RESPONSES TO COMMENTS

ENVIRONMENTAL IMPACT REPORT for

SOLANO LONG-TERM OFF-CHANNEL MINING PERMIT APPLICATION

SCH #96012034

Yolo County

September 16, 1996

County of Yolo

COUNTY ADMINISTRATIVE OFFICE
625 Court Street, Room 202 Woodland, CA 95695 (916) 666-8150 FAX (916) 666-8147

ROY PEDERSON
County Administrative Officer

NOTICE OF AVAILABILITY AND PUBLIC HEARING

RESPONSE TO COMMENTS on DRAFT ENVIRONMENTAL IMPACT REPORT for the SOLANO CONCRETE COMPANY LONG-TERM, OFF CHANNEL MINING PERMIT APPLICATION

TO: Interested Agencies and Individuals

FROM: Heidi Tschudin, Contract Planner
Yolo County Community Development Agency

DATE: September 16, 1996

The County of Yolo is analyzing an application from Solano Concrete Company, Inc. (1601 Cement Hill Road, Fairfield, CA 94533) for a Mining Permit, Reclamation Plan, Floodplain Development Permit, Rezoning, Reclamation Plan amendment for its existing short-term Off-Channel Permit, and Development Agreement to allow an off-channel mining operation on a northern 598-acre portion of eight adjacent parcels, comprising 1,828 acres. The applicant requests an increase in the permitted production rate from 772,400 tons per year mined to 1,445,783 tons per year. Rezoning to attach the Sand and Gravel (S-G) overlay and amendment of OCMP Performance Standards 4.5-2 and 4.5-3 are also necessary as part of this proposal. The site is located in unincorporated Yolo County immediately south of Cache Creek, north of State Highway 16 and immediately east and west of Interstate 505.

Mining and reclamation would generally be conducted concurrently in seven phases over a 30-year period. The aggregate would be extracted outside of the active channel of Cache Creek from "wet pit" mining operations that extend below the seasonal high groundwater level to a depth of up to 70 feet below the existing ground surface. The mining pits would be reclaimed to a combination of uses. Post-reclamation uses within the mining areas include row crop agriculture (223 acres), tree crop production (223 acres), four lakes (161 acres), wildlife habitat (65 acres) and slopes and roads (26 acres).

Reclaimed areas include portions of the adjoining Hutson parcel (100 acres) where mining has been completed under a previous permit approved in 1980, and 35 acres of the Farnham West parcel currently being mined under a three-year permit issued in 1995.

In addition to the proposed mining and reclamation described above, the application proposes restoration of 35 acres of previously mined or unmined land within the project site to oak woodland habitat. This restoration is proposed as a "net gain" to Yolo County. The applicant also proposes continued financial contribution to the Cache Creek Conservancy and dedication of two lakes in the eastern portion of the site to an appropriate public agency for recreational or habitat uses.

This EIR is a project EIR which tiers off the Program EIR for the Off-Channel Mining Plan (OCMP) and incorporates by reference the Cache Creek Resources Management Plan (CCRMP). The EIRs for those two plans were certified on July 30, 1996 (OCMP) and August 20, 1996 (CCRMP); the plans were also approved by the Board of Supervisors at the time of EIR certification.

The County and its consultant, BASELINE Environmental Consulting, have prepared a RESPONSES TO COMMENTS document (Volume 2) for the project-level Draft Environmental Impact Report (DEIR) which provides responses to all comments received during the public review period on the DEIR. The Response to Comments volume, together with the Draft EIR constitute the Final EIR (FEIR) for this project.

This RESPONSE TO COMMENTS document is now available for public review at the public counter of the Community Development Agency, at 292 West Beamer Street, Woodland, California 95695. The document is also available for public review at all Yolo County branch libraries.

A **public hearing** will be held in front of the County Planning Commission on November 13 and 14, 1996 in the Commission Chambers located at 292 West Beamer Street in Woodland, to take action on the project, together with the EIR. A **public hearing** to approve, modify, or deny the project will be held before the Board of Supervisors on November 25, 26, and 27, 1996 (if necessary).

For more information regarding this project, please contact Heidi Tschudin at (916) 447-1809 or David Morrison at (916) 666-8041.

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APPENDICES

CHAPTER 1.0 INTRODUCTION

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This document contains all comments, received during the public review period, on the Draft Environmental Impact Report (EIR) for the Solano Long-Term Off-Channel Mining Permit Application. The project consists of off-channel mining for aggregate adjacent to Cache Creek within an area governed by the policies of the Yolo County Off-Channel Mining Plan (OCMP) and its implementing ordinances, the Off-Channel Surface Mining Ordinance and the Surface Mining Reclamation Ordinance, adopted on July 28, 1996 by the Yolo County Board of Supervisors. A Program EIR was prepared for the OCMP; this project EIR for the Solano Long-Term Off-Channel Mining Permit Application tiers off the Program EIR for the OCMP. The County also prepared and approved (August 20, 1996) a Cache Creek Resources Management Plan (CCRMP) and associated Program EIR for maintenance activities along Cache Creek, which are incorporated by reference, as applicable.

In the course of adoption of the OCMP, the Mitigation Measures of the OCMP EIR were incorporated into the implementing ordinances. Appendix A of this document presents a table which references the location of each OCMP EIR mitigation measure within the OCMP and its implementing ordinances.

The site is located in unincorporated Yolo County immediately south of Cache Creek, north of State Highway 16 and immediately east and west of Interstate 505. Mining and reclamation would generally be conducted concurrently in seven phases over a 30-year period. The aggregate would be extracted outside of the active channel of Cache Creek from "wet pit" mining operations that extend below the seasonal high groundwater level to a depth of up to 70 feet below the existing ground surface. The mining pits would be reclaimed to a combination of uses. Post-reclamation uses within the mining areas include row crop agriculture (223 acres), tree crop production (223 acres), four lakes (161 acres), wildlife habitat (65 acres) and slopes and roads (26 acres).

Reclaimed areas include portions of the adjoining Hutson parcel (100 acres) where mining has been completed under a previous permit approved in 1980, and 35 acres of the Farnham West parcel currently being mined under a three-year permit issued in 1995.

In addition to the proposed mining and reclamation described above, the application proposes restoration of 35 acres of previously mined or unmined land within the project site to oak woodland habitat. This restoration is proposed as a "net gain" to Yolo County. The applicant also proposes continued financial contribution to the Cache Creek Conservancy and dedication of two lakes in the eastern portion of the site to an appropriate public agency for recreational or habitat uses.

The County of Yolo used several methods to solicit input on the Draft EIR. These methods included a public scoping meeting on January 29, 1996; the distribution of a Notice of Preparation; distribution of the Notice of Availability of the Draft EIR; distribution of the Draft EIR; and a public hearing and workshop in front of the County Planning Commission on June 26, 1996.

The Draft EIR was distributed to various public agencies, responsible agencies, and interested individuals. Copies of the document were also made available at the public counter of the Community Development Agency and at all Yolo County branch libraries. The report was made available for public review and comment for a 45-day period. The public review period established by the State Clearinghouse for the Draft EIR commenced on June 3, 1996 and expired on July 18, 1996.

Comments and responses are grouped by letter for written comments and by speaker for oral comments. If the subject matter of one letter overlaps that of another letter, the reader may be referred to more than one group of comments and responses to review all information on a given subject. Where this occurs, cross-references are provided.

This document also includes a Summary of Changes in Chapter 2. The Summary contains clarification, amplification, and corrections that have been identified since publication of the Draft EIR.

This second volume, together with the Draft EIR (Volume 1), constitute the Final EIR for the proposed project.

CHAPTER 2.0 SUMMARY OF CHANGES

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Since publication of the Draft EIR on June 3, 1996, the following changes are hereby considered to have been made to clarify, amplify, and/or provide minor technical correction to the first volume. New text which has been added to the DEIR is highlighted and text which has been deleted is presented in ~~strikeout~~ format.

The following text revisions are shown in the order in which they appear in the DEIR (i.e., by page number), and the "Text Change #s" provided below are referenced in Section 4.0 (Responses to Comments), where appropriate. A revised copy of the Table 2-1: Summary of Impacts and Mitigation Measures is provided in Appendix B.

Text Change # 1:

Page 2-2 -- After the 5th bullet on the page, the following has been added:

- Impacts to groundwater quality from mercury, eutrophication, pathogens transported by water fowl, salts, and boron.
- Effects to municipal water supply wells.

Text Change # 2:

Page 3-5 -- The following revision is made to second sentence of the second full paragraph:

> ... The proposed mining would occur on ~~734~~ 598 acres in the northern portions of seven of the eight adjacent parcels.....

Text Change # 3:

Page 3-6 -- The text on the eighth line has been modified as follows:

The closest town is Madison, located approximately ~~one~~ 0.2 mile southwest of the western boundary of the site, and approximately 0.85 mile from the nearest area proposed to be mined.

Text Change # 4:

Pages 3-6 and 3-15 -- Figures 3-3 (page 3-6) and 3-4 (page 3-15) have been amended to show the location of the Madison sewage ponds and Madison Migrant Center in relationship to the proposed mining and reclamation area. The revised Figures are presented at the end of this section.

Text Change # 5:

Page 3-8 -- The following revision is made to second sentence of the first full paragraph:

...Hydraulic analyses prepared for the proposed project (Cunningham Engineering, 1995) indicate that the hundred-year flood flows would be contained the existing creek banks and levied of the channel of Cache Creek in the area of the project site. Relatively small portions of the project site north of Mining Areas III, V, and VI are subject to flooding during 100-year flood events (see Impact 4.3-4). Based on the elevation of the levee in these areas, the frequency of flooding would be more frequent than a 100-year event but less frequent than a 50-year event. The project proposes to raise the levees in all areas of the project site which do not currently provide 100-year flood protection.

Text Change # 6:

Page 3-8 -- The following revision is made to last sentence of the second full paragraph:

...Reports on mining and reclamation activities have been submitted annually by Solano Concrete to Yolo County since ~~1989~~ 1984.

Text Change # 7:

Page 3-20 -- The text of the second bulleted item on the page has been amended as follows:

- ~~Various local encroachment permits~~ Caltrans encroachment permit for lane construction

Text Change # 8:

Page 3-20 -- The text of the third bulleted item on the page has been amended as follows:

- Rezoning of ~~598~~ 558 acres currently zoned A-1 to attach the sand and gravel (S-G) overlay.

Text Change # 9:

Page 3-21 -- The text of the EIR has been amended after the last paragraph:

One of the possible actions for which this EIR would be used is the preparation of a Development Agreement between Solano Concrete Company, Inc. and Yolo County. A Development Agreement would be a legally binding instrument for financial and other commitments between the County and an applicant, including conditions of approval and mitigation measures of the EIR. The Development Agreement could be finalized only after approval of the proposed project.

Text Change # 10:

Page 4.2-4 -- Figure 4.2-1 has been modified. The revised figure is presented at the end of this section.

Text Change # 11:

Page 4.2-23 -- Add the following sentence to the end of the second paragraph under Impact 4.2-8:

. . .The nearest residence to the mining area is located on SR 16 approximately 1,600 feet south of the Phase V mining boundary (Figure 4.2-1). The nearest concentration of residences to the mining area is the Madison Migrant Center, located approximately 0.2 mile southwest of the western boundary of the site, and approximately 0.85 mile from the nearest areas proposed to be mined (the northern portion of the Solano West parcel).

Text Change # 12:

Page 4.3-36 -- The second paragraph under Mitigation Measure 4.3-4c is hereby amended as follows:

Alternatively, the portions of the levee in these areas could be raised to provide 100-year flood protection for these areas ~~with a minimum of three feet of freeboard~~. Prior to raising the levee, if that is the selected alternative, a hydraulic analysis prepared and signed by a licensed engineer, demonstrating that off-site flooding impacts would not be created, must be submitted to the County for review. This mitigation measure would be consistent with the proposed project and the requirements of the OCMP. Any levee work performed shall be completed prior to commencement of mining within the affected phases.

Text Change # 13:

Page 4.3-37 -- Mitigation Measure 4.3-4f has been modified as follows:

Mitigation Measure 4.3-4f

The proposed project design shall be revised to provide a biotechnical design to replace the proposed placement of rip rap on that section of the south bank of Cache Creek extending 1,500 downstream from the I-505 bridge. The proposed biotechnical bank protection shall be submitted to the Yolo County Development

Agency and Caltrans for approval prior to the commencement of mining in Mining Area VII.

Text Change # 14:

Page 4.3-37 -- The following text amendment is made to Mitigation Measures 4.3-4f, 4.3-4g, and 4.3-4h:

Mitigation Measure 4.3-4f

The proposed project design shall be revised to provide a biotechnical bank protection design to replace the proposed placement of rip rap on that section of the south bank of Cache Creek extending 1,500 feet downstream from the I-505 bridge unless engineering evaluations demonstrate that riprap must be used to control erosion. The proposed ~~biotechnical~~ bank protection shall be submitted to the Yolo County Community Development Agency for approval prior to the commencement of mining in Mining Area VII.

Mitigation Measure 4.3-4g

Mining within Mining Area VII shall not be conducted within 700 feet of the existing stream bank until stream bank stabilization is provided for that portion of the south bank of Cache Creek upstream from the I-505 bridge. The bank protection shall be performed in accordance with the guidelines presented in the Cache Creek Resource Management Plan and Cache Creek Improvements Program. The proposed ~~biotechnical~~ bank protection design shall be submitted to the Yolo County Community Development Agency for approval prior to the commencement of mining in Mining Area VII.

Mitigation Measure 4.3-4h

Recommendations of the geotechnical report (Kleinfelder, 1995) for stabilization of the south bank of Cache Creek shall be implemented within one year after the commencement of mining. Prior to the construction of the improvements, detailed plans identifying the type of stream bank protection shall be submitted to the County for review and approval. The bank protection plans shall incorporate biotechnical methods of bank stabilization when appropriate for erosion control.

Text Change # 15:

Page 4.3-37 -- The last sentence of Mitigation Measure 4.3-4i has been amended as follows:

Mitigation Measure 4.3-4i

... Participation shall include, but not be limited to, contribution of equipment and labor for channel widening projects and channel maintenance ~~mining~~ activities recommended by the County ~~and modification at the Esparto bridge~~.

Text Change # 16:

Page 4.4-4 -- The first full sentence of the page is amended as follows:

The results of the analysis indicated that the 100-year design flow is contained within the channel banks throughout this reach of Cache Creek~~, although portions of the levee do not have three feet of freeboard, as required of a levee designed to provide 100-year flood protection~~.

Text Change # 17:

Page 4.4-4 -- The second sentence of the second paragraph is hereby modified as follows:

According to the hydraulic study (Cunningham Engineering, 1995), implementation of the CCRMP would result in approximately five feet of channel aggradation ~~adjacent to the site~~ at the I-505 bridge; aggradation would decrease downstream toward the project site.

Text Change # 18:

Page 4.4-7 -- Figure 4.4-3 has been modified to include the location of the "Hayes 1" water supply well and is presented at the end of this section.

Text Change # 19:

Page 4.4-12 -- The first full sentence at the top of the page is amended as follows:

. . . and improvement of management practices to reduce discharges that exceed water quality ~~standards~~ objectives.

Text Change # 20:

Page 4.4-16 -- The first full paragraph of the page is amended as follows:

The proposed mining areas will be protected from 100-year storm events through the use of levees and berms. ~~Furthermore, three feet of freeboard will be provided, creating additional flood protection.~~ . . .

Text Change # 21:

Page 4.4-21 -- The first full paragraph has been amended as follows:

The OCMP EIR requires that proposed mining areas are protected from inundation during the 100-year flood (OCMP EIR Impact 4.4-1). ~~The levee protecting the project site does not have three feet of freeboard above the 100-year flood inundation level and is therefore inconsistent with the OCMP EIR.~~ . . .

Text Change # 22:

Page 4.4-22 -- The discussion under Impact 4.4-1 is hereby amended as follows:

~~Under existing conditions, the project site would not be inundated by events equal to or less than the 100-year storm event. However, portions of the existing levees do not have three feet of freeboard. Therefore, the project is not consistent with flood protection requirements of the OCMP.~~

~~**Mitigation Measure 4.4-1a**~~

~~Prior to initiation of mining proposed in this application, the applicant shall increase levee heights to provide three feet of freeboard above the 100-year flood elevations in the vicinity of the project site, except as discussed in Mitigation Measure 4.3-4c.~~

Mitigation Measure 4.4-1~~b~~a

The applicant must apply for, and receive, a floodplain development permit from Yolo County prior to mining activities within U.S. Department of Housing and Urban Development designated 100-year floodplains, as required by the County General Plan and Flood Ordinance.

Implementation of ~~these~~ this mitigation measure~~s~~ would reduce this impact to a less-than-significant level.

Text Change # 23:

Page 4.6-30 -- The fourth sentence of the page is amended as follows:

... Grassland cover ~~and hedgerow plantings dominated by valley oak trees and elderberry shrubs~~ would be established on the transitional slopes between the finished grade of reclaimed agriculture fields and the surrounding unmined areas. Hedgerow plantings dominated by valley oak trees and elderberry shrubs would be planted around the Hutson parcel and possibly in other locations if required as part a Section 2081 agreement to mitigate potential impacts on Swainson's hawk. Cross-sections from the HRP...

Text Change # 24:

Page 4.6-36 -- Mitigation Measure 4.6-2a is amended as follows:

Figure 8 of the HRP shall be revised to indicate the location of hedgerow plantings, proposed by the applicant~~, on any side slopes around the perimeter of areas identified as "Integrated Agriculture" (tree crops) and "Reclaimed Agriculture."~~ around the Hutson parcel or as specified as part of habitat enhancement in a Section 2081

permit if required by the CDFG or to mitigate at a 1:1 ratio the actual loss of fence row habitat.

Text Change # 25:

Page 4.6-36 -- The following text is added to Mitigation Measure 4.6-2d:

... The proposed project shall be revised to provide a biotechnical bank protection design to replace the proposed placement of riprap on that section of the south bank of Cache Creek extending 1,500 feet downstream from the I-505 bridge unless engineering evaluations demonstrate that riprap must be used at certain locations to control severe erosion.

Text Change # 26:

Page 4.6-38 -- The second sentence of the page is amended as follows:

...them along the shorelines. Creating a ~~few~~ vegetated natural islands would provide permanent, secure nesting habitat for a variety of species...

Text Change # 27:

Page 4.6-38 -- Mitigation Measure 4.6-3a is amended as follows:

At least one permanent island shall be created on ~~each~~ one of the proposed lakes to improve their wildlife habitat value. ~~The permanent islands would replace the proposed artificial islands.~~ The artificial islands and submerged peninsulas proposed in the HRP should be retained on all lakes. Characteristics of the permanent island shall include the following:

- The elevation of the islands shall extend a minimum of five feet above the average high groundwater level (approximately 125-foot elevation) to prevent complete inundation during the winter months. Slopes of the island shall not exceed 3:1 above the average low groundwater level.

- The channel of water separating the island from the mainland shall have a minimum distance of 20 feet and a depth reaching at least 5 feet during the average summer low groundwater level to prevent predators from wading to the island during the summer months. A temporary levee to permit vehicle access and maintenance of restoration plantings on the island shall be included in the design, but the levee shall be removed following completion of the minimum five year monitoring program for the restoration effort.

- ~~Each~~ The island shall be revegetated according to the HRP, with perennial marsh at the lowest elevations and low terrace riparian species up to the average

high groundwater level, with a cover of grassland and scattered shrubs provided over the top of the island.

Text Change # 28:

Page 4.6-40 -- The text of Mitigation Measure 4.6-4a is amended as follows:

~~As required by Action 6.4-4 of the OGMP, a~~ A CDFG Code Section 2081 authorization, or the posting of a reclamation bond or letter of credit naming CDFG as the beneficiary, or other alternative mechanism acceptable to CDFG shall be executed prior to ~~project approval~~ commencement of mining.

Text Change # 29:

Page 4.6-43 -- The following modification is made to the last sentence of the text of Mitigation Measure 4.6-6a:

. . . grading or other modifications. ~~Consistent with Action 4.4-1 of the CCRMP, u~~ Use of biotechnical protection design methods. . .

Text Change # 30:

Page 4.7-2 -- The text of the fifth paragraph, line two has been changed as follows:

The project site is located in the relatively flat lands of Hungry Hollow and is surrounded by the Dunnigan Hills to the northeast, the ~~Capay~~ Rumsey Hills to the northwest~~, and the Rumsey Hills to the southwest.~~....

Text Change # 31:

Page 4.11-10 -- The last bullet on the page has been amended as follows:

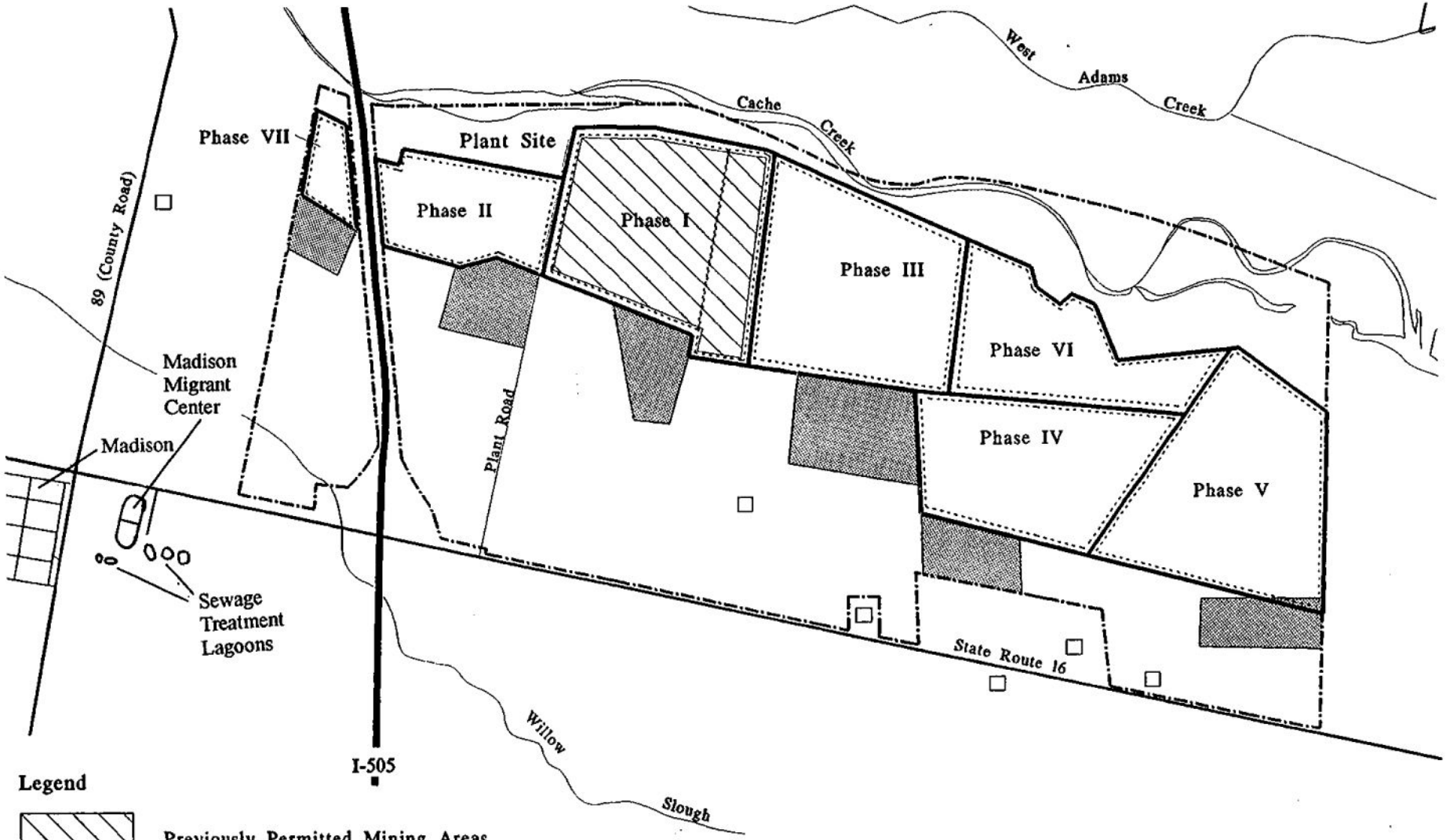
- ~~After mapping~~ Before mining begins on Yol-69, an archaeologist shall be contracted...

The text of the first bullet on page 4.11-11 has been amended as follows:

- If it is determined that the site contains significant cultural resources, an appropriate mitigation program shall be developed, before mining begins on Yol-69, based on the information obtained during the site evaluation.

GENERALIZED MINING PLAN

Figure 3-3

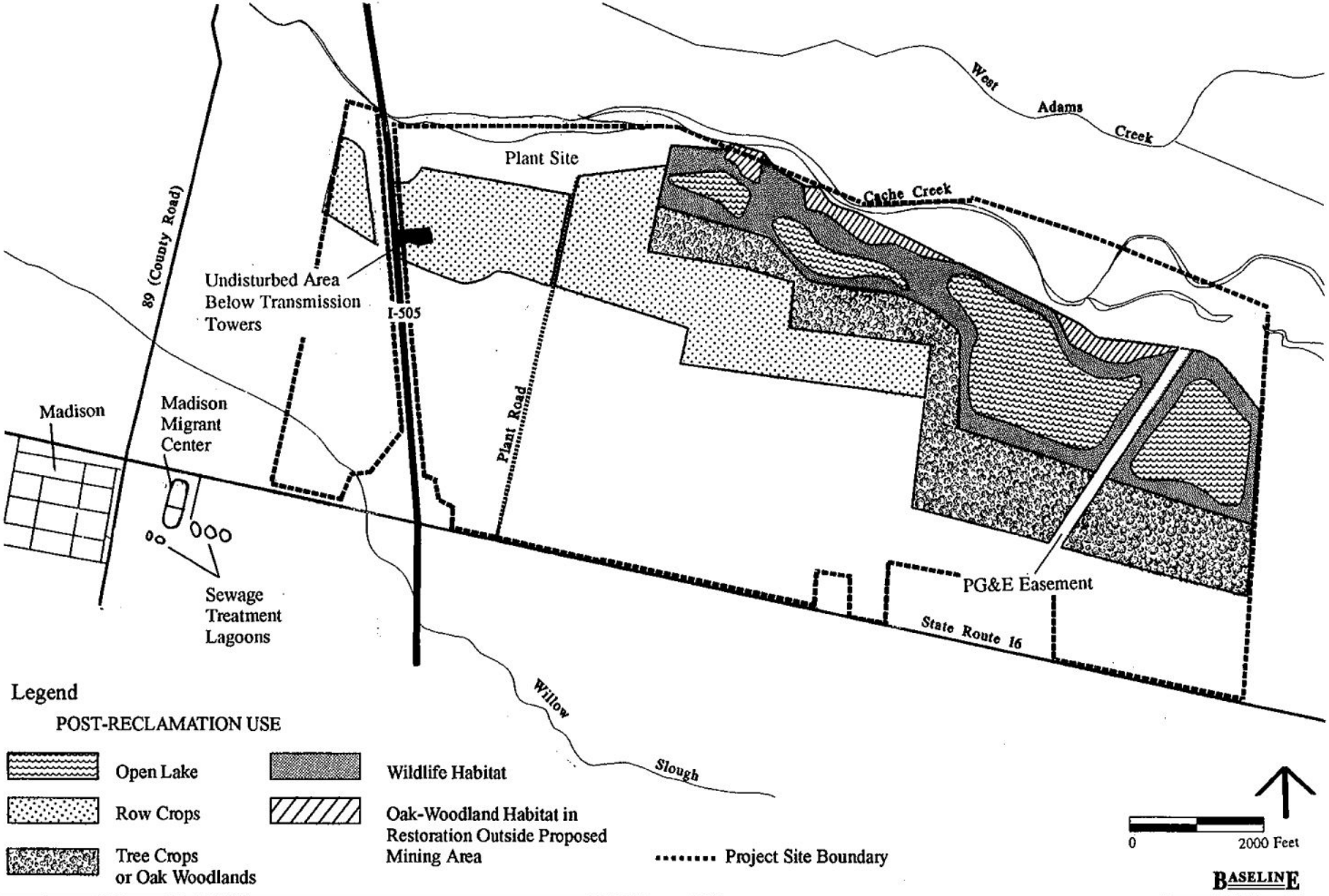


BASELINE

95263-00.03 3/19/96, Cadd File N(2), 263GMP Solano Long-Term

GENERALIZED RECLAMATION PLAN

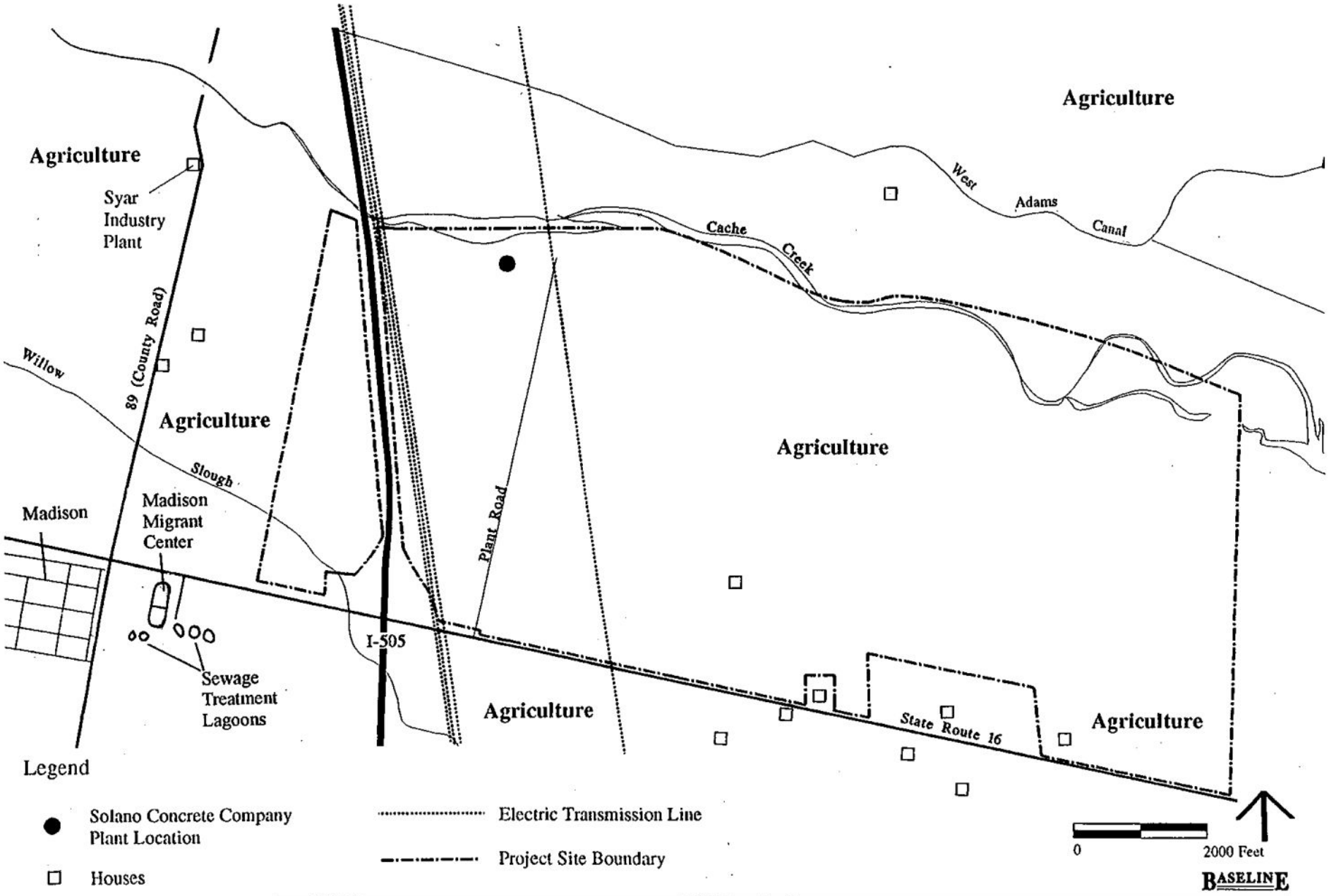
Figure 3-4



95263-00.02 2/1/96, Cadd File N(2), 5263GRP Solano Long-Term

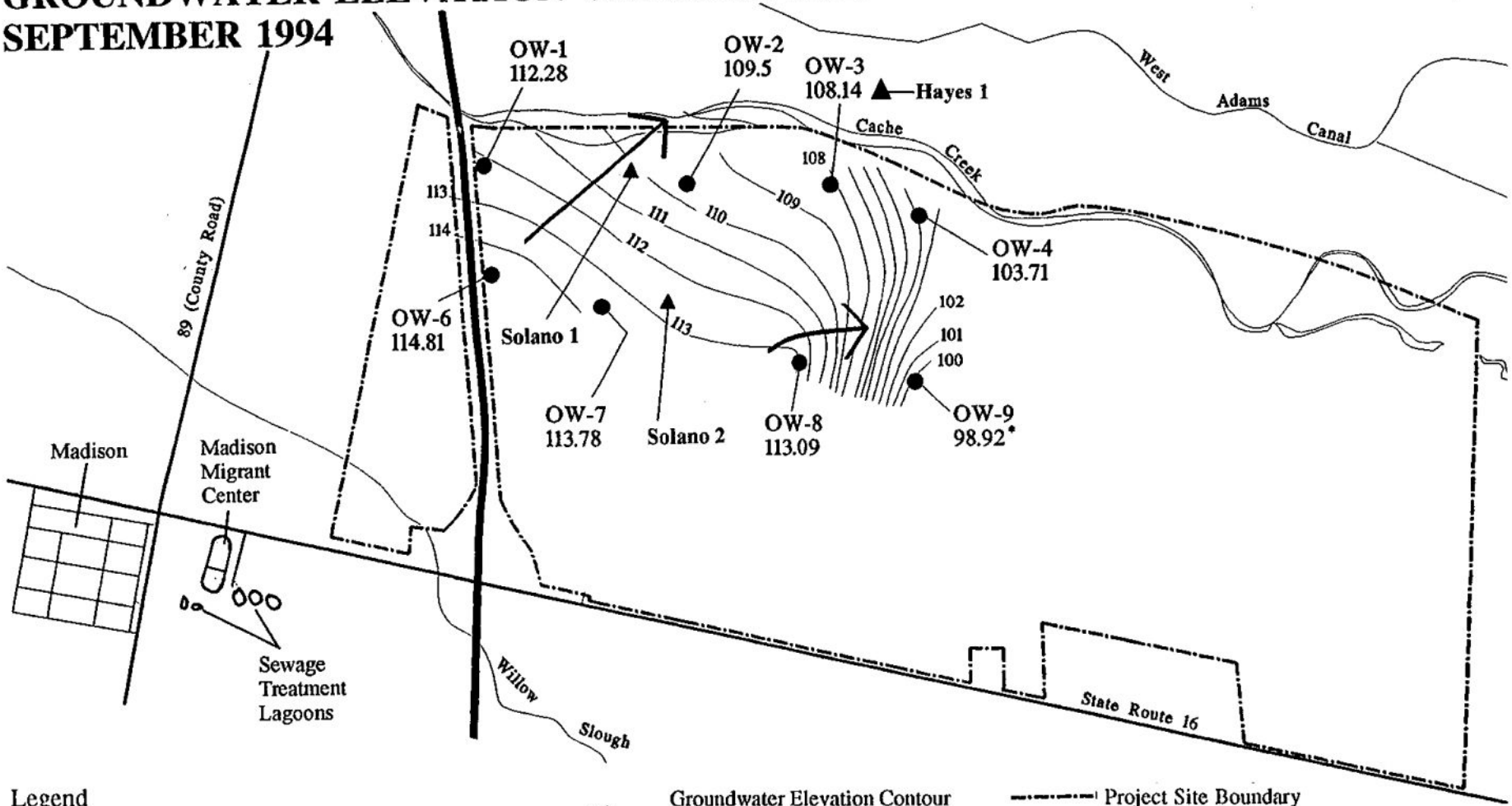
EXISTING LAND USES

Figure 4.2-1



WELL LOCATIONS AND GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 1994

Figure 4.4-3



Legend

Solano 1	▲	Supply Well
OW-1	●	Monitoring Well
112.28		Groundwater Elevation in Feet Above msl (September 1994)
— 120 —		Groundwater Elevation Contour (Contour Interval = 1 Foot)
→		Groundwater Flow Direction
*		Nearby Pump in Operation during Water Level Measurement
-·-·-		Project Site Boundary

0 2000 Feet

Note: Data provided by Solano Concrete; contouring completed by BASELINE.

BASELINE

95263-00.03 3/19/96, Cadd File N(2), 953GSEPT Solano Long-Term

CHAPTER 3.0 LIST OF COMMENTORS

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List of Commentors		
Commentor	Date Postmarked	Letter #
Summary of Minutes from Public Hearing	6/26/96	1
Northwest Information Center, Sonoma State	6/13/96	2
Solano Concrete Co., Inc.	7/16/96	3
Environmental Issues Committee, Western Yolo Grange #423; Cache Creek Coalition; Natural Resources Committee, League of Women Voters, Woodland; and Friends of Cache Creek	7/18/96	4
The League of Women Voters of Woodland	7/18/96	5
Cache Creek Basin Resource Coalition	7/18/96	6
Environmental Issues Committee, Western Yolo Grange #423; Cache Creek Coalition; Natural Resources Committee, League of Women Voters, Woodland; and Friends of Cache Creek	7/18/96	7
California Department of Transportation	7/18/96	8
California Governor's Office of Planning and Research	7/18/96	9

CHAPTER 4.0 RESPONSES TO COMMENTS

LETTER #1

SUMMARY MINUTES FROM PUBLIC HEARING ON DRAFT EIR FOR THE SOLANO CONCRETE COMPANY LONG-TERM OFF-CHANNEL MINING PERMIT APPLICATION ENVIRONMENTAL IMPACT REPORT (EIR) HELD JUNE 26, 1996

The item was introduced by Chair Jim Gray. Commissioner Gray explained the purpose was to receive oral comments from the public regarding the adequacy of the Draft EIRs prepared for each of the five long-term off-channel mining permit applications. The audience was informed that they could speak on any or all permit applications should they choose. The Commission would not be trying to organize the meeting so that comments on a particular application could only be made at a certain time.

The audience was informed that summary minutes would be prepared. Those wanting their comments verbatim in the record were informed to submit them in writing by the following comment closure dates:

Teichert Woodland	July 19 or postmarked July 20, 1996
Solano	July 18, 1996
Teichert Esparto	July 19 or Postmarked July 20, 1996
Syar	July 18, 1996
Cache Creek Aggregates	July 25, 1996

1-1

Heidi Tschudin and David Morrison presented the staff report, gave an overview of each project, and summarized the main conclusions of each Draft EIR.

Commissioner Barbara Webster asked why only two sites had archeological remains. Staff responded that cultural remains weren't discovered during surveys of the other three sites. Mitigation measures have been included to address the potential for buried cultural impacts. 1-2

The hearing was opened to comments from the audience.

Lois Linford, League of Women Voters of Woodland: These plans and their schedule came out in September and have been compressed into 13 months. They have not been out since 1975. 1-3

The net gain strikes her as small. The idea came from Sandy McClellan. It should be a substantial item. 1-4

The League wants to protest the order of processing. The OCMP has not yet been approved. But applications are before the Planning Commission asking for the maximum amount of mining. 1-5

Many exceptions are requested. Teichert Woodland wants a 50 foot setback. The setback was to avoid pit capture. Why are they asking for this? 1-6

How much land in the "rezone-only" areas is in Williamson Act. Was the mining boundary adjusted in the OCMP for Woodland's concerns? What is a development agreement and how is it different that a use permit? 1-7 1-8 1-9

After general discussion about development agreements, the Planning Commission asked the staff to find examples where a development agreement has been used on a mining project. 1-9

The speaker listed all the significant impacts for the Teichert Woodland project and asked whether the Commission feels in good conscience that the plans can be good plans. 1-10

Chairman Jim Gray pointed out that Chapter Two of each document provides a summary of all impacts and mitigation measures.

Johnny Storz: He lives along Cache Creek. He asked if anyone from the media was here to record this? He then read a statement. He was going to drop out after being treated so rudely "downtown". We can rectify the impacts to water quality if we work together. He has positive ideas. 1-11

As a pilot he has flown over the destruction from past mining. After almost 150 years, there are miles of gravel in Yuba County there that was mined from the gold rush. This already mined gravel should be used by firms that want to mine along Cache Creek. They could cooperate with the railroad to transport the gravel. Many along Cache Creek have already had to dig deeper wells. The aggregate industry could fill in existing pits and fix levees to prevent flooding, as well as build release dams, fishing holes, marinas for fishing, and allow for the development of restaurants. 1-12

He read a quote regarding fur bearing mammals and ducks along the creek. Leave the gravel, water supply, and environment alone. 1-13

Bob Spiers, Capay Valley Landowner: He doubts anyone has read all the manuals. He supports what Lois said. He has looked over some of the documents and has hundreds of questions. 1-14

In the Solano document something is missing. Why isn't migrant farmworker housing shown? There are more than 100 people and children there. It is the closest area to any of these pits. Have federal and state agencies that fund the migrant housing been notified? Is this a coverup? 1-15

What about the sewage ponds in Esparto, right next to the migrant worker camp? Raw sewage lagoons. The system works okay, not a good job but not a bad job. These open, raw sewage lagoons are just a couple of minutes flight from the pits. Despite what you hear, these ducks carry a lot of disease. Some ducks are diving ducks and will transmit organisms from the sewage ponds to the pits. This needs to be mitigated. 1-16

There is a controversy concerning slopes. The speaker passed out a diagram of slopes. There has been no safety engineer brought in. Migrant children will use these pits as swimming holes. If you post a sign, how many of these kids read English? There should be a safety engineer looking at this. There are no public pools in Madison and Esparto. You have to assume the worst. 1-17

There is a tendency to take a single sample and say this represents the entire 24.5 mile stretch. Every place along the Creek differs from others. 1-18

A lot of the references listed in the EIR are telephone calls. In one case the consultant has misrepresented himself as the County. There is no written record of the conversation. We are asked to believe that is what the person said. The bias of the person doing the questioning will come out. You can't help it. These are not facts, this is hearsay. Persons mentioned were not given an opportunity to verify their statements or that they knew the facts. 1-19

The pile of documents is too big. This would tie the County up in a contract for 30 to 50 years. Please take the time to look at everything. 1-20

Chairman Grey indicated that he does not share the opinion that you have to look only at the worst case, or that the documents are biased or unscientific. He urged the speaker to point out errors in the writing. The Chairman and the commentor discussed the issue. The speaker indicated he is not concerned with the mining industry, he is concerned with the groundwater. 1-21

Mitzi Spears, Brooks: She shares concerns about issues that have already been raised. Is there a written copy of the proposed agreement available for the public? The staff replied that the draft ordinance will be available in the OCMP staff report. It was reiterated that no agreements are before the County at this time nor have any been drafted. 1-22

Johnny Storz asked when a copy of the Development Agreement Ordinance will be available for review. Staff gave an exact date for both the Ordinance and the individual agreements. Staff also indicated that without an Ordinance, there can be no negotiation on individual agreements. Mr. Storz also reiterated that the lack of reclamation is atrocious. He urged people to go up with a pilot to see the effects of mining. 1-23

Chairman Grey indicated that development agreements are usually used as a bilateral contract (beneficial to both the County and the applicant). 1-24

Lois Linford stated that in the Solano application they are also asking for an exemption to 40 feet. She asked how much of Williamson Act property is to be rezoned to SG overlay. She indicated that the State does not require compatibility on Williamson Act land, the County does this. 1-25 1-26

Kevin Wolf, Davis: He has not had a chance to review the application. He is concerned about how long the insurance policy will run on the pits. Who pays to have algae scraped from the sides of the pits to ensure permeability. When does the liability run out. Who pays? He wants insurance for 50 or 100 years on all applications. 1-27

How long do you monitor? The pits would block the flow of water from Cache Creek throughout the County. What if the entire Creek is blocked by a wall of pits? Fifty percent of Woodland's water supply comes from Cache Creek. 1-28

All these issues should be addressed in the development agreements. The University should have a fund from the gravel industry to monitor forever. 1-29 1-30

On the Russian River there is a serious issue of pit capture. How strong are the proposed levees? You are making a permanent change in the geology here. If the river captures a pit, it is impossible to put it back. 1-31

The City of Sacramento want 500 year flood control. There should be greater than 100 year flood control. Levees have to be able to withstand that. 1-32

The wider the Creek the better. The Floodplain Alternative in the CCRMP goes into these benefits. 1-33

Frank Sieferman, Jr., Millwright and County Resident: He is concerned regarding water quality and environmental concerns. He doesn't want to leave the pits for his kids and future generations. He has a lot of questions about the development agreements. The development agreement is a vehicle to speed the process along. He does not want to stop anyone's livelihood. He uses cement in his business a lot. But as stewards of the soil and keepers of the public trust, the County has a responsibility. There are no references to anything but deep pits. What about no mining (which he does not support) or shallow mining. 1-34 1-35

Take the reasonable course. The court system has already been involved. They stopped the hydraulic mining of the gold rush. Whether you affect properties downstream or upstream you are just as liable. 1-36

Chairman Grey stated that in each project document and in the two program documents, alternatives are presented including no mining, reduced mining, shallow mining, etc. These will all be considered. 1-37

Walter Storz, CR 94B on the Creek: He has lived on the Creek all his life. What has happened to the Creek is sad. It is not what it used to be and never will be again. The research that has been done has been on the 1979 thalweg. Cache Creek watershed has more than the 1979 thalweg though. There is the upper aquifer. This has not been addressed. Woodland wants water. We need a dam to raise the water table and fill the upper aquifer. 1-38

We need to put a rubber dam at the old Lone Star pit so that Woodland would benefit. The upper aquifer needs to be a reserve for dry years. There should be a study made of the upper aquifer. If the dam is built, will the mining pits fill with water. This has not been taken into consideration. 1-39

The public hearing was closed at 10:05am and the Commission took a ten minute break.

Members of the Commission were asked if they had any comments.

Commissioner Henry Rodegerts indicated that a conflict of interest prevents him from participating. The details were given at the April meeting. 1-40

Commissioner Kent Lang asked about the deep pond off of I-5 in the City limits. What monitoring of that pit does the City do? 1-41

Commissioner Barbara Webster indicated it was not difficult to go through the reports, but is was time-consuming. The reports are all organized very consistently. That makes then relatively easy to go through. But it is difficult to keep in mind the salient points. The summary sheets are very helpful. As a Planning Commissioner this is more than she bargained for. She does not live along the creek. She is kind of overwhelmed by the amount of information to assimilate. 1-42

Why did each applicant ask for so much more gravel? Staff speculated because it was a long-term process made very difficult by the County's process, but suggested the question be posed to the operators. 1-43

Commissioner Harry Walker asked how much of the mined acreage would go back to agriculture? Staff responded of 2,200± acres, about half. A net loss of 400 acres. 1-44

The City has three wells near the eastern end of the planning area, what about their proximity? Staff responded that the proposed final boundary is over two miles from Woodland. He will have more questions later on about infiltration rates. 1-45

Commissioner Bob Heringer indicated he tries to look at the big picture. Everyone is concerned with the details. The gravel industry did not abuse the creek to the extent people think. Mother nature did. He is very concerned about groundwater. The pits will store "new" water not "old" water. If we can generate more water, it would be great for both the farmers and the City. 1-46

Chairman Grey indicated that, like Barbara, he is interested in the levels of increase, and amount and extent of the proposed tonnage. Staff responded that information to answer these questions will be included in the staff report. 1-47

Why are some pits deeper than others? Staff responded that the gravel layer varies in depth. 1-48

People think the water issues are not thoroughly addressed. Section 4.4 of every document addressed that issue -- sometimes 30 to 40 pages. There is a lot of information comprehensively presented. 1-49

In the Teichert Esparto document, page 6-3, Section 3 -- is overburden adequately described? Staff indicated that it is the geologic strata between the topsoil, and the sand and gravel. Staff was asked to include a brief glossary. 1-50

Again in the Teichert Esparto document, regarding the permitting of the plant, how is aggregate recycled? Staff responded and indicated that the EIR cumulative analysis assumes a 4 percent recycle rate. 1-51

The Chairman complemented the staff team in their efforts and preparation to date. There is a lot of information to absorb, but it is not impossible. 1-52

Commissioner Lang indicated that it bothers him that the industry has requested so much volume. Is there a market for the increase. What is the reason for the additional request? Everyone is getting greedy. 1-53

The Commissioners discussed the projects further. The need to maintain the setbacks to avoid pit capture was mentioned. It was stated that recycled materials have an advantage over raw materials in terms of cohesion. Less oil is needed with recycled asphalt. The 1994 EPS report was mentioned and the Commission was urged by Commissioner Walker to read it. 1-54 1-55

The hearing was ended at 10:50am.

C:\WP51\HEIDI\YOLO PROJDEIR.MIN

LETTER 1: SUMMARY MINUTES FROM PLANNING COMMISSION PUBLIC HEARING COMMENTS, 26 JUNE 1996

Response to Comment 1-1:

This comment provides instruction to the audience regarding the purpose of the public hearing held on 26 June 1996 and schedule for the receipt of written comments. No response is necessary.

Response to Comment 1-2:

The staff response was correct. Each of the applications for long-term off-channel mining projects presented a cultural resources report. Significant archaeological resources have only been identified at the Solano Concrete and Syar Industries project sites.

Response to Comment 1-3:

The schedule includes all legally mandated review periods, while allowing the County to act in a responsive and timely manner. The purpose of the schedule was to consolidate the evaluation of impacts associated with aggregate mining in a concise and efficient manner. The comment alludes to the long process of aggregate impact analysis that has been undertaken by the County over the last 20 years. The process, initiated last year, incorporated the environmental analysis and policy recommendations conducted over that period into the development of the OCMP and CCRMP as guiding plans for aggregate production and mined land reclamation.

Response to Comment 1-4:

Staff does not agree with the commentor's position that the "net gain" component of the proposed mining and reclamation plan(s) is somehow reduced relative to the initial intention of this benefit to the County. The Planning Commission staff report on the OCMP (July 10, 1996), which has been provided to the commentor and widely circulated, contains a detailed analysis of the original intention behind "net gain." Staff has worked diligently with the individual aggregate producers to develop significant and reasonable "net gains" for each proposed project. Staff notes that the concept of "net gain" has always been subjective, since it is a means for ensuring that the County could receive additional benefits beyond the implementation of aggregate production projects which would minimally comply with State and County requirements. The circumstances and abilities of each operator varies, so that the nature and scope of proposed net gains vary as well. The CEQA process does not mandate the "net gains" proposed by the projects. However, the EIR for each project has considered the potential environmental impacts associated with the "net gain" components of the each project.

Response to Comment 1-5:

The commentor's concern regarding the phasing of the preparation of EIRs for the OCMP and individual projects is noted by staff. The individual projects cannot be approved until the OCMP itself is approved, and even then, each must be entirely consistent. Each application was prepared on the basis of the goals, policies, objectives, and performance standards presented in the First Draft of the OCMP. Following preparation of the EIR on the OCMP, the EIR prepared for the each project included an evaluation of the consistency of the projects with the modified goals, policies, objectives, and performance standards contained in the OCMP EIR. Under this approach, the environmental analysis for each project is dynamically linked to the OCMP. The EIR for the OCMP was certified on 30 July 1996, and the EIR for the CCRMP was certified on 20 August 1996.

Response to Comment 1-6:

The comment regarding the Teichert Aggregate-Woodland application is noted for the record. The comment does not relate directly to the project under analysis in this DEIR. However, the subject Solano project also requests an exception to the requirements of the Surface Mining Ordinance. This is discussed and analyzed on pages 4.3-29 through 4.3-38 of the DEIR.

Response to Comment 1-7:

The comment regarding the Teichert Aggregate-Esparto and Syar Industries applications is noted for the record. The proposed project does not propose "rezone-only" lands. Therefore, the comment does not relate to this project.

Response to Comment 1-8:

The comment relates to the OCMP boundary in an area that would not be affected by the proposed project.

Response to Comment 1-9:

A development agreement is a legal contract signed between a developer (or owner of property) and a city or county. The contents of a development agreement are set forth in State law (California Government Code Section 65864 et seq). The purpose of a development agreement is to specify the details of a developer's commitment to provide certain improvements and to "lock in" the terms of the development project approval with the rules and regulations that are in force at the time the agreement is signed. A development agreement is different than a use permit. A use permit is a discretionary permit that is issued by a city or county to allow a development project to be built. Often, the terms or conditions of approval of a use permit, or other discretionary permits such as rezonings, are included in a development agreement.

Response to Comment 1-10:

Although the comment related directly to the Teichert Woodland long-term application project, staff considers the intent of the comment to be generally applicable to each of long-term projects. The comment identifies project impacts but does not present information on the degree of significance or the extent to which mitigation measures are recommended. As pointed out by Chairman Gray, the impacts identified for the project and associated mitigation measures are summarized in Table 2-1 of the DEIR. Revisions to the summary table are presented in Appendix B of this document. The Commission will make its decision on this project during subsequent public hearings scheduled for November 13 and 14, 1996.

Response to Comment 1-11:

Staff agrees with the commentor's suggestion that working together in a positive way should be the goal in evaluating the issues related to off-channel mining. Staff is uncertain as to the circumstances of the commentor's negative experience but the staff is committed to working closely and fairly with all members of the public.

Response to Comment 1-12:

The comment presents several concepts regarding aggregate production in Cache Creek and northern California. Staff points out that the environmental destruction described by the commentor related to rivers along rivers draining the Sierra Nevada was caused by hydraulic mining of gold. The gravel and cobble deposits along these rivers are extensive and could be used for aggregate products. However, the large sizes of these materials would likely require additional processing (crushing) to provide the full range of grain sizes for products produced from Cache Creek aggregate. Additional transportation costs and transportation impacts would also be caused by distribution of aggregate products to the market areas served by the Cache Creek producers.

Four companies have requested permits to mine specific properties within the County, that they own or control, that contain aggregate deposits. The commentor's point about mining gravel in Yuba County is well taken, and such a scenario was examined in the program-level environmental analysis done for the OCMP. However, the fact remains that the Board of Supervisors has adopted the OCMP which allows carefully controlled, responsible mining within limited acreage adjacent to Cache Creek.

The lowering of groundwater levels related to incision of Cache Creek and the influence of in-stream gravel mining on creek incision were evaluated in the Technical Studies for the CCRMP. Previous in-channel mining was found to be only partially responsible for the many influences on the Creek over the last 100 years. Nevertheless, the County has taken steps to preclude any further commercial mining in the Creek with the OCMP and CCRMP. Off-channel mining would not influence changes in the creek bed elevation. Potential impacts of wet-pit mining on groundwater levels was evaluated in the Technical Studies and the EIR on the OCMP and all impacts were found to be fully mitigable with conditions

required by the Surface Mining Ordinance and Reclamation Ordinance. In addition, the impact of off-channel mining on groundwater resources was evaluated in the DEIR for each proposed long-term mining permit application, such as this one and found to be fully mitigable at the project-level as well.

The proposed project does not propose filling of any existing mining pits, within or outside the Cache Creek channel. The commentor's opinion that release dams, fishing holes, marinas, and restaurants should be developed is noted for the record. However, the proposed project does not propose these post-reclamation uses nor are they envisioned in the County's long-term plans for the area.

Response to Comment 1-13:

The commentor's suggestions for leaving gravel in-place and avoiding impacts to the environment are noted for the record.

Response to Comment 1-14:

The commentor's doubt that anyone has read all the environmental documents prepared for the OCMP, CCRMP, and long-term projects and his familiarity with some of these documents is noted for the record. This observation is not consistent with the staff's observations, through their work with the decision makers and many other interested public members. Staff has organized and presented each document in a similar format to provide a better framework for review of these documents. The commentor's questions are always welcome.

Response to Comment 1-15:

Staff does not consider the DEIR to have excluded the impact to the Madison Migrant Center. The workers housed in this housing facility are considered to be a part of the population of the town of Madison. Environmental impact analysis in the DEIR for this project took into account all nearby residents and communities. The commentor is referred to the Response to Comment 4-39.

Response to Comment 1-16:

The preparers of the DEIR do not agree with the commentor's opinion that the potential water quality impact from diseased birds transporting effluent from the existing sewage ponds of the project site is significant and requires mitigation. The sewage treatment ponds at Esparto and Madison are closer to homes and water supply wells than the proposed project, and present a similar or increased potential for human exposure to pathogens potentially contained in the sewage ponds and related collection system. The commentor is referred to the Response to Comment 4-90.

Response to Comment 1-17:

The issues regarding the safety of slopes are more completely developed in written comments prepared for the project by the commentor (Letter 4). The commentor is referred to the Response to Comment 4-19 for a full discussion of this issue.

Response to Comment 1-18:

The impact analysis was not based on "single sample" data sets as implied by the commentor. The commentor is not specific in identifying the data to which he is referring. Staff agrees that conditions within the Cache Creek basin are variable. The DEIR for the proposed project therefore has relied on reasonable and representative data.

Response to Comment 1-19:

This comment is unspecific and unsubstantiated. The commentor has not revealed the information on which he bases the accusation that any consultant to the County has misrepresented themselves. The referencing of personal communications is made very clear in each of the EIRs prepared for the County. The purpose of this referencing is to provide the public with an understanding of where an opinion or unpublished data have been used in the development of an impact discussion in the DEIR. The commentor is also referred to the Response to Comment 4-113.

Response to Comment 1-20:

The "size" of the environmental documentation relates to the complexity of the issues and legal requirements for adequate analysis. The County has made every reasonable effort to ensure extensive public involvement and appropriate analysis. The process of environmental review was designed to specifically allow for easy comparison and evaluation of the documentation for different project EIRs. The format was developed to include summary tables for easy referencing of impacts, mitigation measures, and alternatives analysis. Staff support the commentor's advice that decision makers "take the time to look at everything."

Response to Comment 1-21:

No response to this dialogue between the commentor and Chair of the Planning Commission is required.

Response to Comment 1-22:

A response to the comment was provided at the hearing. No further response is necessary.

Response to Comment 1-23:

A response to the comment was provided at the hearing. No further response is necessary.

Response to Comment 1-24:

The development agreements prepared for individual projects would constitute a contract between individual aggregate producers to clarify the responsibilities of the applicants for implementation of mitigation measures and "net gain" components of each approved application.

Response to Comment 1-25:

The DEIR for the Solano Concrete project identifies (page 3-20) that the application would require exceptions to the 200-feet setback requirement of the OCMP for separation of proposed mining areas from the Cache Creek Resource Management Plan Boundary. The impacts related to the proposed exceptions to the setback are discussed in Impact 4.3-4c. The mitigation for the exceptions are presented in Mitigation Measures 4.3-4b and 4.3-4c of the DEIR.

Response to Comment 1-26:

A total of 558 acres is proposed to be rezoned with the S-G overlay. All of this acreage is currently under Williamson Act contract. Contrary to the comment, the State does require that mining be compatible with the Williamson Act.

Response to Comment 1-27:

Neither the proposed project nor the DEIR for the project propose an "insurance policy" for the mining or reclamation activities. Under SMARA, the applicant would be required to present financial assurances for completion of reclamation activities. The OCMP also requires that the applicant would be assessed a surcharge of two cents per ton for aggregate mined under the proposed project that would be contributed to a post-reclamation maintenance and monitoring fund administered by the County. The DEIR determined that reduction of mining pit wall permeability (caused by algae) was a less-than-significant impact. The commentor is referred to the Response to Comment 4-28 for discussion of this issue.

Response to Comment 1-28:

The EIRs for the OCMP and each individual project evaluate the potential for impacts on the flow of groundwater potentially caused by reduced permeability at the proposed project sites. The commentor is referred to the discussion of Impact 4.4-5 in the subject DEIR for Solano. Quarterly monitoring of and evaluation of groundwater elevations at the project site is required by the OCMP (Mitigation Measure 4.4-2a) during both mining and

reclamation. Although the changes in permeability caused by the project may result in localized changes in groundwater flow adjacent to the pits, it is considered unlikely that water supply to Woodland municipal wells would be affected by permeability changes caused by the proposed project. No attempt was made to substantiate the commentor's claim regarding the source of Woodland's water.

Response to Comment 1-29:

Development agreements prepared for all approved aggregate mining projects would address implementation of all mitigation measures for impacts related to the project, including impacts to water resources. The development agreements would also result in a binding document for all contributions by aggregate operators, including surcharges on aggregate products, roadway improvements, and the Cache Creek Improvement Program.

Response to Comment 1-30:

Implementation of specific mitigation measures could be performed by qualified scientists from the University of California at Davis. However, staff does not consider it appropriate to restrict other qualified professionals from performing the monitoring and data evaluation required by the mitigation measures.

Response to Comment 1-31:

Staff notes the commentor's opinion of "pit capture" impacts on the Russian River. The DEIR has addressed the potential for "pit capture" in Impact 4.3-4. The DEIR finds that implementation of Mitigation Measures 4.3-4a through 4.3-4j would reduce the impact to a less-than-significant level. It should be pointed out, however, that the "pit capture" has not been found by Sonoma County to be an unmitigable impact. The commentor's statement that the occurrence of "pit capture" could not be corrected if it occurs is not supported. Breaching of a separator between the creek and a mining area could be repaired through conventional earth-moving activities.

Response to Comment 1-32:

In general, the level of protection provided for the urbanized area of the City of Sacramento is from the 100-year flood event. Yolo County has established 100-year flood protection for proposed mining areas. This level of protection is considered by staff and the preparers of the DEIR and the Technical Studies for the CCRMP, if not conservative, to be appropriate for the level of hazard presented by low frequency flooding events.

Response to Comment 1-33:

The commentor's preference for the Floodplain Alternative presented in the CCRMP is noted for the record. Staff notes that the Floodplain Alternative of the CCRMP was not identified as the environmentally superior alternative for the CCRMP.

Response to Comment 1-34:

Staff agrees that responsible stewardship is the goal of the County in development of the OCMP and review of the individual long-term mining permit applications. Staff and the preparers of the DEIR have endeavored to provide thorough analysis of environmental impacts associated with proposed mining and develop reasonable and effective mitigation measures for all significant impacts. There is no connection between the use of development agreements and the "speed of the process." Please see Responses to Comments 1-9 and 1-29.

Response to Comment 1-35:

Staff points out to the commentor that the range of alternatives evaluated in each of the project-level EIRs for individual long-term mining permit applications included a No Mining Alternative (Alternative 1) and two Shallow Mining Alternatives (Alternatives 2a and 2b). The potential impacts of each of the alternatives was thoroughly evaluated in Section 5.3 of each EIR. This is in addition to the eight alternatives examined in the OCMP EIR, from which the Solano document tiers.

Response to Comment 1-36:

The potential for upstream and downstream impacts of off-channel aggregate mining activities along Cache Creek were specifically addressed in the EIRs for each proposed long-term mining application.

Response to Comment 1-37:

No further response is necessary. See also Response to Comment 1-35.

Response to Comment 1-38:

A very detailed discussion of the history of the condition of Cache Creek is presented in the Technical Studies which provided the basis for the OCMP. The hydraulic evaluations performed for the individual mining applications were based on the most currently available data on the topography of the Cache Creek channel in the vicinity of each project site. The analyses were not based on the 1979 thalweg elevations. By virtue of their action taken 20 August 1996 to approve the CCRMP, the County no longer allows commercial mining in the creek and the thalweg concept has been replaced with the reach-oriented Cache Creek Improvement Program.

Response to Comment 1-39:

The commentor's opinion that a dam be constructed within Cache Creek is noted for the record. The impacts of the proposed project on groundwater resources was evaluated in Section 4.4 of the DEIR. The loss of water due to evaporation (Impact 4.4-2) and the influence of mining and reclaimed areas on groundwater flow (Impact 4.4-5) were found

by the DEIR to be less-than-significant impacts. The commentor appropriately refers to the unconfined aquifer within the OCMP planning area as the upper aquifer; it is the uppermost water-bearing zone. As described in Section 4.4 of the DEIR, the upper aquifer is underlain by a clay layer which separates the upper aquifer from deeper aquifers. Contrary to the comment, the upper aquifer was considered in the evaluation of potential hydrological impacts associated with the project.

Response to Comment 1-40:

No response is necessary.

Response to Comment 1-41:

According to Mr. Gary Wegener, Director of the City of Woodland Department of Public Works, the water quality at the referenced property is not monitored. The referenced former mining pit is located one-quarter mile west of East Street. It is approximately 22 acres in size with 100-acre foot capacity. The property is owned by the City of Woodland to be used as a stormwater detention basin. The extent of hydraulic connectivity is not known by the City at this time.

Response to Comment 1-42:

In addition to the various summaries, the staff reports provide a very condensed overview of each document.

Response to Comment 1-43:

The 10 July 1996 Planning Commission Staff Report regarding the OCMP provided an expanded discussion of the issue of tonnage. The OCMP allows a maximum of 5.97 million tons/year (sold) allocation for the combined long-term mining project applications including the existing operations of Granite and Schwarzgruber which together account for 0.47 million tons per year. This would leave a maximum of 5.5 million tons/year to be allocated all or partially among the five individual long-term mining applications. This allocation represents a doubling of historic high production and a 40 percent increase over the previous allocation. The increase in allocation is generally consistent with the projected market demand (5.8 million tons/year) based on estimates by the California Division of Mines and Geology for the Sacramento-Fairfield Production-Consumption Region served by the applicant. The OCMP maximum allocation is also consistent with the allocation volumes supported by the citizen "consensus group" meetings held in 1994. The OCMP is a thirty-year plan that was designed to anticipate future conditions, as well as existing conditions.

Response to Comment 1-44:

A response to the comment was provided at the hearing. No further response is necessary.

Response to Comment 1-45:

A response to the comment was provided at the hearing. No further response is necessary.

Response to Comment 1-46:

By creating storage capacity where gravels were previously located, the reclaimed lakes allow for more water to be retained in the area, whether that be by precipitation, or by a managed system implemented by the Flood Control District.

Response to Comment 1-47:

A recommendation specific to the Solano project will be included in the staff report. Please refer to Response to Comment 1-43.

Response to Comment 1-48:

A response to the comment was provided at the hearing. No further response is necessary.

Response to Comment 1-49:

Extensive evaluation of water resource impacts is presented in Section 4.4 of the DEIRs for each of the proposed projects.

Response to Comment 1-50:

The definition of overburden is presented in a footnote on page 4.3-2 of the DEIR. This definition is generally consistent with the definition presented by staff during the 23 July 1996 Planning Commission meeting. A brief glossary was provided to the Commission in the July 10 staff report on the OCMP.

Response to Comment 1-51:

A response to the comment was provided at the hearing. Aggregate recycling generally starts with concrete rubble that contains little or no steel or other foreign materials. The concrete rubble is fed into a crusher, which breaks it down into smaller fragments. These fragments can then be used as lesser grade sand and gravel. Asphalt is heated and liquified so that it can be reapplied.

Response to Comment 1-52:

Staff acknowledges and appreciates the commissioner's comment which are noted for the record.

Response to Comment 1-53:

Comment noted. No response is necessary. This issue is not a CEQA issue but will be discussed at the project hearing. Please see also Response to Comment 1-43.

Response to Comment 1-54:

Comment noted, no response is necessary.

Response to Comment 1-55:

Numerous recycled aggregate products can be manufactured. Typically, roadway concrete is crushed and used as road base aggregate. The high cementiceous content of these materials promote binding of the aggregate fill. Recycled roadway asphaltic concrete can be used for shoulder "backing" along the margins of roadways. The recycled asphaltic concrete can also be remanufactured into new asphaltic concrete. A minor reduction (typically less than 0.1 percent) in the amount of liquid asphalt can be a benefit of using the recycled asphaltic concrete as aggregate for new asphaltic concrete. However, use of a disproportionate amount of recycled concrete in this process can affect the durability of the remanufactured product.

The referenced 1994 EPS study is based on assumptions that are no longer applicable. The July 10 staff report to the Planning Commission on the OCMP summarized this report and indicates how each issue has been addressed since publication in 1994. A subsequent analysis by EPS within the last few months comparing mining and agriculture is more relevant for review by the Commission. This report was also summarized in the same July 10 staff report.

LETTER #2

13 June 1996 File No.: 96-YO-62E

re: Solano Long-Term Off-Channel Mining Permit Application
SCH #96012034

Dear Staff:

Our office has no additional comment on the above referenced document. However, thank you for your continued concern for protecting historical resources. 2-1

Sincerely,

Leigh Jordan
Coordinator, NWIC

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JUN 19 1996

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OF THE HISTORICAL RESOURCES
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Sonoma State University
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Heidi Tchudin, PLanner
Yolo County Community Development
292 West Beamer Street
Woodland, CA 95695

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JUN 19

LETTER 2: SONOMA STATE UNIVERSITY

Response to Comment 2-1:

Thank you for your communication. The comment is noted for the record.

LETTER #3

Solano Concrete Co., Inc.

IT COSTS NO MORE FOR THE BEST

MAIN OFFICE
1601 CEMENT HILL RD.
FAIRFIELD, CA 94533
707-422-2520
FAX 707-422-0402
DISPATCH 422-9983

CONTRACTOR'S LICENSE
NUMBER 201665

ROCK PLANT AT
MADISON, CALIF.
916-666-2137
707-448-7121

July 15, 1996

JUL 16 1996

Ms. Heidi Tschudin
Tschudin Consulting Group
710 21st Street
Sacramento, California 95814

Re: Preliminary Draft of EIR for Solano Concrete Long Term, Off-Channel Mining Permit Application

Dear Ms. Tschudin:

The following are Solano Concrete's comments to the Preliminary Draft of the Long Term Off-Channel Mining Permit Application EIR. These comments will be augmented with responses from Solano Concrete's consultants as to some of the issues raised by the EIR.

INTRODUCTION.

Although the EIR demonstrates that all but a very few of the impacts from the project can be mitigated to acceptable levels, it tends to overstate the unmitigated impacts of the project. Solano Concrete has been operating its off-channel facility on Cache Creek for sixteen years. In that period, monitoring has shown the operation does not adversely affect water quantity or quality. During this period there have been no threats to the stability of the creek channel or levees from the operation, despite there having been serious flooding in the area during that period. Reclamation of previously mined areas had yielded agricultural production levels equal to or greater than those occurring on surrounding unmined land. In addition, the project is distant from residential areas and has very short and direct hauls to Highways 16 and I-505. 3-1

In some instances, Solano Concrete does not so much disagree with implementing proposed mitigation measures in the form of permit conditions as with the contention that all of the proposed measures are all necessary to mitigate significant impacts to less than significant levels.

SPECIFIC COMMENTS

Alternative 2a (Page 2-5):

This alternative incorrectly assumes that there are adequate reserves South of the various mining areas to offset the loss of material that would be lost by limiting excavation to within ten feet of the water table. In any event, the proportion of overburden in relation to aggregate in these new areas would increase enormously, so even if some amount of material existed south of the mining areas, whether its excavation would be economically feasible is, at best, entirely speculative. 3-2

Project Location (Page 3-5):

Second line of the second paragraph of this section contains the typo: "734 acres". It should be changed to read "598 acres." 3-3

Project Objectives (Page 3-8):

The last line of the second paragraph on page 3.8 incorrectly states that reports have been submitted biannually by Solano Concrete to Yolo County since 1989. Solano Concrete has been submitting annual reports on the Hutson Parcel to Yolo County since 1984. 3-4

Permit Requirements (Page 3-20):

The third bullet incorrectly states that rezoning is required on 598 acres. Rezoning would be required only on 558 acres. 3-5

The entire section refers to a number of permits which may be required. It is not clear that all of them will be required. With respect to a 2081 permit from the Department of Fish and Game for disturbance of foraging habitat for Swainson's Hawks, it should be noted that there is some question about how the 2081 permit process will be proceeding. The Attorney General has issued an opinion suggesting that the mere conversion of forging habitat is not a "take" which should give rise to the need of a 2081 permit. 3-6

However, the applicant has made it clear to the Department of Fish and Game that it will fully cooperate with the Department of Fish and Game in crafting a 2081 permit, if one is required

It should also be noted that the County does have an alternative which allows

the payment of fees pursuant to its Habitat Management Plan in lieu of a project specific mitigation plan. 3-6

Mitigation Measure 4.2-2a (Page 4.2-19):

Phase two mining will occur on the Kaupke parcel where one hundred percent of the mined areas will be reclaimed to row crops, so it is in compliance with Williamson Act standards. In addition to the Farnham East Parcel, the Williamson Act Contract for which does not expire until 2006, Phase Three also includes the Orrick parcel (APN 049-070-and 06, and a portion of the Snyder West Parcel (APN 049-070-09). The Williamson Act contracts for these parcels will expire in the year 2002. The following condition would therefore be adequate: "Prior to the year 2006, only that portion of the Farnham East Parcel that will be reclaimed to row crops or tree crops may be mined." 3-7

Impact 4.2-7 (Page 4.2-22):

The Yolo County Resource Conservation District, although it may be allowed under state Law to "implement conservation plans and programs." does not enact "regional plans" within the meaning of Section 15125 of the Guidelines. That section is meant to require a finding of significance when a project is inconsistent with plans or policies which a lead agency or responsible agency is required by law to follow, or with the plans and policies of an agency with actual jurisdiction over the project or its operation. These factors do not apply to the policies of the RCD, the policies of which are not binding on either the county, the project or any other agency which has jurisdiction over the project. The examples given in the discussion found in the CEQA Guidelines relate to Air Boards, Regional Water Quality Control Boards and other bodies whose plans have the force of law. 3-8

According to the EIR, a mandatory finding of significance is required because the project is inconsistent with RCD policy 5a, which states that "Any change in land use or designation of land use which results in the permanent conversion of agricultural land to a non agricultural land use will be discouraged."

If a violation of that policy, anywhere in the county, requires a significant finding of significance under section 15125, then the granting of any discretionary permit or implementation of any discretionary project anywhere in the county, where that project could use any open space, could not be carried out with a negative declaration or a mitigated negative declaration.

Impact 4.2-8 (Page 4.2-23): 3-9

The text states that "the nearest residence to the mining area is located on SR 16 approximately 1,600 feet South of the phase V mining boundary ...". The land on which that residence is located is under contract to be purchased by the applicant. Under that contract, the applicant will be the owner of the residence before mining starts in the Phase V mining area. The applicant believes that it owns or has under contract all residences that are less than two thousand feet from any of its mining areas. 3-9

Mitigation measure 4.2-8a. (Page 4.2-25):

This mitigation measure is unnecessarily indefinite. We propose the following language be used instead:

"The irrevocable offer of dedication of the reclaimed lake area in phases four and six will include an offer of dedication of a 40 foot right of way connecting the lake area and Highway 16 at the eastern property boundary of the project. The purpose of the right of way will be to allow the option for public access from Highway 16 to the lake area. The offer of dedication shall be worded so that the county, at its option, may accept the offer of dedication of the lake area, but not accept the offer of dedication of the right of way. The offer of dedication may contain appropriate language defining the scope of both the offer and the included easement as is appropriate to protect adjacent agricultural and other allowed land use." 3-10

Description of Local Environment (Page 4.3-2):

The second full paragraph contains the following language:

"The thickness of the fined-grained overbank deposits reportedly increases to the south, away from the creek, to more than twenty feet within the southern portion of the project site." 3-11

It is assumed that this reference to the "project site" is to land owned or controlled by the applicant, rather than to only the mining areas.

Cache Creek Morphology and Processes (Page 4.3-5, 6):

At the end of page 4.3-5 and beginning of 4.3-6 there is the following language:

"The elevation of these lower areas indicate that they were portions of the active channel prior to the construction of the levees or were mined to the elevation of the 3-12

stream bed. The elevation of the levee road in these areas is not, in all places, above the hundred year flood elevations: flooding of the lowered areas is, therefore, possible in low frequency flooding events."

However, the following section on "Channel Stability " contains the following language:

"Hydraulic analyses prepared for the proposed project (Cunningham Engineering, 1995) indicate that the hundred-year flood flows would be contained within the existing creek banks and levied portions of the channel of Cache Creek in the area of the project site." 3-12

It should be made clear that these "low frequency events" are only slightly more frequent than hundred year events. It should also be noted that the application provides that any levees within the project area not already at the hundred year flood elevation will be built up to that elevation.

With respect to the second paragraph of the Channel Stability Analysis section on Page 4.3-7, it should be noted that the channel was not only incised, but was also lowered due to mining activities which have occurred in the vicinity of the project site since 1972.

Mitigation measure 4.3-2a (Page 4.3-26):

It should be noted that the OCMP requirement for a "survey" is only for a check of changes in field elevations, rather than for parcel boundaries. 3-13

Mining area 2 (Page 4.3-30i):

The hundred year flood hazard line is the line from which the two hundred foot setback should be determined. This is a line which can be surveyed and calculated. The Test 3 boundary and the CCRMP channel boundaries are, by comparison, not as well defined. 3-14

Mining area 3 (Page 4.3-30):

The supposed inconsistency here is based on the OCMP EIR's exclusion of previously mined land from the two hundred foot set back. This exclusion is based on the supposition that the previously mined land is too unstable to make a two hundred foot set back appropriate. However, the Slope Stability Analysis submitted by the applicant for this area, which was based on site specific studies, tests and analyses, 3-15

demonstrates that the required safety margin can be obtained when including this previously mined area within the 200 foot setback. 3-15

The levee in this area is to be raised to the hundred year flood elevation prior to mining. The DEIR should acknowledge that the physical distance from the raised levee road is over 200 feet from the mining area boundary, not 40 feet.

Mining Area 5 and Mining Area 6 (Pages 4.3-33 through 4.3-35):

Again, the two hundred foot line set back should be measured from the hundred year flood elevation, which will be established on the levee, which, in turn, will be raised to the hundred year flood elevation pursuant to the application. This, in combination with the margin of safety shown to exist by the engineering calculations contained in the Slope Stability Analysis which is part of the applicant's mining plan, will far more than offset any possible effect of having portions of previously mined areas located between the new mining areas and the levee. Again, the EIR should acknowledge that the mining area boundary is over 200 feet from the raised levee, not 40 feet. 3-16

Mitigation measure 4.3-4h(Page 4.3-37):

Request that this mitigation measure be clarified by amending the first sentence to read as follows:

"Recommendations of the geotechnical report (Kleinfelder, 1995) for stabilization of the south bank of Cache Creek in the vicinity of each phase shall be implemented within one year after the commencement of mining in that phase in accordance with the specific mitigation measures specified in section 4.3 of this EIR." 3-17

It should be noted that under the anticipated terms and conditions of in-channel mining, this work will be done under the direction of the County, who would be the permit holder.

Mitigation measure 4.3-4i (Page 4.3-37):

This mitigation measure is open ended, unnecessary and lacks any connection to the impacts of the project. The lack of nexus is highlighted by the first full paragraph of section 4.3-7 of the EIR, which states: 3-18

"The incision has resulted in increased cross-sectional area of the stream and a corresponding increase in flood water storage. Collins and Dunne (1990) have

suggested that the potential for overbank flooding has been eliminated due to the increased flood conveyance capacity. Hydraulic analyses prepared for the proposed project (Cunningham Engineering, 1995) indicate that the hundred year flood flows would be contained within the existing creek banks and levied portions of the channel of Cache Creek in the area of the project site."

In addition, this project is much too far from the Esparto Bridge to have had any influence on it. Finally, the ability to get the permission of owners of land and mineral rights in the creek bed for channel widening or improvement projects is, as yet, unknown.

Any contribution to these channel improvement programs by the applicant should be part of a "net gain" program, should be done in a manner which creates certainty as to the amount of the liability being assumed, the timing of payments and scheduling and cost of work. In addition, the burden should, at the very least, be proportional to any past or future influence by the applicant on the areas of the channel being improved. Both the HEC-2 study prepared by Cunningham Engineering in connection with the application and the Stream Study found that the problems in the stream channel in the vicinity of Solano Concrete's historical in-channel operation are primarily caused by the narrowing of the channel at the site of the I-505 bridge and not as a result of mining. **3-18**

It should be emphasized that any contribution to channel improvements, restoration of previously mined areas located outside of the mining areas, or other contributions to "net gain" programs must be proportional to the level of mining allowed under the proposed permit. Any significant variation from the methods of mining, areas mined, or amounts of mining from those requested in the application would necessarily impact the applicant's net gain programs.

Mitigation Measure 4.3-4j (Page 4.3-38):

This mitigation measure should be clarified to show that it is sufficient to request a determination from DSD on the alluvial separators. Suggest that this mitigation measure be changed to read as follow:

At least sixty days prior to the commencement of mining below the ground water level in any new mining areas, the applicant shall file a written request with the California Division of Safety of Damns (DSD) for determination on whether the alluvial separators created by the project fall under DSD jurisdiction." **3-19**

It should be noted that mining has been occurring below the water table on the

Hutson Parcel since 1980. 3-19

Flooding (Page 4.4-4):

The first full paragraph on this page impliedly overstates Cunningham Engineering's findings with respect to aggradation. Cunningham found that in the vicinity of the project site there would be significant channel aggradation mostly near the I-505 bridge and within seven hundred feet down stream from the bridge. 3-20

Impact 4.4-1 (page 4.4-22):

The requirement for three feet of freeboard above the hundred year flood plain is inappropriate for two reasons. First, if there is overtopping along the levee in a hundred year storm, overtopping will occur on a regional basis. Second, the mining pits, themselves, have a second level of protection in the form of berms and contouring which makes their boundaries higher than surrounding lands. Third, in a very infrequent event (such as a 500 year storm), the cumulative effect of three feet of freeboard along the whole project site, together with the project sites of other mining operations, might be to cause flooding downstream. This would cause a violation of the OCMP. It is strongly urged that freeboard only be required in areas where it is needed for an extra measure of slope stability. 3-21

Impact 4.6-2 (Page 4.6-35):

The EIR overstates the loss of mature Oak trees resulting from the project. The entire project will result in the removal of only five mature Oaks. The EIR for the applicant's short term permit considered it adequate to replace lost Oaks with new plantings at a ratio of five to one. In addition, under the short term permit EIR, hedgerow plantings were required only along the northern and western boundaries of the mining areas to mitigate lost hedgerow habitat. Hedgerow habitat was present at all in the Farnham West Parcel because of past differences farming practices on the Farnham West and Hutson Parcels. Hedgerows will not be present in most areas in this project. Mitigation measure 4.6-2a therefore goes much too far in requiring hedgerow planting around the entire perimeter of each of the mining areas. Hedgerow habitat should only be required to be installed to the extent required under any Fish and Game 2081 permit, or to mitigate the actual loss of any hedgerow habitat. 3-22

Mitigation measure 4.6-3a (Page 4.6-38):

As noted in a separate communication, the requirement for the creation of a permanent island on each lake, as described in this mitigation measure, is not feasible 3-23

because of the water level conditions which occur naturally in the area of the lakes. As noted in the hydrology information submitted, there is a 14 foot fluctuation between the mean high and mean low water tables. In order to construct islands with the required slopes and heights above high water there would be an average of 5000 square feet of material left in place for every linear foot of island length. An island 200 feet long with no top width would require 33,000 cubic yards of material left in place. The habitat value of that small an island is not significant compared to the value of the aggregate needed for its construction and the cost of the labor and engineering measures that would be necessary to insure proper construction. Because of the 14 foot water table fluctuation, changing the construction standards for the islands to allow steeper slopes would not significantly improve their feasibility. 3-23

It should be noted that this application is for a gravel mining site. The creation of habitat is a result of reclamation. Given the restrictive requirements on setbacks, slopes and other grading issues in the proposed Reclamation Plan, including the creation of beaches and peninsular scallops in the lake areas, significant amounts of aggregate will be lost to these features. Creation of permanent islands is an unnecessary burden, considering the habitat value which will be created by the aforementioned features already included in the application.

We believe that the "floating islands", as proposed, are a viable and economically feasible means of increasing habitat value in the lakes, and are a superior alternative to the permanent islands proposed by the DEIR. Floating islands have proven successful in severe climates in the Eastern United States and in Europe.

Impact 4.6-4 and Mitigation Measure 4.6-4a (Pages 4.6-38-40):

A section 2081 permit should only be required to the extent required by DFG pursuant to applicable law. The payment of the established per acre fee as to all of any part of the project area pursuant to the County's approved Habitat Management Plan should be identified as an alternative to a project specific 2081 permit. 3-24

It should be noted that the Department of Fish and Game takes the position that loss of riparian habitat is one of the reasons for the Swainsons Hawk's decline. Since the project does not impact riparian habitat, and, in fact, results in the creation of sixty five additional acres of wildlife habitat, together with the restoration of another thirty five acres, the project should have a positive benefit to the local Swainsons Hawk population.

Mitigation measures 4.6-5a (page 4.6): 3-25

All of the Elderberries large enough to provide habitat for the Elderberry Long Horn Beetle are already marked in the HRP, and as a result of ongoing farming operations in the project areas, no new Elderberries are growing to the size required for preservation by the DFG. 3-25

As a result, no ongoing surveys, beyond those required under the HRP to monitor the success of mitigation and restoration plantings, should be required.

Mitigation measure 4.6-5c (Page 4.6-42):

It is inappropriate to require the building of new slopes for Bank Swallow habitat, since the slopes required for Bank Swallows are too steep to maintain necessary bank stability.

This Mitigation measure should require the preservation of suitable vertical or near-vertical slopes in previously mined ares, where those slopes are not necessary to maintain required slope stability. These are located primarily to the north of the Snyder East Parcel. 3-26

Mitigation measure 4.6-5d (Page 4.6-42):

Only a total of five mature Oak trees will be removed in the mining process and another five which are located on the project site will be preserved. There is therefore no need for an annual raptor survey. Any tree removals will occur after August 15 and before March 1. In addition , over fifty feet of separation from mining activities will be maintained between the large Oak trees which are remaining on the property and mining operations. 3-27

Air Quality Impacts and Mitigation. (Pages 4.7-1through 4.7-17).

The inappropriate description of impacts of the project as being significant pervades the air quality section of the EIR. Solano Concrete's operation is extremely isolated, with no off-project dwelling units located less than half a mile from the various mining areas. The company conducts wet pit mining, which limits PM-10 emissions, compared to some other extraction technologies. The company has recently completed the installation of extensive air quality improvements in its processing plant, and uses very will maintained equipment. The company continuously implements dust control on its haul roads in accordance with all of its permits. 3-28

As a result, the effect on the overall air quality of the applicant's operation are probably not measurable any significant distance from the project's boundaries.

Because the basin in which the Yolo-Solano Air Quality Management District is located is considered non-attainment for some of the pollutants generated by the operation, it could be argued that it is appropriate to consider the project as having a cumulatively significant impact. Nonetheless compared to the no project alternative, the project improves air quality rather than harms it, and even under CEQA it is therefore a stretch to call this a significant impact.

The DEIR assumes that material not mined as a result of the project will not be mined any place else within the air basin. As noted below this is an erroneous assumption. Simply stated: more aggregate production sites result in shorter hauls and relative reduction in haul related pollution.

In the same regard, the EIR fails to take note of the significance of the fact that the applicant's processing plant already utilizes best available control technology (BACT) in much of its operation. This means that the increased mining in other locations required to make up for Solano Concrete's product under the no-project alternative would generate more pollution per ton of material processed than the applicant's plant. 3-28

The cumulative effect of these errors is to overstate the impact of the project on air quality.

In determining whether Solano Concrete's operation has a significant impact on air quality, the EIR assumes that if there were no operation the material not mined by Solano Concrete would be entirely lost to the stream of commerce, but if Solano Concrete does not mine material near Madison, there will be only a minuscule impact on the total material being mined and hauled within the air basin. The per ton pollution from the mining activities from the substitute sources would be about the same or greater. However, pollution resulting from hauling would increase because of the longer haul routes being used by the remaining producers to supply Solano Concrete's former customers. In their report on the market elasticity of the gravel industry in Yolo County,[1] Professors Bittlingmayer and Smiley, of the U.C. Davis School of Management, made this point clear: because the substitute sources of gravel are within the same air basin as the Solano Concrete operation, even if the Cache Creek gravel industry shuts down entirely, there would be only a tiny decrease in total gravel production resulting form the higher cost of replacement gravel incurred by customers now served by the Cache Creek area, but the gravel to those customers would be supplied via much longer haul routes from the plants providing the substitute materials.

[1]Dr. George Bittlingmayer and Dr. Robert H. Smiley; Market Effects of Costs and Fees Imposed on Cache Creek Aggregate Producers; June 1, 1994.

Over ninety percent of Solano Concrete's output is sold to locations within Yolo and Solano Counties. Under the no-project alternative, within the proposed thirty year term of the requested permit, the huge majority of lost output would be made up by other producers outside the Cache Creek area but in the same Air Basin and with longer hauls to bring substitute material to Solano Concrete's former customers. This approach to the no project alternative analysis is particularly important in light of the fact that Solano Concrete's asphalt plant would probably continue to operate at a hundred percent of capacity, even if it had to import gravel from other sources. The longer hauls to the plant would add to already greater NOX and ROG emissions resulting form the cessation of aggregate production by Solano Concrete. The same is true to a great extent with PM-10 emissions, especially in connection with the actual excavation of aggregate and the use of longer private haul roads at alternative mining sites under the no project alternative.

3-28

Mitigation measure 4.11-2a (Page 4.11-10):

The first three bullets of the mitigation measure have already been accomplished.

With respect to the fourth bullet, request that the words "before mining begins on Yol-69...," be substituted for "after mapping" at the beginning of the paragraph. With respect to the fifth bullet on page 4.11-11, request that the first sentence be amended to read as follows:

3-29

"If it is determined that the site contains significant cultural resources, before mining begins on Yol-69, an appropriate mitigation program shall be developed based on the information obtained during the site evaluation."

Thank you very much for your consideration of these comments.

Very truly yours,

Solano Construction Co. Inc.,

_____

by: Anthony Russo

longterm/tschudin.5

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June 26, 1996

To: Anthony Russo

Fm: Verne Scott

Re: Solano Project EIR, Dated June 3, 1996/Review

In response to your request of June 18, I have reviewed Section 4.4 Hydrology and Water Quality and Section 4.5 Agriculture and have the following comments.

In general:

- The Hydrology and Water Quality section reflects some of the comments that were submitted on the draft EIR in my memo of May 31, 1995. **3-30**

- The section's descriptions, analysis, interpretations and recommendations are consistent with sound hydrologic principles and practices. **3-31**

- The Agriculture section is satisfactory and does not have any major hydrologic impacts. **3-32**

Some specific comments and questions are included in the attached statement.

Enc.

SPECIFIC COMMENTS AND QUESTIONS
On
Section 4.4 Hydrology and Water Quality
Solano Project EIR, June 3, 1996

pg. 4.4-1, par 2: It would be accurate and complete to acknowledge that some of the "unconfined" ground water is perched above discontinuous layers of low permeability clays and sands. 3-33

pg. 4.4-4, par 4: It would be more accurate to define the depth of the "uppermost clay" occurring at a depth of "20 feet" rather than "40 feet". 3-34

pg. 4.4-12, end of par. at top of page: Reference is made to "water quality standards" It should be "water quality objectives" as per Table 4.4-4? 3-35

pg. 4.4-13, par. 5: Would it be more accurate to indicate the "filling...with finer-grained sediment..." will be in portions or part of the "mined areas"?

Since only a portion or part of the "backfilled pits" will be backfilled with "overburden materials", is there data to show that the "flow through the aquifer" "would (be) reduced on a regional basis"? 3-36

pg. 4.4-25, 3rd bullet: What "groundwater monitoring requirements" will not be met by the program proposed? 3-27

pg. 4.4-26, par. 2: I support the statement by Macler pertaining to "potential biological quality impacts". 3-38

pg. 4.4-27, par. 5: It is not clear if the "topsoil, formerly in agricultural production" is in-situ soil or soil transported to the project site as part of the "reclamation plantings" If in-situ soil is used, the problem should be no different than for all the agricultural soil on and surrounding the project site. If it is soil transported into the site, it could be specified that it not contain "persistent pesticides and/or herbicides". The impact of either process should be a less-than-significant. 3-39

pg. 4.4-30, par 2: It should be noted that when "these surfaces (are) inundated by high groudwater conditions," the hydrology of the region is such that inundation will be for short periods of time, i.e. days, not the entire planting or growing season. 3-40

V. H. Scott: June 26, 1996

Solano Concrete Co.

Long-term EIR

Response to Biological Resources Comments

Prepared by:
Zentner and Zentner

The Biological Resources portion of the EIR is generally a well-written and thorough document. Our specific comments primarily concern the impacts and mitigation measures as these are often not well-supported by the text of this Section.

Mitigation Measure (MM) 4.6-2a

This measure would require identification of the areas to be planted in hedgerow habitat.

Hedgerow type plantings will occur only around the Hutson parcel. The Hutson parcel was the only area that had an existing "hedgerow" in the sense that several trees occurred on the edge of this parcel prior to recent mining. The other parcels to be mined do not have existing hedgerow habitat and mining of these parcels should not result in impacts to native plant communities.

As noted in the EIR text, the proposed project would result in the creation of a significant extent of new woodland habitat while mining of the site will result in relatively minor impacts to native communities due to the highly altered character of the site. As an example, the EIR estimates that the restoration program will result in the planting of over 1,000 valley oaks while the mining program will cause the loss of 10 oaks (see below; the applicant proposes to reduce oak loss even further). Consequently, it would be difficult to characterize the provision of hedgerow habitat as needed mitigation for any of the applicant's actions. 3-41

The provision of hedgerow habitat would obviously improve the overall habitat values of the future farmed lands and might further objectives of those interested in total habitat quality in Yolo County. While these are laudable goals to which we would subscribe, requiring these actions as mitigation for non-existent impacts would conflict with case law and regulations on mitigable actions. In short, there is no "nexus" between project-related impacts and a mitigation measure that would require additional hedgerows.

ZENTNER and ZENTNER

MM 4.6-2b

This measure requires the preservation of oaks on the fringe of the mining area.

This measure is acceptable to the applicant. By agreeing to preserve these oaks, the total impacts to oak trees is reduced from the loss of 10 trees to the loss of 5 trees.

3-42

MM 4.6-2c

This measure requires temporary fencing at the edge of Cache Creek.

The text of the EIR does not provide a clear demonstration of the need for fencing along the Cache Creek corridor. Presently, the corridor is separated from the mining areas by the haul road and the slope adjacent to the road. No mining activities that could be reduced by fencing have yet impacted the corridor based on our observations and the EIR does not produce evidence of such impacts.

Temporary fencing is useful (as around the dripline of oaks) as a visual marker to ensure construction equipment and activities do not disturb the soil under the oaks. We routinely specify temporary construction fencing where preserved wetlands or areas of important habitat will occur on construction sites. The Cache Creek corridor has its own barrier in the form of a steep slope; any construction activities in this area would result in significant damage to any construction vehicles or equipment. Consequently, temporary construction fencing does not appear to be necessary. It is important to note that this mitigation measure is also not well-supported in the text. Where actual impacts will occur, as in the loss of oak trees, the text is quite clear and precise in noting and defining these impacts. In this case, though, the text provides no justification for this measure.

3-43

MM 4.6-2d

This measure requires that levees be set back from the edge of riparian habitat and that biotechnical slope control be used in the area downstream of the I-505 bridge.

The EIR indicates that creation of a 3:1 fill slope along Snyder East and West will impact an existing riparian corridor. The impact is not clearly defined; the only work noted here is minor levee work and the cutting and revegetation of a gentler slope to reduce erosion. The EIR also recommends use of biotechnical means for erosion control near the I-505 bridge. Biotechnical means (coir and jute netting, willow wattles, etc.) are generally preferable to rip-rap. However, the ability of these materials to withstand moderate to high velocities in this soil is uncertain. If the project engineers determine that velocities will be low enough to allow biotechnical control to reduce erosion then such a program shall be developed and implemented by the applicant rather than using rip-rap.

3-44

MM 4.6-2e

This measure requires the removal of two exotic weed species and enhancement of existing resources at a site near Snyder East. 3-45

The removal of tamarisk and giant reed and enhancement of the depression near Snyder, East as recommended in the EIR are acceptable to the applicant with the understanding that the removal and enhancement would be completed to the extent practicable given access and other restrictions.

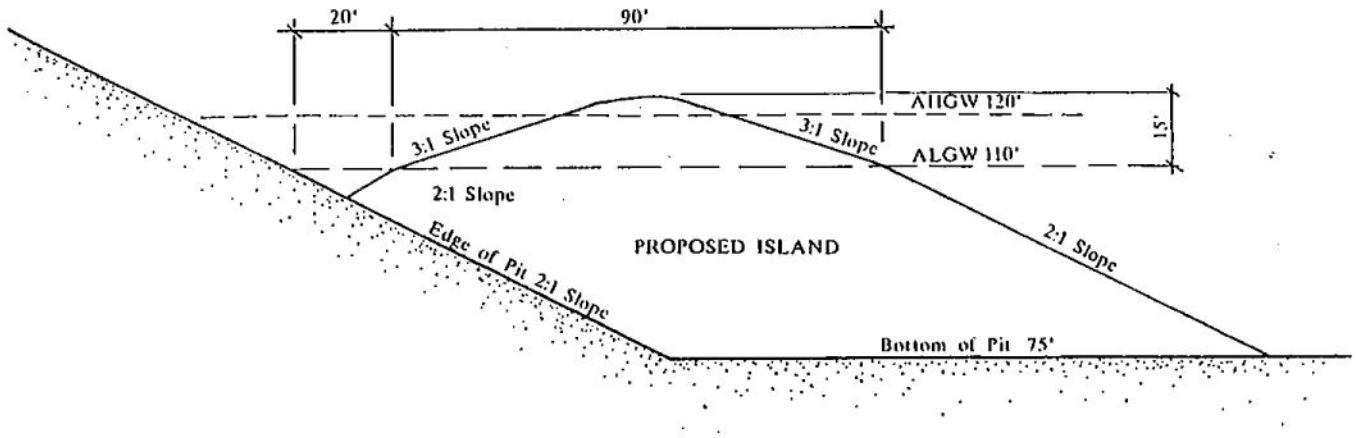
MM 4.6-3a

This measure requires the preservation or construction of earthen islands in the lakes rather than the artificial islands proposed by the applicant.

The construction or preservation of islands of aggregate in the proposed lakes is not supported as a mitigation measure in the text of the EIR. The EIR provides a precise discussion of existing and future habitat and other values of the project site. The EIR concludes that existing habitat values are relatively low in the mining areas and that the proposed habitat restoration activities will adequately mitigate for biotic impacts. Accordingly, there is no nexus for the requirement of such a measure.

While the provision of earthen islands might increase habitat values by some margin, the advantages and disadvantages of such islands should be carefully weighed and the value of earthen islands relative to the proposed floating islands considered. The advantages of islands are defined in the EIR to consist of the provision of "permanent, secure nesting and roosting habitat for a variety of species". This definition assumes that predators are a significant issue in this region and the provision of secure nesting sites important. The presence of large numbers of predators has not been identified in the EIR as an issue for habitant creation in this area. This definition also assumes that nesting and roosting habitat as provided by earthen islands is important. However, the EIR does not define which species would be using these islands for nesting. Given the shape of the islands (see the figure attached), they would not provide flat slopes near the water and they would be composed of highly permeable materials. These islands would probably be dominated by tall weeds the first few years before willows and cottonwoods begin to dominate the near shore areas. The resulting woodland would support nesting wood ducks and passerines but, because this type of habitat will be provided along the entire shoreline of the lakes and these species are not especially susceptible to predators, it is questionable whether this additional habitat is needed. 3-46

Additionally, these types of islands are often subject to significant maintenance requirements. At Great Linford in the UK, one of the most closely monitored and managed mining-wildlife complexes, the willows and alders that grow on their islands are cut every winter to encourage the thick ground cover that is most suitable for nesting dabblers.



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PROPOSED ISLAND
TYPICAL CROSS-SECTION

ZENTNER ZENTNER

Other disadvantages of the earthen islands must also be considered. The cross-sectional area of the proposed islands as defined would require the preservation of almost 5,000 square feet of material for every foot of island length. If an island were 200 feet long with no top width, it would require more than 33,000 cubic yards of material. The opportunity costs of preservation of this much aggregate should be considered.

Generally, habitat or wildlife enhancement begins with an understanding of the objectives of the effort. The habitat goals of the proposed restoration work as contained in the HRP are relatively clear and are stated in terms of the plant communities to be established. The program provides opportunity and performance standards to ensure these habitats will be established. While the provision of islands can be important in many areas, the objectives and need for such a requirement do not appear to have been well-developed.

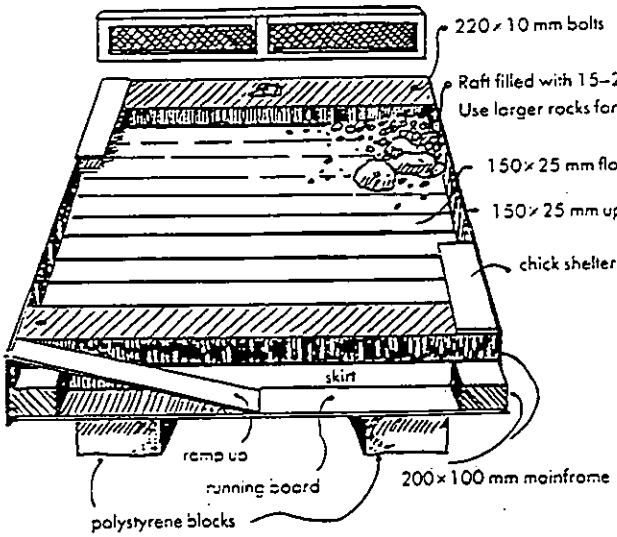
3-46

Floating islands are proposed in the project HRP to provide relatively level habitat near the water for resting dabbling ducks and shorebirds. With modifications, such as the addition of low-growing grasses and forbs, these can also function as nesting habitat for dabbling ducks such as mallards and widgeons. The use of artificial nesting islands has been well-documented in wildlife management projects. Attached figures show illustrations from sites in both the U.S. and U.K. Many of these sites are also subject to ice and snow yet the islands still last for many years. Neil Payne, in *Techniques for wildlife habitat management of wetlands* (1992, McGraw-Hill), lists eight different types of artificial islands, including commercially available forms, and concludes that these are important adjuncts to other habitat restoration efforts.

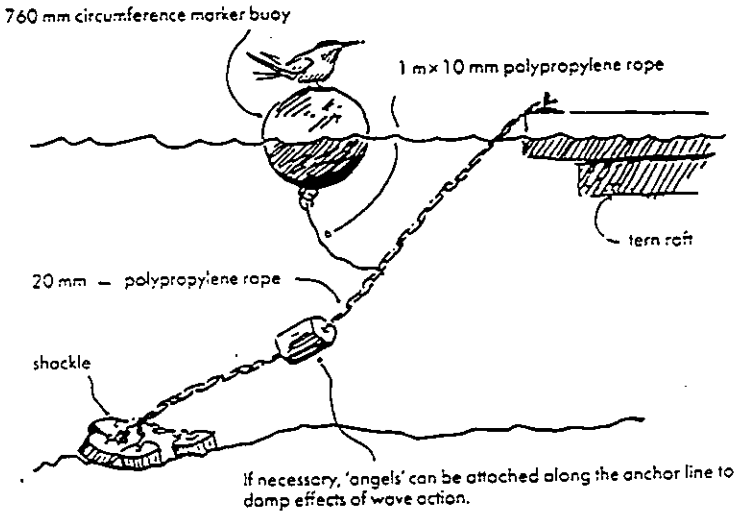
(a) Completed raft

Removable protective wire frame bolted at ends to surround all four sides of raft

3·0 m × 230 mm high, externally covered with 25 mm chicken wire



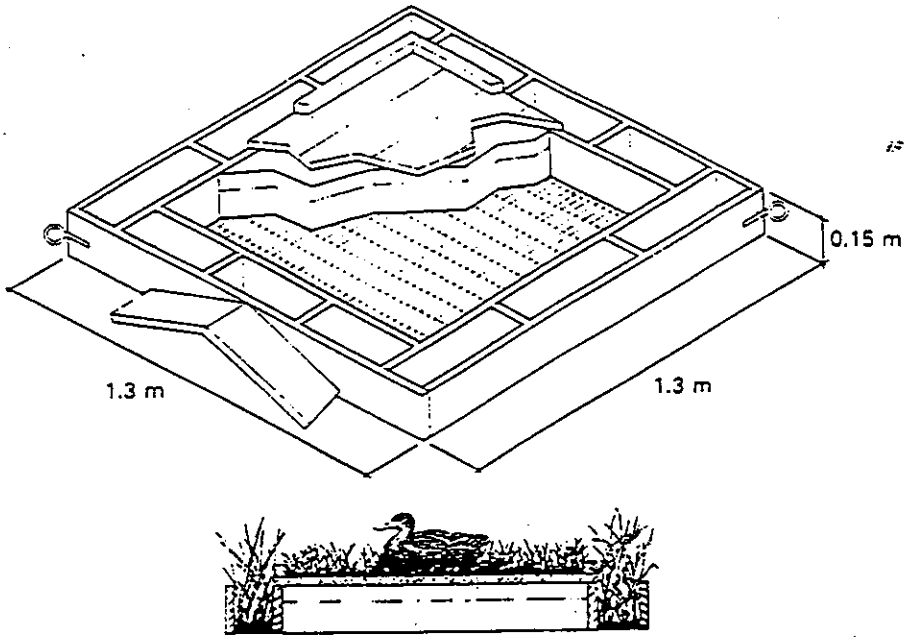
(b) Anchorage for raft



FROM: Gravel Pit Restoration for Wildlife by John Andrews and David Kinsman

ZENTNER ZENTNER

ARTIFICIAL WATERFOWL NESTING ISLANDS



This box section nesting raft is ideal for a single nest. The cavity is filled with polystyrene and the rings are to allow the raft to be anchored.

FROM: Wildlife after Gravel, by Nick Giles

ZENTNER
ZENTNER

ARTIFICIAL WATERFOWL
NESTING ISLANDS

LETTER 3: SOLANO CONCRETE COMPANY, INC.

Response to Comment 3-1:

Thank you for your comment letter. For purposes of clarification, the letter is assumed to be referring to the Draft EIR (DEIR) as there was no circulation of a document entitled "Preliminary Draft" EIR. The commentor's information on Solano Concrete's operation and monitoring efforts are noted for the record. The information presented is consistent with the record and staff's observations.

Response to Comment 3-2:

The commentor's conclusion regarding the availability of aggregate resources and thickness of overburden in the area south of the proposed mining area are noted for the record. The DEIR acknowledges that overburden thickness increases to the south, away from the creek. However, the estimated average thickness of overburden and elevation of groundwater used in development of the alternative were based on subsurface information throughout the proposed site. These estimates were projected to the area south of the project site because of lack of available detailed information and the assumption that CDMG mapping of aggregate resources indicates the presence of aggregate resources in this area. The DEIR reached a conclusion similar to that of the commentor regarding the economic infeasibility of mining of this area.

Response to Comment 3-3:

Text Change #2 has been made in response to the comment.

Response to Comment 3-4:

In response to the comment, Text Change #6 has been made.

Response to Comment 3-5:

Text Change #8 has been made in response to the comment.

Response to Comment 3-6:

The comment specifically addresses the identification of the requirement of a 2081 permit from the California Department of Fish and Game for the disturbance of Swainson's hawk foraging habitat. As described in Impact 4.6-6 (page 4.6-39), the DEIR acknowledges that there is some question as to whether CDMG will consider the disturbance of Swainson's hawk habitat as a "take" under Section 2081. The impact analysis also describes the provisions of the County Habitat Conservation Plan (HCP) that relate to this issue. Mitigation Measure 4.6-6a (page 4.6-40) provides flexibility in the mitigation of the loss of this habitat, including other alternative mechanisms acceptable to CDFG.

Response to Comment 3-7:

The proposed language and the DEIR language essentially say the same thing. Mitigation Measure 4.2-3a contains adequate language to ensure that mining will not be allowed on Williamson Act contracted land unless the proposed reclamation is in conformance with the Williamson Act, or unless the Williamson Act contract has expired. No change is recommended for the EIR; however, staff will consider this language to clarify the recommended conditions of approval.

Response to Comment 3-8:

The commentor is correct, in that the Yolo County Resource Conservation District is not an agency that would be required to issue a permit for the project. However, the Resource Conservation District (RCD) is an agency which has powers (granted by statute) to develop guidelines for certain agricultural practices in Yolo County. CEQA does not limit the plan consistency analysis in an EIR to only regional or other agency plans that have permitting authority over a development project. The comment raises the issue of whether the County would or should identify permanent conversion of agricultural land to nonagricultural use as a significant impact for discretionary permits for other projects proposed within the County. As with any environmental impact analysis, the answer depends on the use proposed and site-specific circumstances of the project.

Response to Comment 3-9:

The comment is noted. The DEIR is correct; however, this additional information regarding ownership will be useful for consideration by decision makers.

Response to Comment 3-10:

The commentor proposes alternative language for Mitigation Measure 4.2-8a. The DEIR is appropriate for CEQA purposes. The alternative language will be considered by staff for inclusion in the recommended conditions of approval.

Response to Comment 3-11:

The commentor is correct. The description of the stratigraphy applies to the entire 1,828-acre project site, comprised of eight parcels. The information used to develop the description was based on regional information and site-specific information provided for the mining areas.

Response to Comment 3-12:

To provide clarification to the issues regarding 100-year flood protection raised in the comment, Text Change # 5 has been amended to the DEIR. The commentor's point that the incised channel has been mined was discussed in the second full paragraph of page 4.3-7.

Response to Comment 3-13:

The commentor is correct in pointing out that the surveying required by Section 10-5.512 of the Surface Mining Reclamation Ordinance applies to determination of elevation and not to a property boundary survey.

Response to Comment 3-14:

It is for the most part. The CCRMP boundary was determined from the best available information on the 100-year flood boundary and detailed analysis of the position of the historic channel. The historic channel can include areas landward of the 100-year flood boundary. Section 10-4.429(d) of the approved OCMP requires a minimum setback of 700 feet from the existing channel bank for all mining areas within the Streamway Influence Boundary. If it is demonstrated that a smaller distance will not adversely affect channel stability, the minimum setback can be reduced to not less than 200 feet. The 200-foot setback cannot include areas behind levees or within the historic floodplain as delineated in the CCRMP.

The appropriateness of this boundary at the project site was evaluated in the DEIR. In areas where the CCRMP boundary did not reflect site-specific hydraulic or topographic data indicating the historic channel boundary, a recommendation was made to revise the boundary (See Mitigation Measure 4.3-4a). Staff considers the revised boundary to be sufficiently well-defined to determine the setback datum. As the project site includes leveed areas and portions of the historic channel that do not provide a sufficient buffer against lateral erosion, the use of the 100-year flood boundary as the datum for the setback would not be consistent with the OCMP.

Response to Comment 3-15:

The geotechnical report submitted for the project did not include a full analysis of levee stability within the project site. It did not evaluate the construction history of the levees at the project site, and no geotechnical borings were made on the constructed levees. Therefore, the position taken by the commentor that the levees have been specifically evaluated is not supported. It is accurate that the physical distance from the raised levee road to the mining area boundary is over 200 feet. In addition, engineered levees require regular maintenance and upkeep that may not be provided once reclamation is complete. The 200-foot setback allows additional insurance against multiple erosion events in an untended reach to avoid "pit capture."

Response to Comment 3-16:

Please refer to Responses to Comments 3-14 and 3-15.

Response to Comment 3-17:

Staff does not agree with the text change recommended by the commentor. Staff and the preparers of the DEIR recommended completion of the levee improvements for the entire project within one year of commencement of mining, as stated in the DEIR. The extent of areas affected by overtopping of portions of the separator which do not provide 100-year protection has not been accurately delineated. Flooding of surfaces lowered by mining in earlier phases could occur during such an event.

Under the CCRMP, in-channel work would require a floodplain development permit from the County. Therefore, the "terms and conditions" of all in-channel work will indeed be under the control of the County. However, the applicant, not the County, will be the permit holder.

Response to Comment 3-18:

The nexus for requiring participation by the applicant in the Cache Creek Improvement Program is established through recognition of Cache Creek as a dynamic system potentially capable of causing changes that could affect or be affected by the presence of off-channel mining areas. Creation of the mining areas proposed by the project would be a significant development requiring protection from flooding and erosion caused by the creek. The applicant has elected to develop mining areas within the Streamway Influence Boundary (SIB). The SIB was established in the Technical Studies for the CCRMP as an area that has been affected by historic migration of the Cache Creek channel. Due to the potential for further channel migration of similar magnitude, the Technical Studies for the CCRMP, the OCMP, and the OCMP EIR recommended that mining areas be set back 700 feet from the existing channel bank. The OCMP and OCMP EIR recognized that the setback could be reduced to not less than 200 feet if individual projects could demonstrate that engineering protection of the channel bank could prevent erosion of the separator between the mining areas and the creek channel.

Although the project is required to provide 100-year flood protection for the proposed mining areas, changes in flooding hazards associated with the creek could result if the channel maintenance under the CCIP were not implemented. In addition, unstable hydraulic conditions could result in unexpected erosion of the channel bank. The implementation of the CCIP is considered by the County to be an important preventative measure for long-term maintenance of the separators bounding mining areas within 700 feet of the current channel.

The commentor's opinion that the position of the proposed project relative to the Esparto bridge does not establish a nexus for required participation in channel modification at the bridge is considered valid by staff. Therefore, Mitigation Measure 4.3-4i has been modified by Text Change # 15 to remove reference to improvement projects associated with the bridge.

Staff does not agree with the commentor's position that the level of participation should be proportional to the level of past contributions of mining activities to channel mining to channel instability or to the level of mining that may be approved for the proposed project. As discussed above, the nexus for requiring participation relates protection of the proposed mining areas to involvement in the channel improvement projects. The mitigation measure addresses improvement of the channel in the area of the proposed project. Therefore, staff does not believe that participation in the CCIP should be considered a "net gain" of the proposed project. The level of liability for activities under the CCIP would likely be similar to the liability that any property owner would incur as related to any other channel improvement project for protection of developed property. The bank stabilization proposed by the project would likely result in similar levels of liability. The applicant is encouraged to obtain legal counsel on the issue of liability. The scheduling and cost (and payment) of work would be the responsibility of the owner but subject to review by YCCDA under the CCIP. However, in-channel work done on properties other than those adjoining the permitted off-channel mining area would be seen as a "net gain."

Response to Comment 3-19:

Staff considers that the determination of the California Division of Safety of Dams (DSD) jurisdiction to be necessary prior to mining that could result in the conditions which may be subject to DSD approval. The commentor's suggestion that a request for determination by DSD sixty days prior to such mining would not meet the intended purpose of the mitigation measure. Within sixty days, DSD may not be prepared to make such a determination.

Response to Comment 3-20:

The commentor is correct. To mitigate potential impacts to the support of the I-505 bridge, the channel should be allowed to aggrade approximately five feet at the bridge. The maintained level of aggradation would decrease downstream toward the project site. Please refer to Text Change #17.

Response to Comment 3-21:

The requirement for three feet of freeboard on flood protection levees around the project site has been deleted under Section B of the Statement of Overriding Considerations for Adoption of the Off-Channel Mining Plan (dated 30 July 1996). It was determined that potential downstream flooding could be exacerbated by this requirement. Please refer to Text Changes # 16, 20, 21, and 22.

Response to Comment 3-22:

A description of the anticipated loss of mature oak trees is provided on page 4.6-35 of the DEIR, which acknowledges that only five oaks would be removed to accommodate mining, that an additional five oaks would be located at the periphery of mining activities and could be damaged or removed, and that over 1,000 valley oaks would be planted as part of

revegetation and restoration. Mitigation Measure 4.6-2b on page 4.6-36 of the DEIR was recommended to ensure protection of mature oaks at the fringe of proposed mining areas where loss of these trees could be avoided.

With regard to the proposed hedgerow plantings along the margin of the agricultural uses, the proposed Habitat Restoration Plan states that plantings would be "provided on the edges of the reclaimed agricultural lands" (page 46), but the Proposed Restoration Plan shown in Figure 4.6-2 on page 4.6-29 of the DEIR does not indicate the location of hedgerow plantings. The proposed Hedgerow Planting Details shown in Figure 4.6-6 on page 4.6-34 of the DEIR indicate hedgerow plantings along the western and northern edge of the Kaupke parcel. Further clarification in a correspondence by the applicant's biologist (Comment 3-41) indicates that hedgerow plantings are only proposed around the Hutson parcel to replace the hedgerow habitat once present as fencerows on this portion of the site. Action policy 6.4-13 of the OCMP calls for simply requiring replacement of hedgerow habitat where lost by mining activities. Additional hedgerow plantings could be established to enhance wildlife habitat for reclamation or as part of a site-specific mitigation plan a Section 2081 agreement with the CDFG. In response to the comment, Text Changes # 23 and # 24 have been made to indicate the proposed extent of hedgerow plantings on the site.

Response to Comment 3-23:

The concerns of the commentor regarding the appropriateness of creating permanent islands in the proposed lakes, the substantial amount of material to create these features, and the benefit of the proposed artificial islands is noted for the record. A discussion of the use of islands as a habitat feature is provided on page 4.6-37 of the DEIR. The proposed Habitat Restoration Plan for the project acknowledges that islands are an important component of open water habitat, but has proposed using floating artificial islands rather than creating permanent islands due to the substantial volume of sand and gravel which must be set aside or replaced in the pit to create them. The proposed use of artificial islands by the applicant's biologist provides an indication of the importance of islands to wildlife and enhancement of open water habitat. As noted by the applicant's biologist in a related correspondence (Comment 3-46), use of artificial islands may be "important adjuncts" to habitat restoration efforts. However, this is generally the case where permanent islands have not been incorporated into reclamation plans and the material required to create a permanent island is not available, making artificial islands the only feasible "adjuncts" for secure resting and nesting habitat.

The collective area occupied by the proposed lakes and the resulting substantial change to the existing upland habitat of the site warrants additional enhancement of the proposed water bodies. Performance Standard 4.5-13, listed on page 4.6-26 of the DEIR, contains provisions for permanent, vegetated islands when developing wetland areas and reclaiming wet pits. While the volume of material which must be left in place for a permanent island is considerable, creating a permanent island on at least one of the lakes would provide secure nesting and roosting habitat for a variety of species.

In response to the Comment, Text Changes # 26 and # 27 have been made to indicate that a permanent island should be required on only one lake and that the proposed artificial islands and submerged peninsulas should remain along the edge of the other lakes.

Response to Comment 3-24:

The County's Habitat Management Plan has not been adopted. Therefore, the framework for offset fees described in the comment has not been finalized and should not be referenced in this EIR. However, Mitigation Measure 4.6-4a provides for alternate mechanisms that are acceptable to CDFG for mitigation of loss of Swainson's hawk habitat.

The opinion of the commentor regarding the use of tree plantings and revegetation of restoration areas as adequate mitigation for potential impacts on Swainson's hawk is noted for the record. As discussed on page 4.6-39 of the DEIR, the site meets the two criteria used by the CDFG in determining suitable foraging habitat for Swainson's hawk for which mitigation must be provided if lost as a result of development. Areas of tree crops and the open water habitat of the lake would be unsuitable for foraging, resulting in the net permanent loss of approximately 384 acres of suitable foraging habitat. Mitigation Measure 4.6-4a on page 4.6-40 of the DEIR calls for securing a Section 2081 authorization with the CDFG to ensure that adequate mitigation is provided for the loss of Swainson's hawk foraging habitat. Tree planting and revegetation of the restoration areas would most likely be considered as part of the mitigation agreement, but this would be defined through further consultation between the applicant's consulting biologist and the CDFG.

Response to Comment 3-25:

As discussed on page 4.6-40 of the DEIR, elderberry shrubs occur in close proximity to proposed excavation areas and could be affected by project-related activities. There also remains a possibility that new elderberry shrubs could become established during the estimated 30-year life of mining activities, and destruction of any new plants supporting VELB would result in an unauthorized take of this endangered species. Mitigation Measure 4.6-5a on page 4.6-41 of the DEIR calls for compliance with the USFWS "General Compensation Guidelines for Valley Elderberry Longhorn Beetle", which has not been defined in the proposed Habitat Restoration Plan. Providing a preconstruction survey prior to initiation of each phase of mining would ensure that a thorough inventory of elderberry shrubs is prepared and appropriate provisions taken to avoid or mitigate impacts of future mining activities.

Response to Comment 3-26:

Mitigation Measure 4.6-5c on page 4.6-42 of the DEIR provides a number of options to replace the artificial bank swallow nesting habitat on the Hutson parcel. This includes creating new artificial habitat on side slopes of the permanent lakes, as well as restoring the vertical bluffs of the Snyder East parcel, as suggested by the commentor.

Response to Comment 3-27:

As discussed on page 4.6-41 of the DEIR, it is possible that one or more species of raptor may establish an active nest in the vicinity of proposed improvements at some time in the future which could be destroyed or abandoned as a result of construction activities. The Habitat Restoration Plan and other components of the project application do not indicate that tree removal would occur after August 15 and before March 1. Mitigation Measure 4.6-5d on page 4.6-42 of the DEIR calls for conducting a pre-construction survey prior to initiation of each phase of mining, which is to occur over specific portions of the site during the anticipated 30-year life of mining activities. The survey would extend throughout the new mining area, where tree removal and ground disturbance associated with mining activities would not yet have occurred, and establishment of new tree or ground nesting locations would be possible. The survey would only be required prior to initiation of a new phase of mining, not on an annual basis as indicated by the commentor. If an active nest is encountered as part of the pre-construction survey, a buffer zone may be necessary to protect the nest location until young have fledged depending on the distance between the nest and proposed mining activities.

Response to Comment 3-28:

The efforts of the applicant to run a clean plant and operation are acknowledged by the County and appreciated. The commentor assumes, however, that under the "no project" mining would occur elsewhere in the basin with "much longer haul routes." This is not necessarily the case. Any one of the existing operations along Cache Creek could theoretically supply this gravel, without measurable increases in haul distance.

The DEIR appropriately evaluates potential emissions associated with the project proposed by the applicant. It would be speculative to attempt to evaluate which company could provide the services the applicant proposes to provide over the next 30 years.

Response to Comment 3-29:

Text Change # 31 has been made in response to the comment.

Response to Comment 3-30:

The preparers of the DEIR made a concerted effort to address all comments submitted during the EIR process.

Response to Comment 3-31:

Staff and the preparers of the DEIR appreciate the comment, which is noted for the record.

Response to Comment 3-32:

Comment noted. No response is necessary.

Response to Comment 3-33:

The preparers of the DEIR agree with the commentor. However, the description of the regional environment in the DEIR was purposefully brief. As referenced at the end of the second paragraph on page 4.4-1 of the DEIR, an expanded discussion of hydrogeology is included in the OCMP EIR.

Response to Comment 3-34:

The uppermost clay occurs at depths ranging from 21 feet in the central portion of the mining area to 50 feet in the south-central portion. The 40-foot average depth was provided as a general average based on review of on-site boring log data.

Response to Comment 3-35:

Text Change # 19 has been made in response to this comment.

Response to Comment 3-36:

The discussion referred to by the commentor is located on page 4.4-14 of the DEIR, second to last paragraph. This discussion focuses on activities that could result in siltation of groundwater recharge areas. Although it does not specifically state in this paragraph that only portions of the mined areas would be backfilled with fine-grained sediment, this fact is stated frequently throughout the document, including in the project description. Filling of the saturated zone portions of some mining areas with finer-grained processing fines and overburden would result in localized reduction in hydraulic conductivity of the aquifer.

Response to Comment 3-37:

Section 10-4.417 of the Off-Channel Surface Mining Ordinance contains specific requirements for number and location of monitoring wells, frequency of monitoring, and constituents to be analyzed. The monitoring program proposed by "Groundwater Hydrology Report No. 3" included in the Solano application package (Appendix 4), acknowledges that the existing program only partially satisfies the requirements of the monitoring program suggested by the draft OCMP. The ordinance requirement expands components of the monitoring program presented in the application.

Response to Comment 3-38:

The comment in support of technical opinion presented in the DEIR is noted for the record.

Response to Comment 3-39:

The referenced paragraph refers to on-site soils. As the fourth paragraph on page 4.4-27 of the DEIR explains, pesticides may migrate through the unsaturated zone toward the water table. Prior to mining and reclamation to lowered surfaces, the distance of downward pesticide migration would be relatively greater, and therefore the likelihood of groundwater quality degradation may be lower. The DEIR preparers understand that the project does not propose importation of soil to the site for use as backfill.

Response to Comment 3-40:

The preparers of the DEIR do not have specific information on the likely duration of inundation events on lowered surfaces. The duration of inundation may not be directly comparable to flooding and drainage of natural higher surfaces (due to different soil conditions and hydraulic head relationships). The paragraph intentionally does not include a reference to inundation duration. Preparers of the DEIR acknowledge that high groundwater levels would be seasonal. Elevated groundwater levels could occur before or during spring planting season. Even periods of short duration, however, may have a critical impact on agricultural productivity, depending on the timing and the type of crop being produced.

Response to Comment 3-41:

The clarification provided by the commentor regarding proposed hedgerow plantings on the site is noted for the record. Refer to the Response to Comment 3-22.

Response to Comment 3-42:

The acceptability of the provisions in Mitigation Measure 4.6-2b of the DEIR to the commentor is noted for the record.

Response to Comment 3-43:

Mitigation Measure 4.6-2c of the DEIR was recommended to provide consistency with Section 10-4.436 of the Off-Channel Surface Mining Ordinance and to ensure that unauthorized disturbance to vegetation along the Cache Creek corridor is avoided. Scattered elderberry shrubs, riparian vegetation, and native trees remain along the corridor, and the area has been proposed for restoration as oak woodland and riparian woodland habitat in the Habitat Restoration Plan for the project. As discussed on page 4.6-35 of the DEIR, these features may be unintentionally disturbed at some point during mining and reclamation unless new haul roads were sensitively sited and fencing was installed to control heavy equipment operation. The remaining existing resources and proposed restoration plantings should be protected through the use of temporary fencing, as called for in Section 10-4.436 of the Off-Channel Surface Mining Ordinance.

Response to Comment 3-44:

The concerns of the commentor regarding the appropriateness of biotechnical slope stabilization are noted for the record. A discussion of the potential impacts of proposed levee improvements and other disturbance on sensitive vegetation resources is provided on page 4.6-35 of the DEIR. Mitigation Measure 4.6-2d on page 4.6-36 of the DEIR calls for protection of areas of established riparian vegetation and use of biotechnical methods to control erosion along the active channel. As noted by the commentor, biotechnical methods may not be appropriate along the active channel if engineering evaluations demonstrate that riprap must be used. In response to the comment, Text Change # 25 has been made to indicate use of riprap if necessary to control severe erosion.

Response to Comment 3-45:

As a part of ongoing monitoring of the project, the County will ultimately determine whether the applicant's implementation of the measure is in full compliance, or not acceptable. The restrictions to which the comment refers are not specified. No modification to the measure is recommended by staff.

Response to Comment 3-46:

The concerns of the commentor regarding the appropriateness of creating permanent islands in the proposed lakes, the substantial amount of material to create these features, and the benefit of the proposed artificial islands is noted for the record. Refer to the Response to Comment 3-23.

LETTER 4

July 18, 1996

To: Dave Morrison & Heidi Tschudin,
Yolo County Planning Department

Subject: Comments & Statements of Concern - DEIR - Off Channel Mining Plan Applications.

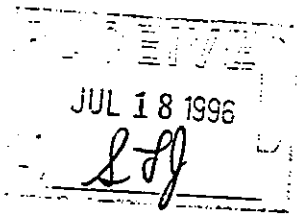
The enclosed documents consist of General and Specific Comments on the DEIRs for the following Off Channel Mining Applications.

Solano Concrete

Teichert Woodland

Teichert Esparto

Syar



We believe that the DEIR Consultants did not adequately address concerns raised earlier. We therefore have re-emphasized our concerns with the hope that adequate consideration will be given to these as well as the other issues. Since the proposed Development Agreement is a more recent issue, we plan to respond separately. 4-1

As indicated earlier the DEIR has not adequately presented the hazardous risk of the Open Deep Wet Pits to the major source of potable water in Yolo County. Some of these pits will exist into perpetuity acting as open, festering wounds on the landscape tearing deep holes into the aquifer holding our most precious resource - drinking water. This would be a terrible legacy to leave our children and future generations! 4-2

Bob & Mitzi Speirs
Environmental Issues Committee
Western Yolo Grange #423

Janet Levers
Cache Creek Coalition

Lois Linford
Natural Resources Committee
League of Women Voters,
Woodland

Ian Ekholm
Citizens for Responsible Mining

July 15, 1996

To: Dave Morrison & Heidi Tschudin

Yolo County Planning Department

Subject: Comments and Statements of Concern

DEIR- Solano Long-term off-channel Mining Permit Application

SCH # 960 12034

June 3, 1996

Part I EXECUTIVE SUMMARY OF COMMENTS

The following comments are discussed in much greater detail in the body of the response.

1. **Has failed to adequately consider the public health aspects of lake eutrophication at vegetation maturity (10-20 years after reclamation), mercury considerations and the presence of the raw sewage lagoons of Madison and Esparto. These raw sewage lagoons are a haven for waterfowl and shore birds which can commute to the proposed pit-lakes (exposed potable aquifer) and carry human pathogens.**

   There is no testimony offered on these matters in the DEIR that was submitted by properly licensed State Experts on Public Health. The testimony that is offered is submitted by people who appear to lack the required licenses. The report by Darrel Slotten on Mercury was excellent except that it was carried out over a very limited period of time and not during a period when the greatest mobilization of mercury is apt to occur. 4-3

2. **The DEIR does not acknowledge the sealing of the sides and bottom of the pit-lake with the silt and clay that is agitated below the water level during actual excavation. It also fails to discuss the sealing of the pit-lakes by organic slimes after and during eutrophication. There is no testimony from expert aquatic biologists or limnologists.** 4-4

3. **The Migrant Farm Labor Housing Project with its concentration of children and Hispanics is not acknowledged. No indication that bilingual hearings or DEIR documents have been furnished or any Spanish language public hearings held.** 4-5

4. The accepted safe slope for public swimming pools is not presented so the reader has no basis for comparison with the pit-lake side slopes recommended by Staff. This response fills that gap and offers graphics to demonstrate that the slope recommended by Staff is 4 times steeper than what is nationally recommended for safety of swimmers. 4-6

5. In calculating evapo-transpiration, the Technical Studies do not use specific micro-climate data for the project vicinity which experiences more frequent north winds with greater velocity than does the climate east of the Dunnigan Hills. Use of general climate data greatly understates the specific evapo-transpiration loss for the project location. 4-7

6. The DEIR never resolves the issue of whether the Division of Safety of Dams will require an engineered dam to be constructed as a separator in depressed areas adjacent to the channel. 4-8

7. Staff provides no engineering justification for agreeing not to require a 100 year flood protection levee and allowing a pit to be flooded. 4-9

8. Staff agrees to allow diversion from Cache Creek into a mining pit although no proof is offered that the specific parcel has riparian water rights. YCFC&WCD has already filed an application with the State for all remaining unclaimed water in Cache Creek. 4-10

9. Staff fails to indicate whether or not permits will be required from the SRB, COE, and DWR if diversion structures are to be constructed on Cache Creek. 4-11

10. Staff authorizes construction of flood control levees on the south bank of Cache Creek, but has not offered an engineered study on what the effect will be on properties upstream , downstream or on the north bank properties. Protecting the south bank may well flood the north bank properties. 4-12

11. The concept of a siltation basin being created by diversions from Cache Creek suddenly arises with no accompanying engineering feasibility study offered to ascertain expected performance. As presented this concept does not even meet the "wild guess" criteria. 4-13

12. Why is biotechnical bank protection favored when it is subject to fire, dry rot and termites? Caltrans, COE, DWR have never used it in Yolo County! Miles of the Sacramento River in Yolo County have been rip-rapped and much of it is no longer visible because riparian growth has become established in it. Rip-rap is by far the easiest and quickest to repair in emergencies. 4-14

13. The cone of depression of the Madison municipal wells has not been charted so neither Staff nor its consultants can ascertain with any validity whether pit-lake water will flow toward the wells. So far they have only "guessed". 4-15

14. The wells and lakes at the site have never been tested for phosphorus. Phosphorus in very small amounts promotes the growth of algae which is the precursor to eutrophication. The Staff's experts are willing to "guess" that this will not become a problem when they have absolutely no information on the presence of phosphorus. The recent preliminary investigation by UCD on mercury confirms that algae is already present in the existing pit-lakes. 4-16

15. The DEIR fails completely to recognize that fertilizer used on the reclaimed agriculture land would be one of the most serious health threats to the exposed potable aquifer by contamination with nitrates. Excess nitrates in the drinking water is of great concern to public health officials. 4-17

16. The use by a consultant of a mathematical model to predict the influence a lake would have on water movement through the aquifer yields results that are unacceptable. The consultant failed to consider the amount of sealing of the bottom and sides of the pit-lake that would be accomplished by the actual excavating through clay lenses below the water surface and the subsequent slime layer biological sealing that will occur as the lakes age. 4-18

17. The acceptance of a 4 stranded barbed wire fence as an adequate barrier to keep trespassing children out of the pit-lakes is ludicrous. Such a fence would not even be a challenge to a dog! 4-19

18. Staff and its consultants contend that eutrophication and biological sealing of a pond can be prevented by having steep sides. However 95% of the algae inhabiting the pond will be individual detached microscopic cells that will settle anywhere and which provide food for the biological slime organisms that will cause the seal. These organisms attach to any surface - vertical, horizontal or upside down. 4-20

<u>The testimony of competent aquatic biologists and limnologists is totally lacking.</u>

19. The DEIR weakly tries to fill in soft spots and gaping holes in its presentation by quoting unknowns and by telephone conversations. The reader is never informed as to what questions were asked or how much relevant background information preceded the question. Such casual conversations and hearsay, totally unsupported by documentation are nevertheless presented to the reader as having the same credibility as the Technical Studies. 4-21

20. No economic investigation and report is made on tree crops. Nowhere is the revenue for the 10 year warranty reclamation period of tree crops compared to the same period for reclaimed agriculture land. The reader has no way of knowing if this is a one to one ratio trade-off on land utilization or whether tree crops is a cheap way of avoiding the extra cost of agriculture reclamation. The forest fire hazard of densely planted tree crops is not discussed. 4-22

21. Higher groundwater in the future when the Tehama-Colusa Canal is extended south of Cache Creek has not been considered in establishing the minimum depth of restored topsoil over the annual average high ground water elevation. 4-23

22, The air quality discussion is invalid because it uses measurements taken at Woodland, approximately 10 miles from the project site. This disregards the local micro-climate which is significantly different. The Hungry Hollow area is surrounded on 3 sides by uplands. 4-24

23. Local emergency response and equipment is not discussed. The Esparto-Capay Fire Department is a volunteer organization and the response time should be discussed for accidental drowning type accidents. 4-25

PART II

Subject: SPECIFIC Comments and Statements of Concern

DEIR- Solano Long-term off-channel Mining Permit Application

SCH # 960 12034

June 3, 1996

PAGE	P#	COMMENTS
1-1	1.2	**The Solano DEIR cannot by law legally "tier off" the OCMP which is a document that, as of June 3, 1996, had no official status in as much as the CCRMP Final EIR had not been circulated and it had not been approved by the Planning Commission or the BOS.** **CEQA does not allow one EIR to depend on a previous EIR that has not been approved by the official bodies that must approve EIRs'.** **This mining permit application in common with the other four individual permit EIRs currently circulating for public comment, is predicated on adoption of the OCMP as written and the development of regulating ordinances based on that plan. The present schedule sets July 23rd as the date for Board Action on the OCMP plan and members of the Board have insisted in public meetings that they have open minds on this issue and have not yet decided how they will vote. For this reason it seems highly improper for these applications to be circulating simultaneously.** **<u>The fact that the Board of Supervisors authorized this action raises serious doubts about the integrity of the whole process.</u>** **In Conclusion - it can be stated that the DEIR of this project is predicated on the outcome of a ball game that has not yet been played.** **THIS IS IN TOTAL CONFLICT WITH CEQA LAW !!**
2.1 2.2	2.2	**Areas of Controversy** **Fails to consider the public health aspects of contamination of the potable aquifer by a) the presence of mercury, b) conditions due to eutrophication as vegetation (algae) reaches maturity, c) transport of pathogens by waterfowl from the Madison and Esparto sewage ponds to the newly created lakes (the exposed potable aquifer).**

4-26

4-27

PAGE	P#	COMMENTS	
		Also not mentioned is the degradation of the pit water (potable aquifer) through evaporation and the consequent concentration of salts. It fails to consider the concentration of boron due to evaporation as an adverse impact on farm crops via the irrigation system. No consideration is given to what might be an unsafe separation between a pit and the cone of depression in the aquifer created by the municipal wells of Madison, the Migrant Housing Project and Esparto. This could cause water from a pit close to a town to be drawn into the public water supply. The city of Woodland's 70+ years of water table measurements amply demonstrate this frightening possibility.	4-27
2-3		EFFECTS FOUND TO BE SIGNIFICANT AND UNAVOIDABLE Does not consider sealing of the sides and bottom of the wet pit with silt brought on by continuing agitation of the water during excavation as layers of soil, clay and silt are removed. No proof has been provided that such siltation will not materially affect the natural flow of the aquifer through the wet pit. There is no practical way of removing this seal.	4-28
		Fails to consider the microclimate at the Solano site, which has a much higher evaporation rate than that shown in the "Technical Studies" which used only broad general regional data not applicable in this location. This increased evapo-transpiration rate will result in greater concentration of TDS and boron locally which will in turn have an adverse impact on adjacent agricultural land using well irrigation. The micro-climate at this location is characterized by significantly more low humidity and hard north winds than the area east of the Dunnigan Hills. This is a glaring gap in information not covered by the County's EIR documents even though local climate conditions are basic to decisions governing the type of farming to be carried out in a specific area.	4-29

PAGE	P#	COMMENTS	
		No information is provided on the long term effects that eutrophication will have on the pit lakes 20 years hence when vegetation is at maturity. These long term effects drastically reduce recreation potential and have a profound effect on potable water quality. This subject is dealt with at great length in EPA document "The Practice of Water Pollution Biology". It should be noted that in all the public documents circulated to date regarding this issue no discussion has been presented by anyone with professional expertise on aquatic biology in relation to Public Health issues.	4-30
2-5	2nd	COMMENT The foregoing section of this DEIR is predicated on the false premise that the OCMP and CCRMP are "done deals". It further assumes that there will be no substantive changes in the OCMP and CCRMP if and when both receive final approval by the BOS, which is in the future. In reality previous response on both documents by concerned citizens has amply demonstrated that both the OCMP and CCRMP are seriously flawed documents and are unforgivably rife with errors, omissions, misinformation and general sloppiness.	4-31
3-3	Fig 3-2	Chap. 3.0 Project Description 3.1 INTRODUCTION Why does Fig. 3.2 show the MRZ-3 (156 Report) as being within the project when CCRMP states on page 4.3-17 that the "planning area is located within an identified MRZ-2 Zone (Dupras, 1988)? What purpose is served by granting a permit covering land outside of the CCRMP declared boundary? It appears that Staff considers the Planning Area boundary to be negotiable if and when the BOS approves the CCRMP or OCMP!	4-32
3-4	1st	PROPOSED AMENDMENT OF EXISTING RECLAMATION PLAN The COE in its 1995 Report states that the DWR has regulations dealing with permanent excavations in proximity to streams that require engineered type dam separators. Has DWR given an opinion on this proposal?	4-33

PAGE	P#	COMMENTS	
3-5		The Town of Madison is less than 1/2 mile from the project boundary - NOT one mile as stated if the scale of Fig. 3-2 is to be believed! Cache Creek is generally regarded as the south boundary of Hungry-Hollow - the description given is incorrect. It should be noted that the farm labor camp at Madison is not shown either on Fig. 3-2 or Fig. 3-3 but is locally regarded as part of the Town of Madison. The discussion on the proximity of dwellings to the proposed project is unacceptably deficient in not making this inclusion. The approximate population of this housing development should be stated.	4-34
3-16		PERMANENT - LAKES (WET PITS) "An irrevocable offer of dedication to an appropriate public agency"-- needs further elaboration. An offer, to be consummated, must also be accepted and this would necessarily have to include a dedication of ingress and egress. "An appropriate public agency" must be defined. What happens to the offer of dedication if the property changes ownership, etc.? As stated the offer has a fine altruistic ring to it but it is a "cute" way of absolving the operator of future responsibility while he still mines at a different location. Our elected representatives need to make their decisions on this issue known to citizens before officially approving the Final EIR.	4-35
3-16		ROW CROP AGRICULTURE All row crops grown in this locality (except organic) require fertilizer and in the newly reclaimed areas additional application will be necessary to regain prior productivity. Placement of the root zone much nearer to the water table will accelerate the accumulation of nitrates into the potable aquifer generating a health hazard. This should at least be mentioned as an unmitigable adverse impact.	4-36
4.2-1		SETTING Cache Creek Mineral Resource Zone does not extend to the Town of Yolo (See 156 Study Map) as stated and Fig. 3-1 is not applicable.	4-37

PAGE	P#	COMMENTS	
		The site's western boundary is less than 1/2 mile of the Town of Madison, not 1.5 miles east as stated.	4-38
4.2-2	Fig 4.2-1	Figure 4.2-1 is incomplete since it does not show the Madison Farm Migrant Housing Development and does not show the Madison sewage ponds which are near the proposed project. As presented the map is misleading and fails to show the high density housing that is closest to the project.	4-39
4.2-4	Fig. 4.2-2	Figure 4.2-2 is incomplete for the reasons described above.	4-40
4.2-9	Fig. 4.2-	Figure 4.2-4 is incomplete for the reasons described above	4-41
4.2-23		IMPACT 4.2-8 The boundary of the proposed project is less than 1/2 mile from the Town of Madison and even closer to the high density housing development of the Farm Migrant Housing Project. The DEIR is incorrect !	4-42
4.2-25		MITIGATION MEASURE 4.2-8a Unless and until the BOS by official action specifically agrees to accept such reclaimed lands this mitigation is speculative. Unless based on firm and timely commitment from the County this action would not seem to conform with CEQA requirements.	4-43
4.3-4	Fig. 4.3-2	Why is a source drawing from Luhdorff and Scalmanini being used when they are not geologists?	4-44
4.3-18	PS 2.5-4	Benches in a sideslope were specified for safety reasons presumably to prevent drowning accidents on slopes of 1:1. What research demonstrates that a slope of 1.5:1 prevents accidental drowning? Is this an arbitrary determination made by the applicant?	4-45

PAGE	P#	COMMENTS	
		Considering that the pit lakes will become an attraction to children inasmuch as there are no public swimming facilities in the Capay, Esparto, Madison area and Cache Creek has no water during the summer, can a waterside slope of 1.5 : 1 be considered safe for clandestine swimming by children?	4-46
4.3-18	PS 2.5-18	It should be noted that PS 2.5-18 sets requirements for slope stability and not for safety of swimmers and waders. If the pit-lakes are dedicated eventually to the County, the County inherits a potent safety hazard in terms of public recreation. Would it not be wiser to design the pit-lake slopes for safety at the outset and thus conform to generally accepted safety practices for such recreational activities?	4-47
4.3-18		PS 2.5-18 fails to address the silting that will occur in the excessive agitation occasioned by excavating below the water surface. The roiled up silt and clay will effectively seal the sides and bottom of the wet pit to adversely affect the natural movement of water through the exposed aquifer. In fact much of the aggregate washing will actually take place in the wet pit with no means of removal of the estimated 25% waste (DMG). It is necessary for the industry to reveal how much waste is left in the wet pit. Until this information is provided all projections made by the authors of the DEIR document are purely speculative.	4-48
4.3-19	PS 4.5-2	The project contemplates excavating within less than 200 ' of the existing channel bank of Cache Creek. However there is no indication that this will conform to the requirements of the Division of Safety of Dams or the DWR for separators which may entail an engineered type dam barrier. The preparers are in no position to comment until this hurdle has been cleared. (Kleinfelder 1995) HAS SDS COMMENTED?	4-49
4.3-26		Impact 4.3-4 Does not consider the silt generated by wave action along the shoreline. The project site is in a micro-climate that experiences a great many more hours per year of hard north wind than the area east of the Plainfield ridge. The wave action will release significant quantities of silt which will settle out on the pond bottom and sides.	4-50

PAGE	P#	COMMENTS	
		The fluctuating water level through the year greatly enhances the chances of erosion and the resulting silt deposition to the detriment of the free natural movement of water through the exposed potable aquifer. **The technical Studies are grossly inadequate in not investigating this phenomenon and at least coming up with a mathematical model to predict the significance of silting generated by wave wash.** **The flatter the slope, the more wave-washed beach is developed - the steeper the slope, the more there will be undercutting and slope failures at the water edge which becomes a progressive encroachment as the water level fluctuates.**	4-50
		The Kleinfelder 1995 report is a generalization and is not site specific. Inasmuch as every separate strata encountered in the excavation process will be exposed and since each strata has its own individual stability characteristic, it does not necessarily follow that "one designed slope fits all". The DEIR is promoting a "cookbook" approach. A highly erodible unstable lens of very fine sand topped by more resistant material will cause slope collapse if the fine sand strata is subject to wave wash erosion or carries a flow of subsurface water into the excavation. A scientifically engineered slope must be precisely tailored to fit the prevailing conditions that will only be exposed after excavation is completed. **The DEIR presentation on the subject of slope stability and erosion suffers from over-generalization and demonstrates an inadequate grasp of a very import aspect of the project.** ONE SLOPE ANALYSIS DOES NOT FIT ALL!	4-51
4.43-27		YEARLY SEDIMENT YIELD OF CACHE CREEK **This question has been raised a number of times in the prior EIR documents --the 210,000 tons per year of sand and gravel (NHC, 1995) is actually sediment which includes sand and gravel. A DMG report agrees generally on the 210,000 tons figure for sediment of which ONLY 6% IS SAND AND GRAVEL. Actually on reading closely, NHC figures for sand and gravel agree with the DMG report within reason.**	4-52

PAGE	P#	COMMENTS	
		The reason for the Cache Creek Settling Basin is to intercept the silt which makes up over 90% of the streamload - see COE reports. **The preparers need to understand that sediment is the total transported geological material down Cache Creek, not just sand and gravel! The preparers should also realize that sand and gravel is being stream-transported out of the planning area into the reach between Yolo and the Yolo By-pass. This is what has caused the significant lowering of the thalweg at the 4 bridges at Yolo.** **IMPACT 4.3-3 AND ITS EXPLANATION SHOULD BE CORRECTED AND RE-WRITTEN.**	4-52
4.3-29	5th line	**IMPACT 4.3-4** **Velocity of flow is expressed in "feet per second" not "cubic feet per second" which is a volume measurement. The preparers should become conversant with the terms that they use.**	4-53
4.3-29 4.3-30		**The discussion as presented fails to consider the considerable hazard of subsurface "piping" (underflow through a permeable strata) of the 100 year water surface into an area that has been lowered. This is precisely what the 1995 COE report stated about recharge pits short circuiting back into the creek. In this instance the direction of the flow would be reversed.** **Manipulation of the CCRMP boundary will not change or mitigate the threat.** **COMMENT** **Until the DEIR resolves the issue of what the DSD or the DWR considers to be a separator not subject to engineered specifications in this setting, the DEIR is in no position to make a judgment call.** **It is indeed troubling, that the preparers leap frog from subject to subject without resolving the interdependent connection which may or may not negate the position taken. The DSD separator issue should have been conclusively resolved the first time it was mentioned so that the course taken was straightforward and not skirted in every ensuing consideration with no definitive conclusion**	4-54 4-55

PAGE	P#	COMMENTS	
4.3-31	Fig. 4.3-7A	For clarity the map should be extended southward to show its relationship with SR-16. This is especially true for Mining Area I and Mining Area II which will give an indication of how close lakes will be to the Migrant Labor Housing Project and the safety hazard of unauthorized swimming by unsupervised children.	4-56
4..3-30		COMMENT The ethics and propriety of moving the CCRMP boundary in an EIR that has not been fully processed and upon which this DEIR depends, to accommodate this mining application is questioned. Apparently there was sufficient reason to draw the boundary as proposed in the CCRMP. Will this become standard practice to arbitrarily alter the playing rules to accommodate the player?	4-57
4.3-33	1st P	PROPOSED LEVEE NOT TO BE CONSTRUCTED This decision indicates that the County staff has agreed not to provide 100 year flood protection for a former mining pit, thus allowing the pit to be flooded in high flow events. Have these arbitrary negotiations met with the approval of FEMA, COE and SBR and other agencies in contact with the SCH? At what point is the public permitted to respond on the arbitrary adjustment of the CCRMP boundary considering that the public response period for the CCRMP DEIR has already ended! We are presented with a tactic that is unique in our experience of participating in the EIR process, A rule has been established in a general EIR document (CCRMP). A site-specific EIR predicated on the CCRMP is then circulated for Public Comment and in it we find that the applicant has engaged in discussions with "the County" (unidentified individual) proposing that "the improvements (raising the levee) not be implemented". They further state that approval by YCCDA of an exemption from Performance Standard 4.3-8 would be required. Where in such a back room wheeling and dealing atmosphere does the public have a right to be heard?	4-58

PAGE	P#	COMMENTS	
4.3-35		MINING AREA VII Inasmuch as Caltrans must be notified of any activities within the 100 year flood plain within one mile of a Caltrans bridge, what has been Caltrans response to the proposed riprap for the south bank of Cache Creek?	4-59
4.3-36		MITIGATION MEASURE 4.3-4C Considering that the YCFC&WCD has already filed an application with the State for any remaining unallocated water rights on Cache Creek does Staff have the authority to arbitrarily permit diversions from the creek? It is strongly suspected that Staff has not received the concurrence of the YCFC&WCD on this concept. HAS YCFC&WCD CONCURRED? It is further suspected that diversion structures can not be constructed on Cache Creek without the approval of several State and Federal agencies such as SDR COE, DFG, DWR and RWQCB. HAVE THESE AGENCIES BEEN CONTACTED AND WHAT IS THEIR RESPONSE? Does levee work along Cache Creek require permits from State and Federal agencies? The subject of levee construction along Cache Creek does not address the possibility of causing flooding on the north side of the creek or at least increasing any level of flooding potential that already exists. If the possibility will be created that the north side of the creek may flood because of levee construction on the south bank, why have the north bank owners not been notified, as required by law, that a DANGEROUS CONDITION may be created? Why is a complete hydrology study not required both upstream and downstream of any proposed levee construction or bank protection proposal to completely and accurately identify problems? IS "SILTATION BASIN" THE NEW BUZZ WORD TO REPLACE "RECHARGE BASIN"?	4-60 4-61 4-62 4-63

PAGE	P#	COMMENTS	
		It would be a very great money saver for the applicant if formerly mined land with a greatly lowered surface elevation could be exempted from retroactive obligations to reclaim the devastated area that will be permitted when the total Cache Creek EIR process is completed. The COE 1995 report has largely discredited the "recharge basin" concept and the YCFC&WCD has not publicly refuted the COE's comments.	4-63
		It would indeed be clever to change the title of this money saver to "siltation basin" with the hint that it may eventually become wetlands or habitat. However Staff and its consultants in their haste to embrace this concept is guilty of attempting to go from first base to third base by cutting across the infield and eliminating the pesky second base.	
		There are a number of serious concerns that the preparers have not explained to the reader:	
		1, Since the Technical studies did not consider "siltation basins" no studies, findings or recommendations have been made and consequently the public has not been given an opportunity to comment.	4-64
		2. The "Technical Studies" provides no recommendations for the design of "siltation basins". The mosquito breeding problem has not been addressed.	4-65
		3. No plans have been provided showing the necessary elevations of the thalweg, land to be silted, or eventual finished land elevation at the conclusion of reclamation.	4-66
		4. No historic data documenting surface elevations or winter creek flows have been provided. Since this provides the basis of design for diversion structures the depth of the water in the silting basin cannot be predicted without it.	4-67
		5. No prediction of the rate of siltation depth per year has been furnished and hence no forecast of the length of time to "top out" can be supplied.	4-68
		6. No historic creek flow data has been provided to predict the frequency of flooding of the basin.	4-69

PAGE	P#	COMMENTS	
		7. How long will the "topping out" take so that it will no longer be wetlands? What happens to the NET GAIN of wetlands when the water supply has ended? Will the wetlands become a noxious weed patch when the water supply ends?	4-70
		8. Federal and State agencies have strict requirements for dredging and filling. Why are the requirements for fill not provided to the reader for clarity of the concept?	4-71
		9. NWH and DMG both report that Cache Creek is sediment starved with resulting erosion to banks and channel scour. Why will the diversion of sediment not exacerbate this condition?	4-72
		Appreciable volumes of silt are transported by the creek only during high flow events which may not happen every year (DMG, COE, USGS) and even then only for a few hours since the creek rises and drops rapidly (flash floods). If the diversion structure is not gated, outflow from the basin will occur as soon as the creek flow subsides and the sub-colloidal material will not settle out and hence will be returned to the creek. To give perspective to the time required to build up silt, the Cache Creek Settling Basin trapped silt at an average rate of 600 acre feet per year in a 3,600 acre basin before Indian Valley Dam was built (COE). This represents a deposition rate of about 2 inches per year and included all flows. The proposed silting basins are not apt to reach this siltation rate and even if they did, it would amount to only 20 inches of fill during the 10 year warranty period to be imposed. This brings us to the question of who will operate this reclamation after the applicant has fulfilled his obligation? Inasmuch as the heaviest silting will occur at the inlet into the pond, the deposit will have to be cleared on a frequent basis or it will soon seal itself off. Who performs this function once the 10 year warranty is over?	4-73
		10. All of the water rights available for Cache Creek have already been applied for. What documentation can the applicant offer to show that the project land has riparian rights and has historically used them?	4-74

PAGE	P#	COMMENTS	
4.3-36		MITIGATION MEASURE 4.3-4d The annual report must be submitted by a properly licensed P.E. and said report must be sealed and signed. It is noted that the County has been accepting reports in the past that are not signed and sealed as per State law. it is illegal for the county to accept reports for the record that are not signed and sealed properly. The time for the annual inspection or due date of the report is not specified. The due date should allow enough time to complete remedial action prior to Nov. 1.	4-75
		How does the County place a restriction on the property deed for non-compliance? What is the legal procedure? How does the placing of a restriction on the property deed assure compliance? Doesn't this merely transfer the obligation at the time of title change to the next owner? The County really has no control unless it has the authority to stop the transfer of title - can the County do this? Has Staff ever run this by a title insurance company legal counsel?	4-76
4.3-37		MITIGATION MEASURE 4.3-4f Biotechnical bank protection uses combustible materials which are subject to rot and termites and are only of limited term effectiveness. Why is this procedure favored over riprap which is the choice of the COE for the Sacramento River and the Yolo By-pass? Wildfires in combustible bank protection are difficult to control because of extremely limited access for fire equipment. Sections of the Sacramento River in Yolo County are no longer recognizable as having been riprapped because vegetation and trees have taken over as the voids between the rocks have filled with silt. Willow mats are generally not available in this area since they are not commercially grown and the DFG will not allow the cutting of riparian willow thickets.	4-77
		If riprap fails, it is easily patched. This is not true of biodegradable and combustible material. Failed biotechnical bank protection will be invariably patched with riprap as it is the easiest, quickest, cheapest and most readily available material.	4-78

PAGE	P#	COMMENTS	
		Staff is requested to document areas where Caltrans, COE, DWR or any other flood control responsible agency has used biotechnical bank protection in Yolo County in the last 25 years. **Why build a maintenance problem?**	4-78
4.3-37		MITIGATION MEASURE 4.3-4e Caltrans must be allowed to comment on the proposed bank protection as per SMARA regulations.	4-79
4.3-37		MITIGATION MEASURE 4.3-4h A study must also be made of the north bank to ensure that protection placed on the south bank would not adversely affect the North bank. See NWH for further explanation.	4-80
4.3-37		MITIGATION MEASURE 4.3-4I Length of the agreement should be specified - warranty period of 10 years is not applicable inasmuch as improvement may take place at a time later than 10 years.	4-81
4,3-38		MITIGATION MEASURE 4.3-4j The County needs to know at the time of signing an agreement with the applicant if DDS type separators are needed. If they are needed, the financial assurance bond will need to be much greater as this is an expensive type of construction.	4-82
4.4-2	3p2s	SURFACE WATER "In the northern portion of the project site, storm water apparently flows eastward and northward –" COMMENT: Use of the term "apparently" suggests that the applicant does not know for certain which direction the drainage takes. The DEIR cannot be founded on speculation and guesses. The EIR should state definitively exactly how the drainage flows and Staff should not make a judgment until it precisely understands the drainage pattern. If the applicant is not familiar with the territory, he certainly has the obligation to become acquainted!	4-83

PAGE	P#	COMMENTS	
4.4-5	Fig. 4.4-2	Where is the location of "Hayes 1" supply well?	4-84
4.4-6		COMMENT: The migration of contaminants would be of the most concern to the municipal wells in the Town of Madison and to the adjacent migrant labor housing development. However Fig. 4.4-3 does not give groundwater contours for this vicinity! The cone of depression of the municipal supply should be indicated at its most adverse condition in order to assess the hazard, if any, of contaminant flow toward the municipal supply.	4-85
		COMMENT ON GROUNDWATER TESTING: The biggest concern in creating permanent pit-lakes in the potable aquifer is their eventual eutrophication as the pit-lakes age and the vegetation in and surrounding the pit-lake reaches maturity (probably 20 years in the future). One of the factors is excessive algae growth. Eutrophication may give rise to odors, unsightliness and may impart a disagreeable taste to the water. Eutrophication abounds in this region: Clear Lake and Lake Berryessa are examples as well as numerous ox-bow lakes along Yolo County's east border.	4-86
		A predictor of eutrophication is the presence of phosphorus, even in microscopic amounts. Phosphorus, a predictor of algae growth, is found in the atmosphere, agriculture run-off, percolation of irrigation water and in many fertilizers and pesticides. This has long been established by the EPA. NONE OF THE WATER QUALITY TESTS PROVIDED INCLUDED PHOSPHORUS!. Therefore we do not really know what the prospects for eutrophication are.	4-87
4.4-13		MUNICIPAL WELLS In the DEIR, municipal well information is attributed to "Lopes, 1996" but no information is provided regarding the identity and qualifications. Is he a recognized expert on municipal water supply?	4-88

PAGE	P#	COMMENTS	
		Staff apparently does not understand that the Madison wells are gravel packed wells and hence have hydraulic continuity from the sanitary seal (if any) to the bottom of the well. The position of the well screens are irrelevant inasmuch as the gravel pack (envelope) is continuous from the well head to the bottom of the well. The purpose of the gravel envelope is to intercept all possible sources of water.	4-89
		COMMENT: **<u>The discussion on municipal wells is so fragmented and incomplete that it cannot be regarded as legitimate expert testimony and is inadequate for a DEIR.</u>** One of the most troubling aspects of this discussion is the fact that the sewage oxidation ponds of both Madison and Esparto are within easy commuting distance for water fowl and shorebirds who might inhabit the pit-lakes to be created (exposed potable aquifer). The host of human pathogens from the sewage oxidation ponds will be readily transported to the pit-lakes. Once in the pit-lakes the contamination can travel laterally via sand and gravel strata toward the nearest well. Lateral migration through a granular medium does not filter out pathogens and viruses. They are however filtered out by a soil medium which is why the Madison and Esparto sewage ponds do not contaminate the municipal wells. A host of scientific reports are available on this subject. (see papers by H. Bouwer). It should be noted that the City of Woodland is required to chlorinate (disinfect) any treated wastewater that is discharged from its oxidation ponds. This treated wastewater is then detained in shallow ponds in the Yolo By-Pass to provide a resting place in the Pacific Flyway for migrating ducks and geese. This chlorinated treated wastewater prevents the ducks and geese from carrying human pathogens to the next resting spot which could easily be a drinking water reservoir. Staff and their consultants render a great disservice to County residents by their failure to address such an important issue.	4-90

PAGE	P#	COMMENTS
4.4-14	1stP	COMMENT ON LOCAL GROUNDWATER MYTH: This DEIR, in common with the other documents related to this process makes frequent references to statements of "technical experts" that the water table flow is at most only a few feet per year, thus limiting the capacity for contamination to spread. So far none of the cited studies, including Environ, Rivertech, CH2M Hill and Dames & Moore has ever cited an actual, credible study that measures groundwater movement in the "planning area". A study utilizing some type of "tracer" is urgently needed so that the flow route and rate of movement can be precisely identified. The study should deal specifically with groundwater movement in the Esparto to Plainfield Ridge vicinity along Cache Creek. 4-91 In order to conclude that it is not possible for wet gravel pits to hydraulically interconnect with the cone of depression it is necessary to graph the cone of depression around municipal wells in Madison and Esparto on a monthly basis for a full year. This has not been provided in the DEIR but should be. To provide Staff with an authentic documented example of groundwater movement in a local setting we would refer you to just one example from the City of Woodland's routinely documented well data. Staff should bear in mind that a vertical movement of the water table must also be accompanied by a horizontal movement or the wells would either overflow or would dry up. 4-92 Well #1 at 5th & Lincoln dropped 19 feet to an elevation of -5 ft MSL with no pumping. Well #6 at Grand & Lincoln dropped 35 feet to an elevation of -15 feet MSL while pumping 52,575,750 gallons. This was a drop of more than 1 foot per day during May. This pump is located about one mile from Well # 1. This clearly illustrates that groundwater can move impressive distances in short periods of time through Cache Creek gravel if extraction is heavy. The hydraulic gradient was about 10 feet in a mile between the two wells. By August, if the same extraction scenario is continued the hydraulic gradient between the two wells will be significantly greater and groundwater will move even further horizontally.

PAGE	P#	COMMENTS	
4.4-14	IstP	How will backfilled pits increase groundwater storage if all of the void space that was in the gravel before excavation has been removed. The capacity of the aquifer is directly dependent on the volume of the void space between the aggregate particles and soil particles. If water is to be stored on top of the backfill, the excessive loss through evapo-transpiration must be calculated for this discrete micro-climate and compared to the void space loss. Inasmuch as no calculations or site specific research has been offered to prove that storage capacity has been increased, the claim must be rejected as unfounded and untested. <u>The EIR process should avoid including self-serving platitudes that have no proof or hard evidence</u>	4-93
4.4-15		FERTILIZER INFILTRATION TO THE WATERTABLE Staff and preparers completely misunderstand how nitrates (the most objectionable constituent) reach the potable aquifer through application of fertilizer. The nitrates in fertilizers are dissolved in the irrigation water (in the spaces between the water molecules) and therefore are not filtered out. The excess not used by crop roots eventually migrates to the aquifer. This is exactly the condition being experienced in the agricultural regions of California (DHS, DWR, RWQCB - hundreds of publication on this subject). The lowering of the ground surface and its placement closer to the watertable will speed up the process. The Solano agricultural operation has not been in existence long enough to reflect this phenomenon.	4-94
4.4-16	4thP	Does not consider what the erection of levees on the south bank may do to the property along the north bank in regards to flood hazard. This has been discussed previously in this response.	4-95
4.4-16		The Staff cannot make the statement that evaporation after the project is completed will be less than significant because neither the DEIR nor the Technical Studies have produced any calculations using the appropriate micro-climate data that will demonstrate what the evapo-transpiration will be at least 20 years hence when vegetation and wetlands are at maturity.	4-96

PAGE	P#	COMMENTS	
		The use of a DWR general table on evapo-transpiration does not suffice for this site specific setting. Without adequate site specific data upon which to base its assumption Staff cannot make a flat assertion that would have any validity.	4-96
4.4-16 4.4-17		The Todd mathematical modeling is worthless because it did not make allowance for silting of the sides and bottom of the wet pit by the relentless churning and roiling of any and all clay and sediment lenses encountered. All of these released fines and sediment are not removed from the wet pit and remain to settle out, with the resulting sealing of the surfaces that it deposits on. A good indication of how much aggregate washing is being accomplished in the wet pit could be obtained by comparing it with the washed out sediment of dry pit mining carried out by Solano. DMG 156 uses an estimate of 25% waste for dry pit mining. Todd Engineering has no basis to predict anything on the movement of groundwater through the wet pit and aquifer. Mathematical modeling is only as good as the controlling data that is supplied - if the complete and accurate picture is not provided, the conclusions are not based on reality. "Garbage in, garbage out!".	4-97
4.4-17		Fails to explain that waterfowl and shore birds will commute from Madison and Esparto sewage ponds to the newly created lakes. These sewage ponds contain raw sewage which is constantly being introduced and disinfection, if any, only takes place at the point of discharge from the ponds. Contaminants from municipal waste will be inadvertently introduced by biological vectors as described above and elsewhere in the response. It is important to note that the sewage ponds as well as the Migrant Labor Camp were not referred to or included in the Figures 3-2,3-3,3-4, 4.2-1, 4.2-2, 4.2-3, 4.2-5, 4.3-5,4.4-3.4.4-4, 4.5-1, 4.5-2, 5-1, 7.1-7, 7.1-8, 7.2-40 -and others. This is an important omission since these Migrant Labor Camps are quite large, and have 2 large open sewage ponds nearby. It would seem that since these camps are Federally funded they would have to have a Federal Agency review the proposal to determine safety of their water supply, and possible risks to the children in the area. Why was this not done? Is there an attempt to mislead or misinform the agencies reviewing the proposal?	4-98

PAGE	P#	COMMENTS	
4.4-17		PS 2.5-8 A 4 stranded barbed wire fence does not specify height of fence. The wet pits will be an attractive nuisance to children from the Madison Area, especially the high density farm labor housing development. Inasmuch as there are no public swimming facilities in the Madison-Esparto area this will be a tempting place for kids to swim after plant working hours and on weekends. If the County will have signed an agreement with the applicant, the County will automatically be named in any lawsuit resulting from injury or death. The fence specified is certainly not a kid-proof barrier and warning signs will be of little use especially for kids from the Migrant Farm labor Housing Development. Some will not read English and some will not read at all. The wet pits will pose a most dangerous hazard.	4-99
4.4-22		MITIGATION MEASURE 4.4-16 Doesn't construction of flood control levees along Cache Creek require clearance from SRB, COE, DWR and Caltrans?	4-100
4.4-23		It is questioned if the DWR 3.92ft/year evaporation rate specifically applies to this micro-climate area inasmuch as many more hours of low humidity and hard north winds are experienced here than in Woodland. DWR gives the evaporation for Davis as 67 inches per year - See Bulletin 50. Wetlands growing tules, cattails and willows exceed the water usage of agricultural crops by several fold. Earlier response on the Technical Studies and OCMP conclusively proves that Staff's findings are not supportable - see earlier response.	4-101
4.4-24		Does not include contamination by waterfowl and shore birds from the raw sewage lagoons of Madison and Esparto. See previous comments on this subject in this response	4-102
		COMMENT: The use of bio-solids (sewage sludge) on adjacent farm lands is not addressed. Yolo County has no ordinance regulating the use of bio-solids on agricultural lands.	4-103

PAGE	P#	COMMENTS	
		The RWQCB acts as lead agency and has already approved its own Negative Declaration for permits for the Dunnigan Hills. The chances of introducing airborne biosolids into wet pits is a potent health menace given the hard north winds blowing from the Dunningan Hills. This Health Issue is currently being addressed by counties in the San Joaquin Valley. **Why has Staff avoided this issue?**	4-104
4.4-24		**AGRICULTURAL TAILWATER RUNOFF** **This section fails to list the run-off of excess fertilizer. The most heavily used fertilizers contain nitrogen and nitrates and is a subject of great concern for the drinking water supply in California and especially in Yolo County. One future source of nitrates would be subsurface flow into the wet pits from adjacent pits reclaimed to agriculture which are apt to use excessive amounts of fertilizer to restore former production capability to meet reclamation requirements.** **The lowered agriculture land will no longer have the depth of separation between the root zone and the groundwater surface that formerly existed. Degradation of drinking water quality is a cumulative process that is ongoing in other parts of Yolo County to the detriment of the drinking water supplies.**	4-105
4.4-25		**COMMENT:** ***"Wet pits below the groundwater table would be constructed of relatively steep slopes."*** **These steep slopes will be a deadly hazard to trespassing children that are either poor swimmers or not able to swim. It is very easy for young children to panic if they slide down a slippery slope into deep water. The Madison-Esparto area has no public swimming facilities and these deep pits will be the only swimming locale.**	4-106
		STEEP SLOPES DO NOT DISCOURAGE EUTROPHICATION **Eutrophication is caused in great part by over-population of algae. More than 95% of the algae available for eventual population of the wet pits are individual free floating cells.**	4-107

PAGE	P#	COMMENTS	
		Clear Lake, Lake Berryessa, the Madison and Esparto raw sewage ponds are at least 95% unattached algae. Attached and/or rafting algae is a very small part of the population. Free floating algae are independent of the configuration of the containment and hence slope has no influence.	4-107
		It is noted that on the recent mercury research study at Solano by UCD free floating algae is already present in the ponds where the fish were captured - see report (Slotten et al. 1996).	4-108
		In the Daily Democrat (4/20/96) it is reported that the degree of clarity in Lake Tahoe has reached an all time low. In 1995 it was measured at 70 feet, 6 inches, in 1968 it was measured at 100 feet. In our warm climate the Solano ponds are doomed to an early loss in clarity.	
		It is interesting to note that the Sanitary Engineering Research Laboratory of the School of Public Health at UCB was able to raise algae at the rate of 50 dry tons per acre at depths of less than 4 feet of water (See EPA reports).	
		Staff has not yet provided published reports on eutrophication made by qualified experts in the field and consequently the Scalmanini-Todd report is unacceptable and the DEIR is deficient.	
4.4-25		**EUTROPHICATION/BIOLOGICAL DEGRADATION** **Under Impact 4.4-4 the following statement is made:** ***"A wet pit that penetrates the groundwater table would be continually freshened by groundwater flow through the sidewalls and would therefore not be significantly susceptible to stagnation*** **"(David Keith Todd, 1995)** **<u>This is a ridiculous statement and scientifically inaccurate</u>!** **As previously explained in this and other responses on the total EIR process, Todd failed to recognize the inevitability of silt sealing of the pond's sides and bottom by the very act of dragline excavation through clay and silt lenses below the water surface. This practically washes the aggregate before it is lifted out of the pit-lake - DMG estimates that this amounts to 25% waste.**	4-109

PAGE	P#	COMMENTS	
		There is no place for this agitated clay and silt to go except to settle out on the sides and bottom of the pit. In addition to this, the wave wash on the shores will constantly bring fine silt into the water with every breeze and this micro-climate is subject to strong north winds. Ponds in this climate become lined with organic slimes that are comprised of a host of different organisms that will quickly seal the submerged surfaces. Checking the sides of a Doughboy pool that has not been treated with a chlorine product will aptly demonstrate this. If the consultant had ever slipped on rocks in a trout stream he would understand what organic slimes are all about and trout streams are continually freshened beyond belief. Both Clear Lake and Lake Berryessa have active inflowing streams all year but both have the sides and bottoms sealed and as the lake level drops, this seal cracks and curls on exposure to the sun and is left on the beach. In summary - Todd's remarks can only be regarded as pure conjecture and flies in the face of experience in this area. **Such conjectures are generally considered inadmissible in the EIR. Todd must refer to scientific studies to substantiate his statements!**	4-109
4.4-26		**Bruce Macler - EPA Quote** **Bruce Macler was not informed by the consultant of the existence of raw untreated sewage ponds belonging to Madison and Esparto that are within 5 minutes flight time from the pit-lakes to be created by the proposed project. Waterfowl and shorebirds regularly use the raw sewage ponds. The RWQCB and EPA requires that the City of Woodland and the City of Davis chlorinate any discharge from their oxidation ponds so that humans will not be exposed downstream.** **Staff should understand that the Madison and Esparto raw sewage lagoons have raw untreated human sewage continually flowing into them. This is the water that waterfowl and shorebirds use. Their feet and under-belly feathers are submerged providing easy transport to the exposed drinking water aquifer of the proposed pit-lakes. Tame geese from a nearby residence are seen regularly on the Esparto ponds.**	4-110

PAGE	P#	COMMENTS	
		Why are these raw sewage ponds not listed in the numerous figures included in the DEIR report? Was there an attempt to cover up this important health issue?	4-111
		WHAT STAFF NEEDS TO KNOW ABOUT EPA! In California the State, not EPA, makes and enforces the rules of the contamination of the drinking water through the SWRCB, RWQCB, SDHS, and DMG. This is because California's requirements are stricter and more stringent than are those of the EPA. In California the EPA acts as an overseer, to see that California's enforcement does not fall below the lesser standards of the EPA. It should also be pointed out that Federal employees do not have to obtain the State licenses to practice that the health officials employed by the State do. Likewise, Federal employees of the COE, USGS, etc. do not need to have the proper State license to perform professional engineering. The reason is that Federal employees have to meet a much lower standard of expertise than do State employees or individuals in private practice subject to State professional requirements. Also Federal employees are often assigned to different states or regional offices. The point of this discussion is - if Staff wants to quote the most authoritative source on public health matters, IT MUST BE OBTAINED FROM THE PROPERLY LICENSED STATE OFFICIAL. The quote from Bruce Macler clearly indicates that he was not familiar with the territory in Yolo County, nor the proposed project plans. He did not appear to be familiar with the document "The Practice of Water Pollution Biology" nor did he have training as a limnologist.	4-112
		COMMENT: THE ABUSE OF USING CONVERSATIONS AS EVIDENCE FOR MITIGATION! This DEIR uses scraps of conversation with various individuals to substitute for compelling evidence of mitigation. (see Chapter 6, personal communications).	4-113

PAGE	P#	COMMENTS	
		However the reader is usually not told what question was asked, its background or how it was posed. It is not difficult to phrase a question so that the hoped for answer will be elicited. Generally the person questioned is happy to oblige out of courtesy with no real thought as to how the answer may be subverted to fill the question's needs. Moreover the questioner does not write up a summary of the discussion to send to the person supplying the "evidence" to make sure that he has been quoted accurately. This leaves the questioner free to apply his bias to the information quoted. The use of nebulous conversation fragments amounts to hearsay and could not likely be reproduced in court as legitimate testimony several years hence. The practice of using this type of evidence can at best be described as unprofessional and misleading since the reader usually does not realize that the information was taken from an informal telephone conversation which was not checked for accuracy.	4-113
4.4-26	6thP	<u>IS STAFF MAKING PUBLIC HEALTH FINDINGS WITHOUT BEING LEGALLY LICENSED</u>? Staff has absolutely no scientific basis for concluding that *"a significant pathogen source would not be present!"* Given the nearby presence of the raw sewage ponds of Madison and Esparto and the waterfowl and shorebirds that use the ponds, Staff is in no position to declare that the wet pits will never be contaminated. Furthermore, Staff has not produced any site specific research on this subject. Even more troubling is the fact that Staff has not demonstrated it has the proper State licenses to <u>legally</u> make such a finding - see DHS requirements. If Staff does not accept responsibility for their public health finding, what legally licensed person makes this finding? Does Macler of the EPA have the required California professional license? In the remote possibility that he might be legally licensed, it is not likely that he would declare a "pathogen free zone" without having researched and inspected the site.	4-114

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		The Staff and their consultants appear to be sticking their necks way out when they ignore scientific papers submitted by concerned citizens plus a quote from Lederberg, a Nobel Laureate winner for his scientific work, all indicating that migratory ducks can be carriers of disease from one area to another. Please clearly indicate what are Staff "guesses" and what are the facts based on scientific evidence! If scientific evidence is to be disputed by Staff, please provide justification in the response!	4-114
4.4-27		INFILTRATION OF AGRICULTURAL WATERS Fails to discuss fertilizers and the threat of contamination by nitrates which is a great health concern. Fertilizers must be ultimately dissolved to be utilized by crops. Dissolved fertilizers are NOT FILTERED OUT by passing below the root zone. This is a major health hazard in several agricultural localities in the State, including some wells in Yolo County.	4-115
4.4-28		BIOACCUMULATION OF MERCURY (Including its Mobilization, Biomagnification and Toxicity.) The description of the Bioaccumulation of Mercury by Staff and their consultants is inadequate and only partially correct. In its elemental form mercury is not a significant hazard unless large amounts are vaporized and inhaled. Although elemental mercury can be found in soil and rock all over the world, it is found in especially high amounts in Northern California due to the presence of a Mercuriferous Belt which extends along the Coastal Range. Extensive mining of mercury ore carried out in this area for the past 150 years has contributed to the widespread presence of mercury and mercury ore (Cinnabar) in the sediment of Cache Creek, Clear Lake, Lake Berrryessa and other water bodies in this area. Under certain conditioons elemental mercury or mercury ore can become converted to methyl mercury in the presence of certain bacteria and fungi found in wet sediment. The converted methyl mercury is readily absorbed and accumulated in living plants and animals. It passes up the food chain, concentrating in fish and fish eating birds and in humans who comsume the fish.	4-116

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		Methyl mercury is a deceptive poison, its effects are initially mild and slow to be expressed. It is circulated in the blood stream and eventually concentrates in the brain and other nervous tissues where it remains intact for long periods of time (In fish the excretion rate is 2.5 years just to reduce the tissue levels by 50%). It eventually destroys the nerve cells in which it accumulates. The data obtained from the UCD monitoring teams (Slotten, et all 1996) have clearly demonstrated that the physical and chemical conditions established in the Solano open wet pits facilitate the mobilization and bioaccumulation of methyl mercury in amounts sufficient to have an environmental impact and to be a potential hazard to human health. A single sampling of fish taken from the wet pits was equal to that of fish taken from Cache Creek which is an "impaired" waterway because of its known high levels of methyl mercury in fish. <u>The mercury levels in these pit water fish is sufficiently high to be a health hazard, especially if eaten by pregnant women and children..</u> Fishermen who supplement their diet by consuming these fish on a regular basis could also be subject to irreversible brain and nervous system damage. 4-116 The methyl mercury levels in these pit water fish must be considered as an additional health hazard regarding the presence of methyl mercury in this area. Moreover if these wet gravel pits were to be used in the future for stocking fish, methyl merecury poisoning could become extensive. Once conversion to methyl mercury has taken place there is no practical way to prevent its accumulation in biological organisms and no way of preventing its magnification to toxic levels in aquatic organisms. The deep water pits will be an attractive "nuisance" for trespassers for fishing as well as other water sports Once the fish are known to be present in the pit water there is no way to enforce fishing rules, especially as far as children and migrant workers are concerned. Thus the excavation of the deep wet gravel pits greatly increases the total amount of available methyl mercury in the area and augments the potential risk of methyl mercury poisoning to human health.

PAGE	P#	COMMENTS	
		The proposed implementation of a groundwater or pit-water monitoring program is not a mitigation for the potential hazard. The mercury and the conditions required for its conversion are already present and bioaccumulation has been clearly demonstrated by the UCD monitoring team. Additional monitoring of pit-water fish must be performed to determine how high the levels may eventually go, the seasonal variations, and how long the high levels will persist. Meanwhile the existing Solano Wet pits constitute a serious threat to the environment and to human health. Is Staff going to continue recommending additional deep wet pits which will contribute additional areas of mercury mobilization, bioaccumulation and Biomagnification? **Where does Staff draw the line on subjecting the public to additional serious health risks?**	4-116
4,4-29		**IMPACT 4.4-5** **The DEIR does not consider the fact that the wet pits could at some time in the future be used as wells to irrigate adjacent lands. This would eliminate the expense of drilling a well and a much cheaper pumping plant could be installed. However, pumping from these wet pits could produce other hydrological conditions that have not been investigated. Nothing in the DEIRs produced thus far prohibits using the wet pits as a future irrigation supply. This opportunity will most certainly occur to someone in the future, therefore it should be addressed now.** **Although Staff considers the reduced flow through the aquifer to be less than significant for this project, it is noted that the total parcels are being included in the DEIR. The wet pit mining that may be done in the future may well have a cumulative impact that is significant. Will the granting of a permit now preclude further permits if a significant cumulative impact can be demonstrated?**	4-117
4.4-29	7thP	**IMPACT 4.4-6** **Can the miner arbitrarily conduct storm water into Cache Creek by a new route without securing State and Federal permits?**	4-118

PAGE	P#	COMMENTS	
		QUESTION: It is stated that overburden may be disposed of as backfill into the wet pits. Is topsoil considered overburden? If this is so, why is valuable agricultural soil not used in reclamation to agriculture?	4-119
4.5-15		IMPACT 4.5-2 To provide the 1 : 1 ratio offsets: 1. What is the program to improve non-prime soils? None has been presented in the DEIR.	4-120
		2. How does the placement of agricultural preserve easements on prime farmlands not currently protected change anything - it is already zoned for agriculture?	4-121
		3. All lands under consideration have the underlying aquifer so all have a potential water supply as does the whole "planning area". How can any land be limited by lack of irrigation water supply - a well can be drilled anywhere? COMMENT: The 1 : 1 ratio has certainly not been demonstrated by Staff, it clearly fails to prove its case.	4-122
4.5-15		The purposes presented in Impact 4.5-2 are simply speculations. Historical crop production on these lands must be provided in order to have a baseline with which to compare future production.	4-123
		The DEIR never addresses the use of additional fuel occasioned by the vertical lift of the lowered agriculture land surface to haul the crops out.	4-124
4.5-17		IMPACT 4.5-4 Fails to describe or consider the extreme fire hazard (forest fires) that tree crops and uncontrolled habitat will present. These locations will be difficult for fire equipment to reach, especially the internal areas. Once a tree crop forest has been swept by a wildfire, it will take years to recover if not totally destroyed. This exact conditions has occurred in the past in local eucalyptus groves (Dunningan and Zamora areas). These were the first tree farms in Yolo County and were planted circa 1910-1920.	4-125

PAGE	P#	COMMENTS	
		No data has been provided on whether the proposed species to be planted are subject to insect or fungi and what the control requirements are. Even more importantly who provides the care after the warranty expires? If the trees are harvested after the warranty, who plants and tends the next crop. Does the area revert to a fire hazard weed patch? How long is the warranty on the "net gain"? A tree crop forest next to a wheat field is certainly a significant increase in potential conflict as far as fire hazard is concerned. These issues need to be considered in the DEIR!	4-126
4.5-17, 4.5-18		IPACT 4.5-5 The DEIR fails to consider a situation where the historic high groundwater may become even higher. A plan to extend the Tehama-Colusa Canal southward from its present termination at Bird Creek to south of Cache Creek has been under consideration for a long time. This would permit the pumping of surface water westerly into the Madison vicinity and possibly connect to the YCFC&WCD system. Should additional surface water become available in the vicinity of the project area, the groundwater level will certainly rise because of reduced pumping.	4-127
4.5-21	2ndP	IMPACT 4.5-7d *"No significant environmental impacts to agriculture would result from tree crop production"*. the DEIR fails to point out that groves of trees provide birds such as crows and starlings a base from which to operate when adjacent seed type crops are planted. This has long been a problem for safflower, sunflower, sprouting wheat and barley. Farmers also report crop losses in areas close to resting spots for birds. This is especially true for grapes and other berry type crops. The crow, blackbird and starling populations have skyrocketed locally as all are classified as protected by DFG. It used to be common practice to poison and shoot these crop predators. In fact, Yolo County used to pay a bounty for crows and this was a way for young hunters to pay for their ammunition.	4-128

PAGE	P#	COMMENTS	
		COMMENT; **Nowhere does the DEIR compare the gross income of tree crops as compared to the conventional agricultural crops traditionally raised in this area. This comparison should be based on the 10 year warranty period.** **Without a favorable revenue being demonstrated for tree crops, tree crops become a cheap and easy method to avoid agricultural reclamation costs and to use areas more difficult to reclaim. Perhaps the fines and waste now proposed to be dumped into the wet pits along with the overburden (top soil?) could be utilized in the tree crop area to bring a much greater "net gain" to the County's economy.**	4-129
		COMMENT; **THE GREAT "NON-SEALING BY SEDIMENT POND" HOAX** **This discussion of the measures to prevent sealing of the wet pits with sediment which prevents the free movement of water through the potable aquifer when viewed in its totality is probably by far the most hilarious section of the whole DEIR. A good laugh is certainly needed in threading one's way through this document.** **Consider the following paradoxes and contradictions:** **1. The very act of excavation with a dragline scarifies the sides and bottom of a pond because of the teeth in the bucket. The bucket would not self-load when dragged across the earth if it did not have teeth to make it dig into the soil or gravel. The teeth are angled like an ordinary carpenter's wood plane to dig in (this is called "suction.)** **2. The side slopes cultivated by the bucket teeth, will be washed into the pond with the first rains as the runoff is greatly accelerated. This cultivated top layer will be quite effective in silting up the bottom and sides of the pond when dissolved or washed by rainfall.**	4-130 4-131 4-132

PAGE	P#	COMMENTS	
		3. Seeding this already prepared seed bed with grasses will be ineffective because the seed will wash into the pond. Additionally, it may take several rains to wet the seed bed enough to sustain continued growth after germination (if it does occur). Moisture penetration is a slow process on a steep slope, to give perspective, the Dunnigan Hills can only be planted to grain crops every third year because it takes 2 years of fallow to conserve enough enough moisture for the 3rd year's planting.	4-133
		4. The slopes are not likely to be hydro-mulched (spraying of seed in a matrix of straw mixed with water) as it is not specified and requires specialized equipment. If they were to be hydro-mulched it would likely be at the time of reclamation at mine-out for the pond. The intervening years with rainfall, erosion and wind erosion will have already provided the sediment seal to the pond. Sad, isn't it? In Sonoma County it was mandated that the sloped areas be reseeded annually until the vegetation was adequate. Why can't that be stipulated in the permit process for Yolo County? The mere act of seeding a slope does not guarantee that growth will be adequate.	4-134
		5. A review of Figure 4.3-2, page 4.3-4 "Typical Subsurface cross-section reveals a middle clay layer of significant dimension separating the upper sand and gravel from the lower sand and gravel. The very act of excavating through this middle clay will release huge quantities of clay slurry if the clay is submerged. Clay is the smallest soil particle encountered, suspends easily and if you were going to seal a reservoir, it would be the material of choice to construct a waterproof lining. However, if we are lucky enough to be in a dry period when we excavate through the middle clay, we will certainly encounter the lower clay when we bottom out. How else will we know when we get to the bottom of the sand and gravel? When we take out the last bit of sand and gravel, we have automatically scarified the clay, thereby roiling up great clouds of clay to seal the side and bottom inasmuch as this is below the water surface.	4-135

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		6. In the event that we have not thoroughly sealed the sides and bottom of the ponds by the time we are through excavating, wave wash on the steep side slopes brought on by the extremely hard north winds in this micro-climate will go a long way in creating any additional sediment seal needed.	4-136
		7. In case you are still worried that the above described sealing is not thorough enough, there is a whole new efficient method yet available - biological sealing. This seal is created by the host of microscopic flora and fauna that largely feed on the free floating algae of the type already found in the Solano ponds (see ongoing UCD Research, Slotten et al, 1996). This biological seal is often referred to as "slime layers".	
		The biological seal is about as efficient a waterproofing layer as can be produced without using sealing compounds. The City of Woodland has more than 50 years experience dealing with slime layers in activating hundred of acres of percolation ponds each year to dispose of treated cannery waste. It has been demonstrated hundreds of times in dozens of ponds that once the biological slime layer is established, the only pond water loss is to evaporation.	4-137
		Unfortunately in the EIR Process the Staff relied on Consultants willing to operate outside their field of expertise (Their resumes indicated absolutely no experience or training in this field).	4-138
		How does Staff extricate itself from this seemingly unfathomable tangle of paradoxes and contradictions? It is really quite simple, you load the mess into a mathematical program and run it through a computer. The program can be readjusted if need be to provide an answer that states that flow through the aquifer will not be seriously impacted. The fact that the programmer did not consider the above 7 points of discussion in his model is apparently of little consequence. One cannot but help to stand in awe of the wonders of the computer age!	4-139
		How can Staff determine that the hundreds of acres of pit-lakes proposed in the next 30 years will not adversely affect the natural flow through the aquifer.	4-140

PAGE	P#	COMMENTS	
		To begin with Staff appears completely ignorant of the various factors that have to be considered.	4-140
4.6-4		DESCRIPTION OF REGIONAL ENVIRONMENT Fails to recognize the presence of the Madison and Esparto sewage oxidation ponds which provide habitat for waterfowl and shorebirds both local and migratory. It also fails to recognize livestock reservoirs in the adjacent Dunnigan Hills. It does not inventory the dozens of miles of permanent irrigation ditches that provide riparian vegetative habitat. Local mallard ducks that nest in the grainfields use the ditches for swimming.	4-141
4.6-7		GRASSLAND This is an extremely abbreviated list and should have at least twice as many entries.	4-142
4.7-2 4.7-3		DESCRIPTION OF LOCAL ENVIRONMENT The description is WRONG! Rumsey Hills are not on the southwest as stated. Measurements of air quality for Woodland are not applicable as the project is in a distinct micro-climate that is significantly different from Woodland. Many more hours of north wind of greater velocity than generally experienced in Woodland are experienced at the project site. Also both rainfall and temperature range varies from Woodland. Why is the project evaluated on wide regional air quality measurements rather than site specific data? All other considerations are supposedly based upon site specific data. The topographic restraints of the project are quite different from Woodland. The usual excuse that Woodland's air quality measurements are the only ones available poses the question as to why site specific measurements were not acquired - Woodland has neither asphalt plants nor aggregate mining. This is akin to taking one patient's blood pressure in a hospital and then saying the rest of the patients fall within that measurement range.	4-143 4-144

PAGE	P#	COMMENTS	
		COMMENT: Using air quality measurement taken 10 miles from the project site is not credible science. Readers of the DEIR are entitled to a factual local presentation. Certainly Staff has an obligation to provide data that specifically applies to the project.	4-144
4.7-3		EXISTING EMISSIONS In preparing an earlier agenda for an economic study it was stated that a transit-mix concrete plant was also located here. Why has it not been listed in this DEIR?	4-145
		COMMENT: Why does the DEIR ignore the increased emissions created by agriculture trucks hauling crops upgrade out of the lowered reclaimed agricultural land. Hauling 20 tons up a ramp will require maximum throttle and a low gear.	4-146
		Why is the subject of atmosphere stratification not discussed for the reclaimed agricultural land which will now be in a basin? This will be especially significant during harvest season.	4-147
4.12-1		HAZARDS - INTRODUCTION The issues listed do not include accidents resulting from steep slopes, e.g., bicycles, hiking, motorcycles, ATMs.	4-148
		GENERAL COMMENT: The project is within easy walking or biking distance of Madison and the adjacent Migrant Farm Labor Housing Project. There are no public swimming facilities in the Madison/Esparto area and there are no other bodies of water deep enough for swimming during the summer. Hundreds of children reside in the area.	4-149
		Existing pit-lakes and those to be created will become irresistible attractive nuisances for children, especially after mining hours and on Saturdays and Sundays. The fencing proposed is in no way "kid proof".	
		Even the flattest slopes proposed for the pit-lakes sides greatly exceed those recommended for swimming pool standards for public use.	

PAGE	P#	COMMENTS
		Inexperienced swimmers and waders are subject to extremely hazardous conditions. It is quite likely that responsible adults will not be accompanying clandestine swimming excursions by trespassing minors. Once a wader/swimmer is in trouble there is not likely to be a responsible person present to extend lifesaving assistance. **Children from the migrant camp will likely be Hispanic and many are left at home unsupervised while the parents work in the fields. Many may not be bilingual or even able to read warning signs.** **Once a child is in trouble in the water (after mining hours) the proposed pit-lake locations are too isolated from SR-16, I-505 or any nearby dwellings for other children to seek help on a timely basis. It is difficult to visualize a more inviting hazard and one so remote and far from emergency help!** **Because the County as the lead agency, has promulgated the regulatory safeguards and will be a party to the permit agreement, it will most certainly be named in any lawsuit involving injury or death. It is seriously doubted that the County can escape responsibility with a "save harmless" clause in the permit because the regulations written at this reading seem to be far from adequate.** 4-149 **Lawsuits brought on behalf of the occupants of the migrant labor housing project will have cost free legal assistance through the various legal services created for the disadvantaged and minorities.** **Staff is remiss in not obtaining a complete risk assessment of this situation provided by experts in the field. Written comments by the County's insurance carrier should also be included. The citizens who ultimately are left with the bill are entitled to this!** **Furthermore, it should be pointed out that there are no plans for any public swimming facilities to be constructed in the next 30 years in the Capay/Esparto/Madison area. The local Unified School District is impoverished and school bonds are most difficult to pass. In the meantime the juvenile population continues to increase and the potential for juvenile swimming trespass will increase. It is not likely that privately owned swimming facilities will be built for profit as this sector of the business has long been unprofitable.**

PAGE	P#	COMMENTS	
		<u>If we must have pit-lakes they must not be allowed to become "death traps" for our children!</u>	4-149
4.12-8		IMPACT 4.12-3 See earlier discussion Posting of signs is of little value for children especially considering that some from the Farm Labor Housing Project may be unable to read and most are Hispanic. Fencing will not be of a sufficient standard to prevent kids from climbing. The City of Woodland Parks & Recreation Department has been unable to keep children out of the municipal pools with an 8' chain link fence topped with barbed wire. The police respond to many calls of illegal swimmers at night after the pool has been closed. Staff should cite the commonly accepted standards for swimming pool safety as promulgated by safety engineers. The vbinadequate safeguards offered entirely miss the mark!	4-150
		LOCAL EMERGENCY RESPONSE CAPABILITY NOT GIVEN The Esparto/Capay Fire Department is mostly volunteer - its make-up and response capability should be fully explained. The response time to an emergency at a Solano Concrete pit-lake should be noted as well as how long it would typically take to assemble the volunteers at the accident site. It should be determined whether the Fire Departments have sufficient rescue apparatus on board, including a foldable raft to facilitate reaching a swimmer in trouble some distance from the shore. <u>Staff has failed badly to adequately appraise one of</u> <u>THE MOST POTENT SAFETY HAZARDS OF THE WHOLE PROJECT!</u>	4-151

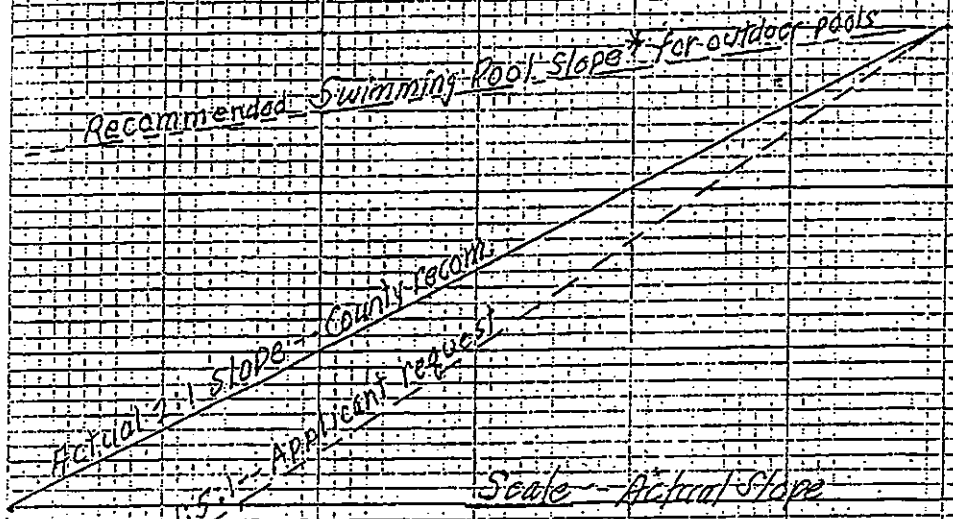
PAGE	P#	COMMENTS
		COMMENT: **WHERE ARE THE MISSING EXPERTS?** An adequate DEIR would most certainly have a lengthy and detailed discussion on public health and safety hazards performed by a competent, experienced, safety engineer. it is painfully clear that Staff does not possess these qualifications. Staff has gone to great lengths in other parts of this DEIR to quote "experts" no matter how obscure or poorly equipped they are to discuss the subject under consideration. However on this safety subject no one with even the minimum qualifications has been invited to comment. For Staff information the following quote is from the "Annual Report", May 1995 (the latest) of the California Board of Registration for Professional Engineers and Land-surveyors on page 5: "Under current California law, engineers may register in three practice disciplines (Civil, Mechanical or Electrical) or in 13 title disciplines (Agricultural, chemical, control systems, corrosion, fire protection, industrial, manufacturing, metallurgical, nuclear, petroleum, quality, SAFETY and traffic)." In an appraisal of what appears to be the cumulative infractions of the registration law thus far by Staff and its consultants on the total EIR documents thus far submitted for review, it may well be just cause for requesting an investigation by the Registration Board's investigation Staff.
		COMMENT: HAS THE YOLO COUNTY HOUSING AUTHORITY BEEN ASKED FOR COMMENT? The Farm Migrant Workers Housing Project is the closest concentration of children to the proposed project. The population is predominantly Hispanic with many children and English may well be the second language while some may not be literate. Has a Spanish DEIR been furnished to the housing project and have any bilingual public meetings been held so that the residents have the opportunity to be heard?

4-152

4-153

PAGE	P#	COMMENTS	
		There are specific State and Federal laws (not CEQA) that deal with the information to be furnished minorities and low income groups. Such groups in many cases are entitled to levels of information, explanation, and notification over and beyond the formal published legal notices generally required by CEQA. The minorities and the disadvantaged enjoy more protection under State and Federal law than provided by CEQA. THESE REQUIREMENTS MUST BE MET!	4-153
		COMMENT: SIDE SLOPES OF PIT-LAKES EXPLAINED The average reader of the DEIR cannot visualize a 1.5 : 1 or a 2 : 1 slope for a proposed lake as this is typical engineering jargon. Above all, the reader cannot equate the numerical designation of slopes to what is considered an acceptable slope for the bottom of a public swimming pool. The DEIR should provide an understandable graphic to provide the reader comprehension of what is being proposed. Given the absence of such a graphic, one is provided (see attached) that is drawn to actual scale for comparison purposes. For further explanation comparison is made on the amount of vertical drop that would occur for a horizontal distance of 6 feet.: Recommended drop in a public swimming pool = 9 inches ("Design" book for Engineers by E. E. Seelye) Staff recommended drop 36 inches Applicant's recommended drop 48 inches This demonstrates that Staff's recommendation is 4 times steeper than the recommendation for public pools. The applicant's proposed drop is 5.3 times steeper than the recommendation for public pools. This gives a basis of comparison to demonstrate how dangerous the Staff's proposed 2 : 1 slope is. (see attached drawing)	4-154

COMPARISON OF SWIMMING POOL SLOPE
TO PROPOSED MINE LAKE SLOPE



In 6' horizontal distance:

Recom. Swim. Pool will have 9" drop
Co. Recom. slope will have 36" drop
Applicant's slope will have 48" drop

APPENDIX A

PLEASE INSERT AT THE BACK OF EACH APPLICATION

* "DESIGN" - Elwyn E. Seelye
Design Book For Civil Engineers

KEUFFEL & ESSER CO.

LETTER 4: ENVIRONMENTAL ISSUES COMMITTEE WESTERN YOLO GRANGE #423, CACHE CREEK COALITION, NATURAL RESOURCES COMMITTEE LEAGUE OF WOMEN VOTERS WOODLAND, CITIZENS FOR RESPONSIBLE MINING

Response to Comment 4-1:

Thank you for your comment letter. The contents of the DEIR have been developed in response to concerns received on the Notice of Preparation and at the scoping meeting. Staff has verified that all relevant comments from that process were adequately addressed in the DEIR.

Response to Comment 4-2:

The comment is unsubstantiated, and inconsistent with the independent findings of the DEIR and earlier studies. The commentors have reiterated their specific concerns in the attachment to Letter 4 received on this DEIR. Responses to these specific comments are provided in Responses to Comments 4-3 through 4-154.

Response to Comment 4-3:

Regarding eutrophication and potential biological degradation of wet pits, please refer to Response to Comment 4-30. Regarding licensing of experts, please refer to Responses to Comments 4-112 and 4-152. Regarding mobilization of mercury, please refer to Response to Comment 4-116.

Response to Comment 4-4:

For the discussion of the potential for sealing of the sides and bottoms of permanent wet pits with silt, clay or biological material, the commentor is referred to Response to Comment 4-28.

Response to Comment 4-5:

Please refer to Response to Comment 4-153.

Response to Comment 4-6:

The commentor is referred to Response to Comment 4-19.

Response to Comment 4-7:

The summary of climatic data presented in the OCMP EIR on pages 4.4-1 and 4.4-2, and referred to in the DEIR, was prepared based on Federal meteorological publications. The preparers of the DEIR consider the summary to provide adequate detail to support the subsequent hydrology and water quality analysis. Further, the OCMP EIR acknowledged

that evaporative losses would occur at the wet pit lakes, but that these losses are acceptable (as a matter of County and Regional Water Quality Control Board policy) to support biological habitat diversity. Furthermore, the OCMP EIR included the potential higher evapotranspiration of wetland areas at the perimeters of the wet pit lakes. Staff is recommending no change to the DEIR.

Response to Comment 4-8:

The preparers of the DEIR reviewed the California Water Code regarding jurisdiction of the Department of Water Resources, Division of Safety of Dams (DSD) over the alluvial separators proposed by the project (page 4.3-20, third paragraph of the DEIR). Based on this review and discussions with DSD engineers, it appears that permitting of the separators under DSD would not be required. However, to be conservative, Mitigation Measure 4.3-4j recommends that the applicant contact DSD, prior to implementation of the project, for a formal determination. For the record, such a determination has been received regarding the Cache Creek Aggregates application. For that application, DSD responded that the proposed off-channel mining did not fall within their justification.

Response to Comment 4-9:

Staff interprets the commentor to be referring to the option of controlled flooding of areas behind the Solano Concrete levee. The commentor is referred to Response to Comment 4-58.

Response to Comment 4-10:

The construction of a controlled flow inlet channel would merely protect the existing bank during flooding, it would not substantively affect creek flow conditions or result in new diversions. Water rights concerns are not relevant to this issue.

Response to Comment 4-11:

Mitigation Measure 4.3-4c of the DEIR describes two alternatives for mitigating the lack of compliance of the project with the minimum 200-foot setback requirement of the OCMP. An exemption from the OCMP requirement would require construction of controlled flow inlet structures for areas inundated by a 100-year flood event. The determination of whether the controlled flow inlet structures would be installed has not yet been made. The construction of the inlet structure would not result in any new diversion of water from the creek; the structure would only control potential erosion associated with existing flooding hazards. A design of the structure has not been completed. It is not possible to accurately determine at this time which agencies would have jurisdiction over the installation of these structures. The applicant would be responsible for obtaining all appropriate permits.

Response to Comment 4-12:

Please refer to Response to Comment 4-80.

Response to Comment 4-13:

The commentor appears to have misunderstood the concept of the controlled flow inlet structures. Under the existing condition, flood waters enter former mining areas through a low portion of the alluvial separator. The controlled flow structure proposed by the applicant, which may or may not be constructed, would provide bank protection to prevent erosion and downcutting during these overtopping events. No new inlet or "siltation basins" would be constructed.

Response to Comment 4-14:

The preparers of the DEIR have recommended biotechnical slope protection for the project site to promote integration of bank protection into the goals for the CCRMP. Well designed biotechnical bank treatments are well-established alternatives to the placement of riprap. The specific design of the treatment will be constrained by the same engineering requirements for conventional treatments such as riprap. The commentor suggests that biotechnical methods are susceptible to fire, dry rot, and termites, implying that all biotechnical methods are supported by wooden materials only. However, a wide range of stabilization techniques ("mixed construction") are available that incorporate structural bases (including reinforced earth, gabions, and, in some cases, riprap) for rooting medium and suitable surfaces for development of vegetation. The preparers of the DEIR agree that riprap slopes can eventually provide rooting substrate for plants under some conditions, including along the Sacramento River. Riprap treatment cannot be assumed to be more effective or long-lasting than a properly designed biotechnical slope. Although easier to repair, the riprap slope may require similar or more intensive maintenance. Staff does not agree with the commentor's implication that the requirement for biotechnical slopes should be reverted back to the riprap design proposed by the project. However, Text Change #14 has been made to address the possibility that a riprap design is the only acceptable bank protection solution for the project site.

Response to Comment 4-15:

The distance of the Madison wells to the nearest proposed mining area is approximately one mile. This distance is five times the minimum setback (1,000 feet) between mining areas and municipal wells specified by Section 10-4.427 of the Off-Channel Surface Mining Ordinance before modeling of effects to the wells is required. The Off-Channel Surface Mining Ordinance, which includes setbacks for mining from wells, was certified by the Yolo County Board of Supervisors on 30 July 1996. The Madison public water supply wells are located upgradient of the proposed mining areas as indicated by the groundwater elevation contour maps presented in Figures 4.4-3 and 4.4-4 of the DEIR. The contouring does not suggest that the groundwater table is significantly impacted by the cone of influence associated with the Madison wells. Groundwater flow is directed eastward at the site, not westward toward the Madison wells. The relative low pumping rates of the wells, the high transmissivity of the unconfined aquifer, and the distance of the wells from the proposed mining areas suggest that, in the professional opinion of the preparers of the EIR, the wells would not affect or be affected by any change in the groundwater flow regime caused by

the proposed project. If the wells were within 1,000 feet of the proposed mining areas, Section 10-4.427 of the Ordinance would require the applicant to conduct capture zone analysis (which would include determination of the cone of depression) for the Madison wells.

In addition, Section 10-4.417 of the Ordinance requires installation of a monitoring well network to establish local background groundwater conditions and document any changes in groundwater elevations resulting from implementation of the proposed project. It is also significant that agencies responsible for protection of water quality and review of the adequacy of technical information presented in EIRs prepared for mining and reclamation proposal (including the Central Valley Regional Water Quality Control Board and the California Department of Conservation) have not submitted any comments suggesting that the treatment of water quality issues, including drinking water, have not been adequately addressed in the OCMP EIR or any of the long-term mining application project EIR.

Response to Comment 4-16:

Phosphorous has been included as a required sampling parameter in the water quality monitoring program required in Section 10-4.417(a)(3) of the Off-Channel Surface Mining Ordinance. The required monitoring includes determination of background water quality data prior to mining and monitoring during mining and reclamation. This monitoring requirement is extended to the proposed project by Mitigation Measure 4.4-4a of the DEIR. If maximum concentration levels are exceeded, these mitigation measures require the operator to submit a report, to both the County and the Regional Water Quality Control Board, describing the proposed means to remediate any problems caused by mining and reclamation activities. Staff also points out that the evaluation of conditions in the existing mining pit lakes at the Solano Concrete property (see Appendix C of the OCMP EIR) included investigation of algae levels. The evaluation indicated that chlorophyll A levels (a quantitative measure of algal growth) were low in the lakes and that organic matter concentrations in sediments at the bottom of the lakes were also low. These data indicate that significant algal populations do not develop in these lakes.

Response to Comment 4-17:

Nitrate has been included as a required sampling parameter in the water quality monitoring program detailed in Section 10-4.417 of the Off-Channel Surface Mining Ordinance. This monitoring requirement is extended to the proposed project by Mitigation Measure 4.4-4a of the DEIR. In addition, the Surface Mining Reclamation Ordinance requires prevention of runoff into reclaimed mining areas (Section 10-5.507) and a five-foot minimum separation between reclaimed mining area surface and the seasonal high groundwater level (Section 10-5.516). These requirements will minimize the potential discharge of agricultural runoff (possibly containing nitrates) to the groundwater underlying the site.

Response to Comment 4-18:

Regarding the potential for sealing of the sides and bottoms of permanent wet pits with silt, clay or biological material, please refer to Response to Comment 4-28. The use of mathematical modeling for groundwater analysis is discussed in Response to Comment 4-139.

Response to Comment 4-19:

This DEIR identifies the future wet pits as a potential attractive nuisance and therefore a potential hazard, especially if trespassers were to fall into the pits. As a result of this potential hazard, the DEIR recommends mitigation measures to minimize this impact; the mitigation measures in this DEIR consist of a reference to the OCMP EIR mitigation measures (codified in Section 10-5.510 of the Surface Mining Reclamation Ordinance), since this impact is an impact that is not unique to this project but pertains to all off-channel mining projects. The Ordinance requires fencing (a minimum of 42-inch barbed wire fence or equivalent), signage, and a change in pit slopes near the water's edge during and following mining. These mitigation measures are considered to be conservative measures to protect the health and safety of trespassers.

The barbed wire fence and associated signage were recommended to indicate the presence of an open body of water so that trespassers would not inadvertently fall into the pits during day- or night-time. The fence would not be effective in eliminating access to the pits. It is not possible to eliminate access to the pits for someone who wants to access them. The extreme security measure could be walls similar to those surrounding State and Federal penitentiaries, and such measures are not reasonable for this potential impact. Additionally, the barbed wire would be a minimum — other types of fencing are allowed and encouraged where property owners experience trespass problems.

The commentor has indicated in subsequent comments that the suggested mitigation measures for a gentler slope (2:1) would be totally ineffective in preventing the accidental drowning of children from nearby areas, who would access the pits during the summer for swimming. The commentor suggests that since these children would trespass to go swimming in the pits, the pit side slopes should be constructed similarly to the requirements for bottom slopes in swimming pools. It should be noted that public swimming pools have shallow ends and deep ends, unlike the proposed wet pits which will have 2:1 slopes around the entire perimeter. The deep ends of public pools are frequently 8 feet deep with vertical sides that present enormous risks to children. The 8:1 slope referred to by the commentor is only applied along the length of the pool, not the width. Moreover, Yolo County has determined that 42-inch fencing is adequate protection for public and private pools in densely settled urban areas. As the commentor notes, the wet pits will be remote and isolated and will not be readily accessible to small, unattended children.

Furthermore, there are no standards for the steepness of slopes of wet pits, except those that require that the slopes must be geotechnically stable. The California Department of

Conservation, administering SMARA, does not have any requirements for pit slopes except for engineering requirements to ensure slope stability; they also do not keep any statistics on individuals falling into reclaimed pits. Cal OSHA also does not have any requirements for finished pit slopes, only safety orders pertaining to working mines. In fact, Cal OSHA has indicated that the flatter the slopes to a pit, the greater the attractive nuisance.

The County balanced the need to protect trespassers from being injured with the lack of regulations for slope steepness, and the fact that flatter slopes could possibly increase the attractiveness of the pits to trespassers. The 2:1 pit slope requirement reflects this balance, and is similar to the slopes at Shadow Cliffs, a very popular deep-pit reclamation project in Alameda County, which is now an active recreation area. It should be noted that Solano Concrete proposes a 3:1 slope around the lakes for habitat enhancement purposes.

Response to Comment 4-20:

Regarding eutrophication and associated water quality degradation in the mining pit lakes, please refer to Response to Comment 4-30. The potential for formation of a biological "seal" in the lakes is addressed in Response to Comment 4-28.

Response to Comment 4-21:

EIR preparers often contact public agencies and/or special experts during the evaluation of environmental impacts. This is a prudent activity since individuals may possess information that is not published. For example, Yolo County officials were contacted for the preparation of this DEIR to ascertain the status of permitted underground tanks at Solano Concrete's facility, whether inspections occurred, and whether any violations of permits had been recorded. Also the DEIR preparers contacted the agricultural commissioner's office to ascertain historic pesticide and herbicide uses in the County and to obtain information on agricultural practices in the County. This type of information can only be obtained from direct communication with knowledgeable individuals. This DEIR also uses personal communications with knowledgeable individuals to present information to the readers of the DEIR; whenever personal communication has been used by the DEIR preparers, the person contacted has been referenced by name, title, and agency affiliation. This allows the interested reader to also contact the person, should he or she wish to do so.

Response to Comment 4-22:

The California Environmental Quality Act (CEQA) requires an analysis of <u>environmental</u> not economic impacts. Economic effects are to be studied only if there is a direct link to a physical change in the environment (see Section 15131 of the CEQA Guidelines). The issue of whether the economic revenue over a ten-year period from tree crop production versus conventional row crop production was not investigated in the DEIR prepared for the Off-Channel Mining Plan and, consequently, the proposed project was not addressed in this DEIR. However, the 10 July 1996 Planning Commission Staff Report for the OCMP

presented a comparison of expected revenue for poplar trees to conventional row crops. In addition, the economic viability of poplar plantations was described in the Response to Comments document for the 1995 Solano Concrete Company, Inc., Short-Term, Off-Channel Mining Permit Application.

The risk of wildfire at the project site is not significantly increased by the proposed planting of tree crops. Fire hazards would be similar to those posed by conventional crops or the riparian habitat along Cache Creek. See also Response to Comment 4-125, below.

Response to Comment 4-23:

The Director of the Yolo County Flood Control District as well as the hydrologist for the District have both been contacted numerous times regarding compatibility of the OCMP goals, policies, and regulations with District operations. It is our understanding that the OCMP and implementing ordinances are compatible with existing and planned District operations and projects including the pending District Groundwater Recharge and Recovery Program.

Based on discussions with the District, the construction of the canal referred to by the commentor is not a scheduled project. The availability of water is in question. Furthermore, a construction project of that magnitude would require environmental impact analysis under CEQA (and potentially NEPA). If and when the project is formally proposed, the environmental impact analysis would examine potential impacts associated with increased groundwater levels.

Response to Comment 4-24:

Climatic data for the air quality analysis were obtained from the Woodland monitoring station, close to the project site. There are only a limited number of monitoring sites within Yolo County and having a station that close to the site is fortuitous. The Woodland monitoring site measures PM-10 and ozone, two regional pollutants. Being regional in nature means that because the pollutants sources are so spread out geographically, the concentrations of ozone and PM-10 do not show great variation over distances within a few miles. Localized pollutants, such as carbon monoxide, could show strong variations over short distances, but carbon monoxide is not a problem pollutant in Yolo County in general or specifically in the project area.

Air quality monitoring data for Woodland is the closest available data and is considered representative of the project area. Air quality impacts were evaluated on a regional basis. The impacts assessed in the EIR are those related to the increase in regional emissions as a result of the project, or impacts of emission of a specific pollutant on nearby sensitive receptors. The EIR assessed the total impact of the project and cumulative impacts on air quality. Project traffic will disperse on roadways in the region, and winds will disperse pollutants throughout the region. For these reasons, a localized analysis of air quality impacts would be misleading and not be representative of the project's impact on regional air quality and attainment of air quality goals.

Response to Comment 4-25:

The OCMP EIR discussed potential increases in demand for public services to the OCMP area in response to implementation of mining in the OCMP area and determined that there would be no significant increases in demand for services from mining activities in the OCMP planning area. This DEIR tiers off the OCMP Program EIR.

Response to Comment 4-26:

This DEIR is a project EIR prepared under the OCMP Program EIR. The OCMP EIR was certified by the Board of Supervisors on 30 July 1996 as adequately describing the environmental impacts from the Off-Channel Mining Plan. This project EIR tiers off the OCMP Program EIR, as provided for in the California Environmental Quality Act. Certification of this EIR would follow certification of the Program EIR and take into account any and all changes to the latter document. Phasing the preparation of the environmental documents allows for full public participation in their processing and is in full accordance with the requirements of CEQA.

Response to Comment 4-27:

Staff does not agree that the water resource issues raised by the comment were not addressed in the DEIR. The exclusion of these issues from the section "Areas of Controversy" does not ignore the extensive analysis provided in the project- and program-level EIRs. Eutrophication, biological degradation (including pathogens) and mercury bioaccumulation were discussed in Impact 4.4-4 of the DEIR. These issues were also discussed in the OCMP EIR. Evaporation was discussed in Impact 4.4-2 of the DEIR and additional discussion of associated water quality impacts is presented in Response to Comment 4-29. Potential impacts of the proposed project were evaluated in Impact 4.4-5 of the DEIR. The Madison (including the Madison Migrant Center), Esparto, and Woodland public water supply wells are located more than 2,000 feet from the mining areas of the proposed project. Section 10-4.427 of the Off-Channel Mining Ordinance requires groundwater modeling to evaluate impacts of mining and reclamation on water supply wells only if proposed mining areas are within 1,000 feet of municipal wells or within 500 feet of domestic wells. The distances were considered appropriate for protection of water wells in the Technical Studies for the CCRMP and were supported in the OCMP EIR analysis. In response to this comment the DEIR has been amended as indicated in Text Change # 1.

Response to Comment 4-28:

The commentor's opinion regarding whether or not the mining pit lakes will transmit water to the surrounding aquifer appears to be inconsistent within Letter 4. When potential water quality threats to the potable aquifer, such as degradation of water quality at Madison wells (Comments 4-15, 4-85, 4-89), or migratory water fowl (Comments 4-3, 4-90, 4-98, 4-102, 4-110), or airborne biosolids from sewage sludge (Comments 4-103, 4-104) are claimed by the commentor, the mining pit lakes, by inference must readily transmit water to the

aquifer. However, when discussing eutrophication and sealing of the mining pit lakes by silt, clay, and biological material (Comments 4-4, 4-18, 4-20, 4-28, 4-48, 4-50, 4-97, 4-109, 4-130) the commentor concludes that the mining pit lakes will become sealed.

The preparers of the DEIR have been consistent in the DEIR analysis; some mechanical and biological clogging of the mining pit lakes may occur. However, based on empirical data and observations from other similar systems, these lakes, will maintain hydraulic communication with the surrounding aquifer.

Any silt and clay layers encountered during excavation will be largely removed from the mining pit. Undoubtedly, some sediment fines will settle on the pit bottom and sides during mining. However, a thick accumulation of fines is not likely to occur. As mining proceeds, and the pit is deepened, the fines that settle out as a result of previous mining would be excavated or remobilized into the water. This process of on-going excavation and remobilization would continue to occur until the end of mining.

With regard to "proof" that this sealing (either from clay deposits or biological clogging) would not occur, similar completed mining pit lakes in alluvial systems were reviewed. Based on the rapid responsiveness and high degree of correlation of water levels in mining pits and the surrounding groundwater system in the existing Solano Concrete mining pit lake and the mining pits in the Middle Reach of the Russian River, including pits that are over 20 years old, groundwater flow through the mining pit lake walls is maintained. Specifically, the Basalt Pit, which is located adjacent to the Russian River just south of the confluence with Dry Creek, may represent a "worst case scenario" for eutrophication and remains hydraulically connected to the aquifer. The Basalt Pit receives approximately one million gallons a day of secondarily treated wastewater from the Healdsburg Wastewater Treatment Plant. The water within the pit is highly eutrophic; visibility is typically only a few inches. However, fluctuations of pit water elevations and adjacent groundwater elevations show correlation, indicating that flow occurs readily through pit walls. Discharges from the treatment plant to the Basalt Pit have been occurring since 1980. Sixteen years of "worst-case scenario" eutrophication has not resulted in sealing the pit walls. Therefore, biological sealing of mining pit lakes that have no such nutrient source, such as proposed under this project, are not expected to occur, much less result in a significant and unavoidable impact.

Response to Comment 4-29:

Regarding microclimates, please refer to Response to Comment 4-7. With regard to salt-loading of the wet pits, it has been estimated in the Technical Studies for the CCRMP that increase in salt content (as measured by total dissolved solids (TDS)) would stabilize at approximately five percent above concentration in newly created wet pit lakes. This estimated increase would apply to boron salt compounds. This increase is not considered significant because the effects of increased TDS would decrease by dilution in the groundwater system with distance from the wet pits.

Elevated boron levels in groundwater within the lower Cache Creek basin were also discussed in the Technical Studies. Background levels of boron in groundwater can be as high as 3 mg/L. Testing of boron in groundwater samples and water within existing mining pit lakes at the Solano Concrete property in 1994 indicate that levels of boron in the lake water (2.2 mg/L) are similar to levels in groundwater collected from wells upgradient and downgradient of the lake (1.8 to 2.4 mg/L).

Response to Comment 4-30:

Staff does not agree with the commentor's opinion that the potential impacts of eutrophication have not been addressed in the DEIR. The commentor is referred to the discussion of eutrophication presented in Impact 4.4-4. A similar discussion was presented in the DEIR for the OCMP. Additional discussion was provided in the Response to Comments document for the OCMP. The DEIR for the OCMP was certified by the Yolo County Board of Supervisors on 30 July 1996, and the subject analysis tiers from it. It is also significant that agencies responsible for protection of water quality and review of the adequacy of technical information presented in EIRs prepared for mining and reclamation proposal (including the Central Valley Regional Water Quality Control Board and the California Department of Conservation) have not submitted any comments suggesting that the treatment of water quality issues, including eutrophication, have not been adequately addressed in the OCMP EIR or any of the long-term mining application project EIR.

The preparers of the DEIR question the validity of the commentor's opinion that the mining pit lakes proposed by the project would be subject to eutrophication. The technical term "eutrophication" was defined in the DEIR as the loading of inorganic and organic dissolved and particulate matter to lakes at rates sufficient to increase the potential for high biological production. The term is somewhat subjective and is not typically defined quantitatively. A eutrophic lake is typically characterized by high algal biomass, resulting from high nutrient loading, and poor circulation. The proposed mining pit lakes do not present conditions that would encourage eutrophic conditions. Conditions expected in the lakes which would inhibit eutrophication of reclaimed lakes include deep, steep-sided morphology, relatively short residence time for water (caused by flow of groundwater into and out of the lakes), relatively low nutrient loading (related to the prevention of surface water flow into the pits), and the relatively high pH of source water (groundwater). Although algal growth will occur within the lakes, as in all natural lakes, an unusually high algal population is not expected. Monitoring of chlorophyll A levels in the existing Solano Concrete mining pit lakes indicated low algal density in these lakes in April 1996. The sampling of sediments indicated low organic content in the sediments at the bottom of the lakes. These data suggest relatively low algae production in the lakes. The preparers of the DEIR expect that thermal stratification and possible low oxygen conditions in the basal waters of the lakes could develop during late summer. This condition would be temporary and would not necessarily cause significant eutrophication of the lakes.

The preparers of the DEIR are familiar with other mining pit lakes that have been constructed in similar environments to the proposed lakes in the lower Cache Creek basin. The deep, steep-sided aggregate mining pit lakes in the area of Pleasanton, California, and

similar lakes along the Middle Reach of the Russian River in Sonoma County are not significantly eutrophic. Although thermal stratification of these lakes occur, high algae populations do not typically develop in these lakes unless high nutrient loading occurs.

The preparers of the DEIR have reviewed the 1969 Federal Water Pollution Control Administration publication referenced by the commentor. As is explained in this reference (and many others), eutrophication is dependent on available nutrients, primarily phosphorous and nitrogen. Lakes and reservoirs which receive excess nutrient have the potential to become eutrophic. As described in Table 3 (page 39 of the 1969 publication), major sources of phosphorous include sewage effluent, industrial discharge, phosphate rock, agricultural drainage, and benthic (sea floor) sediment releases. As discussed in the DEIR none of these nutrient sources would be available to the wet pits. Table 3 further lists minor contributors, including domestic ducks, sawdust, rainwater (where pollution is present in atmosphere), wild duck, tree leaves, and dead organisms. Of the minor contributors, it is anticipated that only wild ducks and dead organisms would be introduced into the wet pits. This discussion demonstrates that only minor amounts of nutrients would be introduced, minimizing the potential for significant eutrophication to develop. Sources of phosphorous would be limited to phosphorous supplied in groundwater and from atmospheric fallout.

Although the preparers of the DEIR consider the potential for significant eutrophication to develop to be low, the OCMP requires that the operators of permanent reclaimed mining pit lakes monitor temperature, dissolved oxygen, pH, eH, and dissolved carbon levels in the lakes for up to ten years after completion of reclamation. Development of eutrophic conditions, which may result in increased methyl mercury production, would require mitigation.

Response to Comment 4-31:

The proposed project cannot be approved unless the project is found to be consistent with the approved OCMP and CCRMP. The EIRs for the OCMP and CCRMP were certified as adequately describing the environmental impacts associated with those projects. The OCMP was approved on 30 July 1996 and the CCRMP was approved on 20 August 1996 by the Board of Supervisors. The commentor's opinion regarding the quality of analysis contained in the OCMP and CCRMP EIRs is noted for the record.

Response to Comment 4-32:

The commentor appears to be confusing the purpose and content of the CCRMP and the CCRMP EIR with the proposed project. The proposed project is not located within the CCRMP area. The CCRMP planning boundary is entirely within the CDMG MRZ-2 boundary as correctly indicated in the CCRMP DEIR. The commentor is referred to Figure 4.3-5 of the Solano DEIR for delineation of the CDMG boundaries for Mineral Resource Zones (MRZ) in the project area. Although the southern end of the Solano West parcel is located within the MRZ-3 boundary, all proposed mining within this parcel is located within the MRZ-2 boundary.

Response to Comment 4-33:

Please refer to Response to Comment 4-8 for discussion of the potential permitting requirements by the Division of Safety of Dams (DSD) of the Department of Water Resources (DWR). Although the project EIR has been sent to DWR for review, they have not offered any response indicating concerns regarding DSD jurisdiction.

Response to Comment 4-34:

The commentor is correct. The distance from the western edge of the project boundary (the Solano West parcel) to the Town of Madison (including the Madison Migrant Center) is approximately 0.2 mile. The distance between Madison and the nearest areas to be mined is approximately 0.85 mile. For clarification, the text of the DEIR has been amended as Text Change # 3. Figures 3.3 and 3.4 of the DEIR have been amended by Text Change # 4 to show the Migrant Center. The Migrant Center houses 88 families and operates 6 months of the year.

The comment regarding Hungry Hollow is noted. The project location description on page 3-4 states that "Cache Creek transects the [Hungry Hollow] valley, flowing eastward," which is an accurate statement.

Response to Comment 4-35:

The DEIR discusses potential impacts associated with dedication of lands to a public agency on pages 4.2-24 and 4.2-25 of the DEIR. The commentor is correct that this could be a potential impact of the project, especially issues concerning public access. Mitigation 4.2-8a has been recommended to reduce this impact to less than significant. As noted in the Mitigation Measure, the land will not be dedicated until reclamation is complete. The operator is in no way absolved of his responsibilities. An appropriate public agency would be one that has experience in managing lands for open space, habitat, and/or recreational purposes. Examples of such agencies include Yolo County and the California Department of Fish and Game.

The comment regarding what happens to the proposed dedication if the land were sold is an administrative issue, not an environmental impact. However, for the commentor's information, any easements would run with the land as would an Irrevocable Offer of Dedication (IOD).

Response to Comment 4-36:

It should be noted that over the past nine years Solano Concrete has not used higher than average applications of fertilizer in its reclaimed agricultural areas, and has achieved increased crop production rates over similar, unmined fields. In addition, past groundwater monitoring conducted by Solano Concrete of the water in the mining pit lakes immediately

adjoining reclaimed lowered agricultural fields has consistently contained nitrate levels below the threshold for drinking water (45 mg/L).

The OCMP and implementing ordinances require extensive monitoring of nitrates in the wet pit lakes and groundwater. If nitrate levels were identified in the pits or groundwater higher than background, corrective action would be required by Section 10-4.417 of the Off-Channel Surface Mining Ordinance. Corrective action could include alteration of agricultural practices to reduce nitrate loading (alternate crop selection, reduced fertilizer application) at the surface.

Response to Comment 4-37:

The Mineral Resource Zones (MRZ) delineated by CDMG extend to just west of the town of Yolo. The description presented in the DEIR is considered a general perspective for the purpose of the land use discussion. The reference to Figure 3-1 is intended to regionally orient the reader.

Response to Comment 4-38:

Text Change # 3 has been made in response to the comment.

Response to Comment 4-39:

Figure 4.2-1 has been modified to specifically indicate the Madison Migrant Center. Please see Text Change # 10.

Response to Comment 4-40:

Figure 4.2-2 has not been modified to indicate the Madison Migrant Center because the figure illustrates General Plan land use designations, not current land uses.

Response to Comment 4-41:

Figure 4.2-4 has not been modified to indicate the Madison Migrant Center because the figure illustrates project lands under Williamson Act contracts, not current land uses.

Response to Comment 4-42:

The text on page 4.2-23 has been modified as Text Change # 11, to note the location of the Madison Migrant Center in relation to the project.

Response to Comment 4-43:

Mitigation Measure 4.2-8a addresses the need for the County and the applicant to negotiate the dedication of reclaimed lands in Phase V and VI for a Recreation Node, as

planned in the Cache Creek Resource Management Plan (CCRMP). The CCRMP contains several policies about the County's intent to acquire lands through dedication.

Goal 5.2-2 in the CCRMP states "Establish a variety of outdoor recreational and educational opportunities along Cache Creek for use by the public." Two Actions outline how the land for these recreational areas are to be acquired: "Solicit the dedication of restored habitat areas and/or recreational areas to the County or an appropriate land trust, such as the Cache Creek Conservancy, in order to provide continuous open space along the creek" (Action 5.4-1), and "Acquire future sites, through purchase or voluntary donation, so that the County can maintain and develop the areas according to the future recreation plan" (Action 5.4-7). During the public hearing on the OCMP on 23 July 1996, the Board of Supervisors specifically asked each of the participating operators (including Solano Concrete) if they would offer land for dedication. The Board's intent was quite firm and clear.

Upon adoption of the CCRMP, the Yolo County Board of Supervisors has indicated the County's intent to comply with these policies and acquire lands for future recreational areas through dedication and purchase.

Response to Comment 4-44:

Luhdorff and Scalmanini Consulting Engineers has compiled extensive hydrogeological data on the region in past reports and documents. The preparers of the DEIR know of no requirement that compilation of stratigraphic information be conducted by geologists. However, the staff of Luhdorff and Scalmanini includes hydrogeologists and engineers who are qualified to compile and present hydrogeological data. In addition, the preparers of the EIR who reviewed technical reports submitted with the application include California Registered Geologists, a Certified Hydrogeologist, and a Certified Engineering Geologist.

Response to Comment 4-45:

Benches on 1:1 slopes are not required to protect trespassers but are included to provide mitigation for slope stability. The 1.5:1 slopes proposed by the applicant were also designed to address slope stability, not public safety. These slopes were not chosen "arbitrarily" but were developed on the basis of slope engineering principles and site-specific slope modeling. Also please refer to Responses to Comments 4-19 and 4-46.

Response to Comment 4-46:

Please refer to response 4-19 for a discussion of mitigation measures to minimize safety impacts associated with open wet pits during mining and after reclamation. Please note, that the proposed project does not include slopes of 1.5:1 at the margins of the pits but rather 3:1 and 4:1 (flatter slopes).

Response to Comment 4-47:

The slope requirements in Section 10-5.530 of the Surface Mining Reclamation Ordinance address engineering standards for slope stability of the slopes and include provisions for flatter slopes to minimize safety impacts. These requirements (as presented in the OCMP EIR) are referenced in this DEIR under Mitigation Measure 4.3-2a.

Response to Comment 4-48:

Please refer to Response to Comment 4-28. Also note that the operator indicated that the site-specific level of waste fines is approximately 17 percent. The 25 percent figure referred to by the commentor was an average for the entire MRZ-2 area.

Please note that swimming has never been included as a potential use of future recreational areas in the OCMP. Intensive uses, such as public swimming areas, could increase the potential for groundwater contamination.

Response to Comment 4-49:

Please refer to Response to Comment 4-8. The applicant has submitted plans to the Division of the Safety of Dams but has not yet received a response.

Response to Comment 4-50:

Wave erosion in the mining pits reclaimed to lakes would not present a serious slope stability threat to vegetated reclaimed slopes proposed by the project. Minor sloughing may occur at the margin of the lakes as the result of undercutting by wave action. This potential condition is acknowledged in the DEIR (page 4.3-26). Annual evaluations of erosion problems at the mining areas by a qualified geologist or geotechnical engineer, as required by Section 10-4.701(g) of the Off-Channel Surface Mining Ordinance, will provide additional insurance that any unanticipated erosion problems are identified and mitigated.

The fluctuating water level in the mining pit lakes will expose slopes to erosion. However, erosion potential caused by runoff would be typically increased during winter months when water levels are generally high. Although the lower portions of the slopes within the zone of fluctuating water levels would support a different vegetative community than the slopes above this zone, the slopes are not proposed to be bare. Reclamation plans for the project site include a vegetative zone that would be appropriate for these areas.

Wave action would result in erosion and redistribution of fine-grained sediments initially located at the margins of the mining pit lakes. The sediments moved by this process would be repeatedly reintroduced into the water column until they are redeposited in deeper portions of the lake. Following reclamation, the sediment volumes delivered to the lake would be limited to sediment generated by erosion of the sideslopes of the lake (runoff from other areas is diverted away from the lakes). Therefore, areas in which fine-grained sediments are removed may become relatively more permeable, while deep areas of the

lake would become less permeable. Water movement through the mining pit lake slopes may be preferentially increased in the shallow portions of the lake. The preparers of the DEIR do not consider the effect of this redistribution of sediment as a significant influence on the ability of water to move through the mining pit lakes.

Mathematical modeling is not necessary to evaluate the potential impact of wave erosion and redistribution of sediment. The qualitative discussion presented above is supported by data collected within and around the existing mining pit lake at the Solano Concrete Company property. Bottom sediment sampling (Slotton, et al.) of the lake indicate that the finest sediment is deposited in the deepest portions of the lake. Coincident changes in water levels in the lake and groundwater levels in wells in the vicinity of the lake provide evidence of hydraulic continuity between the lake and groundwater. No evidence supports the commentor's suggestion that the redistribution of sediment is causing a significant impact at this existing lake.

Finally, the preparers of the EIR concur with the commentor's general description of the relationship of slope steepness and the morphology and erosion processes at the margin of a lake. However, as discussed above, the DEIR has adequately mitigated the potential impacts of erosion caused by wave action.

Response to Comment 4-51:

Preparers of the DEIR consider the geotechnical report prepared for the project (Kleinfelder, 1995) to be a site-specific evaluation of the conditions which could affect the stability of surface and subsurface materials at the project site. The report was prepared in conformance with generally accepted field, laboratory, and slope stability analysis methodologies. The subsurface conditions were evaluated at 13 locations throughout portions of the project site. In addition, the consultant has also performed extensive subsurface investigations within the same alluvial deposits at the Syar Industries properties between County Roads 87 and 89.

Geotechnical engineering practice acknowledges that subsurface exploratory borings only identify the actual conditions at the location of the borings. Interpretation is required to estimate the conditions between the borings. Although the alluvial deposits are heterogenous, the properties of these materials can be reasonably characterized through the collection of site-specific data and familiarity with similar materials. The slope stability analysis performed for the project evaluated a range of slope designs for the mining and reclamation slopes.

The commentor is correct in assuming that some of the deposits exposed by mining may be relatively more erodible than others. The commentor is referred to the Response to Comment 4-50 for a discussion of wave erosion in the mining pits reclaimed to lakes.

Staff does not agree with commentor's opinion that the DEIR evaluation is overly generalized or inadequate. The Department of Conservation (DOC), which is the agency responsible for reviewing the technical aspects of the DEIR (including slope stability), did

not present comments in support of the opinion of the commentor. The commentor is referred to page 7.2-32 of the DEIR, which presents an opinion by DOC that "the geotechnical and hydrological aspects of this site are adequately addressed" in the geotechnical report for the proposed project.

Response to Comment 4-52:

As has been stated before, the DEIR numbers are correct. The commentor is referred to page 3.3-29 of the Technical Studies, where NHC states that the average annual sediment yield for Cache Creek at Capay equals 927,600 tons, of which 210,100 tons are composed of sand and gravel. The remaining 717,600 tons are composed of fine materials and sediments. The DMG report referred to by the commentor is assumed to be "Special Publication 98 - Fluvial Geomorphology and River-Gravel Mining." Pages 13-14 of this document state that the bedload transport was estimated at 77,000 tons or 6 percent of the suspended load. This estimate was based on limited work prepared by the USGS between 1958 and 1967, and is not comparable to the recent data and extensive modeling provided by NHC.

Again, according to NHC, fine materials make up approximately 77 percent of the suspended load, not 90 percent. Nevertheless, the preparers of the EIR agree with the need for the settling basin. Staff understands the basic concepts of sediment transport and acknowledges that material may be carried out of the planning area into downstream reaches, as is stated on page 4.3-27 of the DEIR. Staff also agrees that sediment transport has adversely affected the streambed elevations and local bridge structures.

No changes are required in the text of the DEIR regarding this comment.

Response to Comment 4-53:

The commentor is correct that velocity is measured in distance divided by time (e.g. feet per second). However, discharge, as discussed in the referenced paragraph, is measured in volume divided by time (e.g. cubic feet per second). The DEIR discussion is accurate.

Response to Comment 4-54:

The potential for piping was addressed in the geotechnical evaluation prepared for the proposed project (Kleinfelder, 1995). The conclusion of the analysis was that the potential for piping was remote at the project site. This conclusion was based on laboratory analyses which indicated that the permeability of the material in the separator would prevent the development of critical seepage velocities which could initiate piping. In addition, high flow conditions which could develop gradients required for increased groundwater flow velocities within the separators would be temporary conditions. The condition could be more permanent in recharge basins if the water level in the basins are maintained at elevations significantly above the flow elevation in the creek.

The purpose of the recommended adjustment of the CCRMP boundary at the site was to reflect more accurate site specific information on the location of the 100-year flood hazard boundary. The CCRMP boundary is based, in part, on the estimated position of the 100-year flood boundary. The preparers of the DEIR considered the data presented for the project to be more accurate than the data used in the US Army Corps of Engineers hydraulic analysis on which the original CCRMP boundary was based. Concurrence with this position was given by the preparers of streamway analysis in the Technical Studies for the CCRMP. Staff considers the recommended change to be an improvement in the positioning of the CCRMP, not a "manipulation" as characterized by the commentor. The public is free to comment on the proposed change, as the commentor has done in this letter, during the periods for review of this project, in accordance with CEQA.

Response to Comment 4-55:

Please refer to Response to Comment 4-8.

Response to Comment 4-56:

The purpose of Figure 4.3-7a is to show the relationship between the proposed mining areas and Cache Creek. Extending this Figure southward would not serve the purpose of that figure in the Geology section of this DEIR. However, in response to this comment, Figures 3-3 and 3-4 have been amended to show the relationship of the requested features to proposed mining and reclamation areas. Please refer to Text Change # 4.

Response to Comment 4-57:

The commentor is referred to Response to Comment 4-54 for discussion of the reason for recommended adjustment of the CCRMP boundary at the project site.

Response to Comment 4-58:

The comment is unclear. The referenced paragraph does not represent a "decision," agreement, or "arbitrary negotiation" by staff. It does reflect a proposal by the applicant to address an inconsistency with the required minimum 200 foot setback in a particular way, as well as the environmental analysis of that proposal.

The commentor, as well as any member of the public, is welcome to respond on this aspect of the project proposal at any time. In any event, staff will have to balance the environmental effects of the particular request with other factors in making a recommendation to the Planning Commission and Board of Supervisors. The Planning Commission and Board of Supervisors will have to weigh all relevant factors in making their decisions.

The commentor implies that there is a policy or regulation in the CCRMP that requires 100-year flood protection of former in-channel mining areas. Staff is not aware of any such

rule. The commentor is referred, however, to Section 10-4.417 of the recently adopted Off-Channel Mining Ordinance, which requires flood protection for new off-channel operations.

The EIR indicates that flooding of formerly mined areas that are not currently protected against 100-year flooding could provide benefits to the efforts to sustain riparian vegetation established in these areas. Periodic flooding of these areas would provide nutrients and provide fill in these areas. Adjacent areas proposed for mining would not be inundated by the 100-flood event; the separator height is significantly above the 100-year flood elevation to prevent flooding. Due to hydraulic conditions, controlled flooding of these areas would not, in the opinion of the engineers and engineering geologist, present significant potential for adverse erosion of the channel bank adjacent to the separator. This flooding would occur under existing conditions and would not, therefore, specifically require permitting by agencies with permitting authority for activities in the Cache Creek channel. However, all of these agencies are responsible agencies in the CEQA process and copies of the DEIR have been circulated to these agencies for their review. None of these agencies has submitted comments that the analysis or mitigation measures presented in the DEIR are inappropriate or conflict with their permitting authority.

It is important to point out that the text on Page 4.3-33 of the DEIR states "following discussions between the County and the applicant. . ., the applicant has proposed that the improvement (raising) of the levee not be implemented." The text clearly does not state that staff agreed to the proposal. Staff's formal recommendations will be made to the Planning Commission in the staff report for this project.

Response to Comment 4-59:

Caltrans was involved in reviewing the proposed project designs during their development. In a letter presented on page 7.2-19, the agency stated that the levee stability analyses and hydraulic analyses for the project met the agency's expectations. Caltrans also has provided comments on the OCMP EIR and this project DEIR. The agency did not specifically address the proposed requirement for biotechnical bank stabilization. However, Caltrans staff is aware of the issue from discussions with County staff and the applicant.

Response to Comment 4-60:

Please refer to Response to Comment 4-10. The Yolo County Flood Control and Water Conservation District has reviewed copies of the OCMP and CCRMP plans and EIRs, as well as copies of each project-level EIR. No response has been received.

Response to Comment 4-61:

As stated previously, this is not a new diversion structure, but bank protection. Regarding the acquisition of permits, please refer to Response to Comment 4-11. As stated previously, all of the agencies referred to by the commentor have received copies of the project-level EIRs.

Response to Comment 4-62:

Regarding the acquisition of permits, please refer to Response to Comment 4-11. Permits from state and federal agencies may be required for levee construction along Cache Creek, depending on the nature of the work to be performed.

Section 10-4.416 of the Off-Channel Mining Ordinance requires that flood protection features constructed at the mining areas not result in impacts to base flood levels at or near the project site. Without additional mitigation, raising the levee in the vicinity of the former mining area would channelize more flood waters during extreme events and increase downstream flooding. The applicant has the choice of designing a stable controlled flow inlet channel (which would not impact current or proposed mining areas) or provide the 100-year protection by raising the levees in conjunction with some other mitigation that would offset the potential increase in base flood elevations.

Response to Comment 4-63:

The commentor appears to have misunderstood the concept of the controlled flow inlet channel. No recharge basins are proposed. Please refer to Response to Comment 4-13. The reference to "retroactive obligations to reclaim the devastated area that will be permitted" is unclear. All mined areas under the OCMP will be reclaimed and the CCRMP will result in the creek's restoration, not devastation. The proposal would enhance existing riparian habitat, and provide channel stabilization. Please see Responses to Comments 4-13, 4-64, and 4-66.

Response to Comment 4-64:

The public was given the opportunity to comment on the applicant's proposal, with the release of the DEIR and the 45-day review period that followed. Additional opportunities will be given at the public hearings for this project. The applicant's proposal has been discussed with NHC consultants, who have agreed that it is consistent with the recommendation made in the Technical Studies.

Staff would also like to refer the commentor to page 31 of the U.S. Fish and Wildlife Service (USFWS) report included in the U.S. Army Corps of Engineers Reconnaissance Report for Cache Creek Environmental Restoration. It states:

> "In particular, some pits parallel the creek channel, and are separated from the channel by narrow raised berms. The habitat values of the riparian corridor may benefit by incorporating some of these mined areas into the floodplain of the stream corridor by partially or completely connecting the pits with the active stream floodplain. Potential habitat benefits include increasing the flooding frequency of the pits, increased silt and organic deposition by flood waters -- thus creating areas for establishment of willows, cottonwoods, oaks and other riparian plants, widening of the artificially narrow, entrenched reaches of the stream channel, and reduction of flow velocities under flood conditions."

Staff agrees with the assessment of the USFWS.

Response to Comment 4-65:

Silt basins have not been proposed as part of this project along the inboard side of existing levees. Along certain portions of the levees there are currently lowered surfaces subject to flooding; these areas currently have standing water following flooding events. The proposed project would not change this condition. Mosquito-generating habitat would be addressed by the Sacramento-Yolo Mosquito Abatement District. Regarding the design of "siltation basins," please refer to Response to Comment 4-13.

Response to Comment 4-66:

Please refer to Response to Comment 4-13. The area referred to has already been reclaimed and supports existing riparian vegetation. Construction of the levee would separate this area from the channel and create a hydraulic discontinuity. The controlled flow structure would allow floodwaters to continue to replenish this area and further enhance habitat, while minimizing potential erosion of the bank. As long as the area remains connected to the channel, siltation will continue to occur as it does now. The flow structure would be an erosion control measure only and would not alter the existing flow characteristics of the creek. Detailed plans of the structure will be submitted to the Floodplain Administrator, if this option is approved.

Response to Comment 4-67:

Please refer to Response to Comment 4-13.

Response to Comment 4-68:

Please refer to Response to Comment 4-13.

Response to Comment 4-69:

Please refer to Response to Comment 4-13.

Response to Comment 4-70:

The hydrology of the formerly mined areas would not be significantly changed if the controlled flow inlet channel were constructed. The channel would merely stabilize existing hydrologic conditions by stabilizing the bank and preventing erosion during overtopping events.

Response to Comment 4-71:

Significant dredge and/or fill would not likely be included in the construction of the controlled flow inlet channel. However, since the design has not yet been prepared, it is not possible to determine the extent of these operations. As stated previously (Response to Comment 4-11), the applicant would be responsible for obtaining all appropriate permits.

Response to Comment 4-72:

Please refer to Response to Comment 4-70.

Response to Comment 4-73:

The primary purpose of the controlled flow inlet channel would be to prevent erosion of the existing channel bank during high flows and overtopping events. Since the bank is higher than the formerly mined areas behind the bank, some water and sediment would be trapped behind the bank during overtopping. As stated by the commentor, the quantity of sediment is likely to be small since overtopping events will be infrequent and the amount of sediment in the water limited. Construction of the controlled flow inlet would not create a new "siltation basin."

Response to Comment 4-74:

The project does not require appropriation of additional water rights. Property ownership along a water body generally establishes riparian rights. The applicant currently owns property along the creek and uses groundwater for processing of aggregate and irrigation of agricultural lands.

Response to Comment 4-75:

Mitigation Measure 4.3-4d specifically states that the levee and channel bank inspections shall be conducted by a licensed engineer. Staff agrees that the reports should not accepted as complete by the County unless the report bears the signature and seal of the engineer responsible for the report. Mitigation Measure 4.3-4d also requires that remedial actions recommended in the annual report be completed by November 1.

Response to Comment 4-76:

The deed restriction recommended in Mitigation Measure 4.3-4e provides a legal mechanism for notification of all subsequent property owners of their responsibility to implement continued inspection and maintenance of levees and channel banks at the project site during the post-reclamation. The YCCDA, as the implementing agency, has the responsibility to ensure compliance with the monitoring and reporting requirements. Failure to comply would be a violation of Sec. 10-5.506 of the Surface Mining Reclamation Ordinance and the owner could be subject to administrative penalties described in Sec. 10-5.1210 of the Ordinance.

The County would ensure that the deed restriction is placed on the title by the operator. Once in place, it would be incorporated into future deeds automatically. There would be no need for the County to interfere with the transfer of title. Staff has consulted with attorneys familiar with real estate law, as suggested by the commentor.

Response to Comment 4-77:

The commentor is referred to Response to Comment 4-14. The commentor's point regarding the availability of willow mats and CDFG restrictions on cutting willows is noted for the record. It should be pointed out that these materials are not needed for all biotechnical slope stabilization measures and that these materials are not required by Mitigation Measure 4.3-4f or 4.3-4h.

Response to Comment 4-78:

The commentor is referred to Response to Comment 4-14. Biotechnical slope stabilization methods are commonly applied to projects which emphasize habitat restoration in river management projects. Staff has personally visited sites in Monterey and Alameda counties where biotechnical stabilization techniques have been effectively implemented. It should be noted that riprap is not readily available in Yolo County, nor is it inexpensive. Riprap and other "hard" engineering solutions also require frequent maintenance. The limitations of riprap were apparent at the north bank upstream of the Capay bridge during the March 1995 flood event.

Response to Comment 4-79:

Staff agrees that Caltrans should be specified as reviewing agency for the proposed bank stabilization design. In response to the comment, Text Change # 13 has been made.

Response to Comment 4-80:

The OCMP and OCMP EIR establish a performance standard that any modifications or raising of levees associated with the project cannot result in exacerbation of off-site flooding problems, including the north bank of Cache Creek near the site. The only activity proposed by the project that could impact off-site flooding conditions is the construction of the levee to protect Mining Areas III, V, and VI, as described in Mitigation Measure 4.3-4c. Preliminary hydraulic analysis indicates that raising of this levee would have minimal affects on flooding away from the site. However, prior to raising the levee, if that is the selected alternative, a hydraulic analysis prepared and signed by a licensed engineer, demonstrating that off-site flooding impacts would not be created, must be submitted to the County for review.

The requirement for three feet of freeboard on flood protection levees around the project site was rejected from the final OCMP. It was determined that potential downstream flooding could be exacerbated by this requirement. Please refer to Text Change # 12.

Response to Comment 4-81:

Staff agrees with the commentor that the agreement between the County and the applicant should provide a time limitation on participation in implementation of the CCIP. This would be accomplished through execution of the development agreement between the County

and the operator. The period for compliance with this mitigation measure, as with all mitigation measures for an approved project (unless otherwise noted), would be the length of the permit approval. In this case the permit period would be 30 years if the requested permit period is granted. Staff considers this period to be appropriate for reasonable implementation of the mitigation measure which assures the applicant's participation in the CCIP.

Response to Comment 4-82:

Staff does not agree that a determination by the Division of Safety of Dams (DSD) is necessary prior to completion of the development agreement required in Mitigation Measure 4.3-4i. The financial assurances for mining and reclamation are a separate matter. The financial assurances are regulated under SMARA and the County's Surface Mining Reclamation Ordinance. These regulations require annual adjustments of the financial assurances if significant changes in the labor or material costs for reclamation occur, and can be increased to include additional engineering projects.

Response to Comment 4-83:

On a relatively flat unpaved site, especially one that is subject to earthmoving (e.g. agricultural plowing and releveling, aggregate accumulation and relocation, scraping) it is often difficult to determine exactly which way storm water flows at each portion of the site from year to year. Based on review of recent topographic maps and interviews with site workers, storm water flows primarily eastward and northward.

Response to Comment 4-84:

The Hayes 1 supply well has been added to Figure 4.4-3. Please refer to Text Change #18.

Response to Comment 4-85:

Please refer to Response to Comment 4-15.

Response to Comment 4-86:

Please refer to Response to Comment 4-30.

Response to Comment 4-87:

Please refer to Response to Comment 4-16.

Response to Comment 4-88:

As referenced in Section 6.3 of the DEIR, Tony Lopes is the Manager of the Madison Service District. Mr. Lopes is in a position to know more about the Madison wells than

anyone else. He provided the preparers of the DEIR specific data on the location, construction, and pumping capacity of the Madison wells.

Response to Comment 4-89:

The commentor is correct that wells constructed with continuous sand or gravel packing in the annular space (space between casing and/or screen and side of the boring) could allow groundwater from various levels to enter the well. However, it does not change the EIR preparers' analysis that the Madison municipal wells would not be affected by the proposed project.

Response to Comment 4-90:

The commentor raises concerns regarding the potential for transport of human pathogens and viruses by waterfowl from sewage treatment facilities in proximity to the project site to mining pit lakes and infers a significant threat to public health. Staff and the preparers of the EIR do not agree that a significant threat to water quality is posed by the use of the lakes by waterfowl. It is expected that waterfowl within the area could be attracted to both the open oxidation ponds at the sewage treatment facilities and the mining pit lakes which would be created by the proposed project. Although ducks have been identified as potential carriers of human influenza viruses, the quantity of human pathogens that could adhere to the underside of a duck as it swims in the oxidation ponds would be extremely limited. The potential for the transmission of the pathogens by birds to the mining pit lakes would be reduced by dripping and evaporation of water on the birds during flight from the oxidation ponds to the lakes. Under these conditions, the potential for deactivation of viruses is increased over conditions within the sewage activation ponds. If pathogens were transported to and deposited in the lakes, the concentration of the pathogens would be expected to be very low, given the large volume of water in the lakes and the small volume of water transported to the pit by birds.

If pathogens were deposited in the lakes, the potential for human exposure to them would be minimal. Water contact recreation is not proposed by the project and fencing of the sites is required to keep trespassers out of the lakes. The potential for direct human contact with the ducks in the lakes or with lake water would, therefore, be minimized. Exposure could possibly occur through ingestion of groundwater affected by pathogens released in the lake. However, the potential for migration of pathogens to water supply wells is very low. The migration of the viruses would be limited by the physical filtration of particles contain pathogens and deactivation of the viruses within the aquifer.

Virtually all documented cases of viral contamination of groundwater are associated with septic tank effluent, discharge of sewage effluent, or other sources with high concentrations of raw human sewage. Recommended setback distances established by the USEPA for drinking water wells from suspected sources of pathogen contamination (generally applied to sources of raw sewage) are 100 to 400 feet (see OCMP EIR page 4.4-41). The California Well Standards require drinking water wells to be set back a minimum of 150 feet from cesspools or seepage pits to minimize the potential for

contamination of the wells. The potential risk of pathogen contamination is clearly lower for lakes visited by waterfowl than sources of sewage. As discussed in the EIR, there are no wells within 1,000 feet of the proposed wet pit mining areas, well beyond recommended setback distances from sewage sources.

Mr. Bruce Macler, the Manager of the Groundwater Disinfection Rule for the USEPA, was consulted during preparation of the OCMP EIR regarding the issue of potential biological contamination of the proposed mining pit lakes. Mr. Macler did not consider waterfowl flying from the sewage ponds to the mining pit lakes a significant source of pathogen transmission to drinking water. In his judgement, dilution and processes within the lake and filtering capability of the surrounding aquifer would provide treatment to remove any residual pathogens introduced by waterfowl.

Chlorination of treated wastewater by the City of Woodland is not specifically performed to reduce the potential transfer of pathogens by waterfowl. The chlorination is required for discharge of wastewater to surface waters to reduce the potential of direct human contact with wastewater that potentially contains pathogens.

Response to Comment 4-91:

Reference to a groundwater flow rate of a few feet per year was not made on page 4.4-14 of the DEIR. However, as described in the Technical Studies, this is the approximate seepage velocity of the ambient groundwater conditions in the planning area. In other words, this is the approximate rate of natural groundwater flow. Of course, variations occur within layers of the aquifer and based on proximity to the sand and gravels underlying Cache Creek. This is not a groundwater myth, but founded on the basic principle of Darcy's Law. When the hydraulic conductivity, gradient, and effective porosity of an aquifer are known, the seepage velocity can be determined by simple calculation. Tracer investigations can be useful, but require introduction of a foreign material (dyes, salts, radionuclides) into the potable aquifer, which may impact water quality.

Response to Comment 4-92:

Regarding the proximity of mining to municipal wells, please refer to Response to Comment 4-15. Regarding the vertical movement of the water table in response to pumping, the commentor is correct in stating that groundwater in the planning area could flow at a considerably faster rate when under stress from pumping. The regional ambient groundwater flow rate discussed in Response to Comment 4-91 of several feet per year is the approximate flow rate within the nonstressed aquifer (i.e., without pumping). Flow velocities increase exponentially with proximity to a pumping well. However, beyond the influence of pumping wells, groundwater flows under natural gradients at a rate ranging from one to ten feet per year. So many agricultural wells operate simultaneously during the irrigation season that a network of groundwater drawdown centers (cones of depression) are created, locally capturing groundwater around each well.

The commentor presents an estimate of the groundwater gradient based on water levels from two water supply wells. The period over which the change of elevation of water level dropped 19 feet in the unpumped well (Well #1) is not identified. Seasonal groundwater fluctuation of 10 to 20 feet is expected within the lower Cache Creek basin. In addition, it is not known if the groundwater level at the well is being influenced by pumping of wells that are not operated by the City. Finally, if the groundwater gradient (0.0019) estimated by the commentor is accurate, it would not be significantly different from the regional gradient (0.002) used to calculate the seepage velocity reported in the DEIR.

Response to Comment 4-93:

The commentor is correct that storage capacity of an aquifer is dependent on volume of void space (porosity). The backfill for the pits would consist of relatively well sorted fine sand and silty sand. The porosity of these poorly graded sediments would be higher than the well graded mixture of clay, silt, sand and gravel deposits of the aquifer. Therefore, groundwater storage capacity would be increased in the backfilled pits by the proposed project. The relationship of grain size and sorting to porosity and the relationship of porosity to storage capacity of an aquifer are basic and fundamental concepts used in hydrogeologic analysis. Evaporation from the backfilled pits would be inconsequential to the potential groundwater storage capacity. Water lost by evaporation would be replaced by groundwater flowing out of the aquifer and into the lake. The impact of evaporation was described in the discussion of Impact 4.4-2 of the DEIR.

Response to Comment 4-94:

The DEIR evaluated the potential impacts of infiltration of agricultural waters in the post-reclamation period (page 4.4-27). The preparers of the DEIR agree that infiltrating agricultural waters could result in migration of nitrates to the groundwater table. As indicated in Response to Comment 4-36, Mitigation Measure 4.4-4a of the DEIR requires monitoring of nitrate levels in groundwater. However, the preparers of the DEIR do not agree that the Solano agricultural operations have not been in existence long enough to provide valid information regarding the potential for nitrate problems. The commentor did not present any reasons for his opinion that the existing conditions at the Solano Concrete project site are not relevant.

Response to Comment 4-95:

Please refer to Response to Comment 4-80.

Response to Comment 4-96:

The impacts of evaporation from proposed mining pit lakes were evaluated in Impact 4.4-4 of the OCMP EIR which was certified on 30 July 1996. Calculation of the expected amount of evaporation (considering the lake surface and surrounding wetland habitat) from the mining pit lakes was presented. The OCMP EIR concluded that the cumulative loss of water through evaporation was a less-than-significant impact because the creation of the

lakes provide a beneficial use (wildlife habitat) of the water resources. The proposed project would contribute a portion of the cumulative evaporative loss described in the OCMP EIR. Staff does not consider it necessary to calculate the amount of evaporation associated with the project because the impact was found to be less-than-significant in the program-level EIR from which the project EIR is tiered.

The commentor presumably refers to Table 4.4-1 of the OCMP EIR in expression of the opinion that "a DWR general table on evapo-transpiration does not suffice for this site specific setting." The preparers of the EIR acknowledge that there may be variations in evaporation rates within microclimates within the area. Estimates of evaporation, however, are based on the best available information given the location of existing evaporation monitoring stations. The source presented in the OCMP EIR presents variation in evaporation rates within the Sacramento Valley and is, therefore, considered by the preparers of the EIR to be an appropriate and reliable source for estimates of evaporation at the project site.

Response to Comment 4-97:

Please refer to Response to Comment 4-28 for discussion of siltation of the mining pits. The application for the proposed project estimates the waste factor, on the basis of previous and current mining and processing, to be approximately 17 percent (exclusive of overburden). This waste was incorporated into volume calculations for the reclamation plans. The commentor is referred to Response to Comment 4-139 for a discussion of the appropriateness of hydrogeologic modeling.

Response to Comment 4-98:

Please refer to Responses to Comments 1-15, 4-39, and 4-90. Please also refer to Responses to Comments 1-15 and 4-39 for discussion of proximity of the project to the Madison Migrant Center and 4-90 for discussion of water quality impacts related to waterfowl. The land at the Migrant Center is owned by the County and the Center is managed by the Yolo County Housing Authority. The potential water quality and public health safety impacts of the proposed project were described in the OCMP EIR and the EIR for the proposed project. These documents were reviewed by the County and state agencies responsible for protection of water resources and public health. Staff is not aware of any requirements for federal agency review of the proposed project.

Response to Comment 4-99:

Please refer to Response to Comment 4-19 for a discussion of the potential hazards of open pits. Section 24400 of the State Health & Safety Code requires abandoned excavations to be fenced to protect trespassers. No slope or sign requirements are imposed, nor are any specifics made as to the type of fencing required. By requiring reclamation, as well as 2:1 slopes and posted signs, the EIR exceeds state requirements.

Response to Comment 4-100:

This Mitigation Measure was deleted (see Text Change # 22) in response to the adopted OCMP.

Response to Comment 4-101:

Please refer to Response to Comment 4-7. The comment implies that water usage for native vegetation is inappropriate. This position, if correctly interpreted, is at odds with the adopted OCMP and CCRMP.

Response to Comment 4-102:

Please refer to Response to Comment 4-90.

Response to Comment 4-103:

The application for the project does not propose use of biosolids at the project site. The commentor is correct in noting that there is no County ordinance regulating biosolid application at this time, although one is in the process of being developed. Therefore, speculation on potential future biosolid application in areas outside the project site in this EIR would not be appropriate. Control of dust generation from biosolid application away from the site should be evaluated by environmental analysis of these types of operations.

Response to Comment 4-104:

Please refer to Response to Comment 4-103.

Response to Comment 4-105:

Please refer to Response to Comment 4-36.

Response to Comment 4-106:

Please refer to Response to Comment 4-19 for a discussion of the issues contained in this comment.

Response to Comment 4-107:

Regarding the likelihood of advanced eutrophication to occur in the wet pit lakes, please refer to Response to Comment 4-30. Regarding biological material forming an effective barrier to water flow through a wet pit wall, please refer to Response to Comment 4-28.

Response to Comment 4-108:

The commentor notes that "algae is already present" in the existing Solano wet pit. This is to be expected since essentially all untreated surface water contain measurable amounts of algae. The fact that Lake Tahoe has experienced a reduction in clarity is not directly relevant to this project. Lake Tahoe receives runoff and groundwater flow with a significant nutrient load from a relatively large multi-use watershed area. Major contributors to nutrient loading of Lake Tahoe that would not be present at the proposed project site include sewage effluent, industrial discharge, agricultural drainage, and urban runoff. Similarly, the UCB project reported by the commentor was conducted under conditions vastly different from the proposed project. Algae growth is enhanced in shallow warm water; the project proposes deep steep-sided wet pit lakes. For further discussion regarding the likelihood for advanced eutrophication to occur, please refer to Response to Comment 4-30.

Response to Comment 4-109:

Please refer to Responses to Comment 4-28 and 4-30.

Response to Comment 4-110:

Mr. Bruce Macler, Manager of the Groundwater Disinfection Rule, US Environmental Protection Agency (USEPA), was contacted during preparation of the OCMP EIR and subsequently during preparation of this EIR to discuss the potential impacts on water quality impacts related to subsurface water supplies. Mr. Macler is responsible for management of the group of groundwater specialists and health professionals working on development of guidelines and requirements for testing of the water quality of water supply systems which use groundwater.

The commentor is correct in indicating that communications between Mr. Macler and the DEIR consultants did not specifically address the location of the sewage treatment facilities for the town of Esparto and Madison relative to the location of the proposed mining areas. However, in subsequent conversations with Bruce Macler of the U.S. EPA, he stated that, in his opinion, the threat to water quality posed from waterfowl migration from the sewage ponds to the proposed mining pit lakes was essentially nonexistent. See also Responses to Comments 4-90 and 4-112.

Response to Comment 4-111:

Please see Responses to Comments 1-15, 4-39, and 4-90.

Response to Comment 4-112:

The commentor's opinion regarding the qualifications of federal, state, and private practice environmental professionals is noted for the record. Staff does not agree with the commentor's position that licensing of a professional in any specific state is a direct

indication of the level of expertise of the individual in the field in which they practice. Many recognized experts, including federal and state agency employees and university professors do not hold licenses in their professions. Some of these professionals provide expert testimony in public hearings and courts of law. The reasons that these individuals choose to become or not become licensed is a personal decision. Professional licensing is only required in California for certain types of activities controlled by specific regulations.

Staff does not agree that information or opinions on public health issues must be obtained for a "properly licensed state official". Numerous authorities on groundwater and surface water quality are not employees of the state and exclusion of such experts is not sensible. The commentor does not specify the licensing to which he is referring. The commentor may be referring to California registered environmental health specialists (formerly called registered sanitarians). Registration as an environmental health specialist does not demonstrate expertise in determination of water quality impacts.

Finally, Mr. Bruce Macler was not contacted as a local expert in environmental conditions in Yolo County nor as a limnologist. Mr. Macler was contacted to provide the perspective of an expert involved in the development of federal standards for analysis and management of drinking water supplies. Staff considers Mr. Macler's position as manager of the Groundwater Disinfection Rule as suitable for qualifying him as an expert in addressing issues regarding potential sources of contamination to drinking water supplies. Mr. Macler's familiarity with the cited reference (a general report published in 1968) is irrelevant. It is noted by staff that the Director of Yolo County Department of Public Health (the local agency responsible for public health protection) has reviewed and commented on the water quality monitoring programs which were developed in the OCMP EIR and incorporated into its implementing ordinances. The Director has judged the proposed water quality and public health protection mitigations to be acceptable.

Response to Comment 4-113:

Staff emphatically disagrees with the commentor's conclusion that mitigation measures presented in the DEIR were based on "scraps of conversations with various individuals". The bibliography and listing of persons contacted presented in Chapter 6 of the DEIR is formidable. The accusation presented in the comment is not substantiated by any evidence other than that addressed in Comments 4-110 and 4-112. The commentor may not be aware of the need to draw from current information or site-specific knowledge during evaluation of impacts of a project. Many times, this information is not finalized or published. The DEIR preparers made the effort to contact identifiable authorities in certain issue areas to obtain additional information. This is common practice during preparation of EIRs which require description of existing conditions, conditions which may not be accurately characterized by published data.

Response to Comment 4-114:

Regarding the waterfowl as a potential pathogen source, please refer to Response to Comment 4-90. Regarding the qualifications of the preparers of the DEIR, please refer to Response to Comment 4-152.

Response to Comment 4-115:

Please refer to Responses to Comment 4-36.

Response to Comment 4-116:

Staff does not agree that the description of bioaccumulation of mercury is "inadequate and only partially correct." Information requested in the comment regarding the characteristics and environmental hazards were summarized in the discussion of bioaccumulation of mercury presented in the analysis of Impact 4.4-4 of the DEIR. As indicated in the DEIR, a more detailed discussion of bioaccumulation of mercury is presented in the OCMP EIR.

The commentor is correct in asserting that the results of testing of fish samples collected in the existing Solano Concrete Company mining pit lakes indicate that bioaccumulation of methylmercury is occurring. The commentor is also correct in pointing out that the levels of mercury in fish from the lakes are comparable to the levels in fish collected from Cache Creek. The mercury levels in fish from the lakes and creek are lower than the current FDA fish advisory criterion (1.0 mg/kg); some of the levels are higher than the fish consumption level (0.5 mg/kg) recommended by the National Academy of Sciences in 1973. Similar levels of mercury have resulted in the issuance of fish consumption advisories by the California Department of Fish and Game (CDFG) for Clear Lake and San Francisco Bay. CDFG has not issued a fish consumption advisory for Cache Creek.

Mitigation Measure 4.4-3a of the OCMP EIR directly addresses the potential for methylmercury production in the mining pit lakes, requires monitoring of mercury levels in mining pit lakes, and presents specific mitigation measures for potential accumulation of methylmercury. The provisions of this mitigation measure also provide recommendations to post warnings at the mining pit lakes in the event of issuance of a fish warning based on required mercury testing in fish in the lake and the creek. Although the mining pit lakes could be attractive to fishermen, unauthorized persons using the lake and defying security provided by required fencing and gates would be doing so in violation of trespassing laws. Mitigation Measure 4.4-4a of the project level DEIR tiers off of the OCMP requirements. Staff considers these precautions to be appropriate mitigation of the potential exposure of people to biota affected by mercury within the lake environments.

The measure includes provisions for remediation to ensure protection of the public. In addition, the OCMP has instituted a maintenance and remediation fund for addressing any long-term problems that may occur.

Response to Comment 4-117:

Although the application for mining submitted for this project does not specify that any of the mining pit lakes would be used for agricultural water supply, the preparers of the DEIR are aware of no regulations prohibiting this activity. It is unlikely that such a practice would be cost beneficial or logistically advantageous. Since irrigation wells are already located throughout the site and provide adequate flow and distribution, it is difficult to understand why new capital expenditures would be made to draw water from the wet pit lakes. Assuming the irrigation wells are drawing from the uppermost groundwater, lift requirements would be approximately equivalent (since the aquifer is largely unconfined, groundwater and surface water elevations would be approximately the same). It is also unclear why pumping from a pit would have any different hydrological effects than pumping from an irrigation well. The impacts on water levels would be similar.

Response to Comment 4-118:

Provided the alteration to runoff patterns does not result a significant increase in discharge quantity or decrease in quality, the applicant can make alterations to runoff patterns without specific permits. The CEQA process acts as a review of potential environmental impacts. Quantity of storm water discharges from the site would decrease under the proposed project since internally drained lowered surfaces and lakes would be created. Storm water quality at industrial facilities is regulated under the Clean Water Act, which requires site inspections and runoff quality monitoring. The gated culvert was evaluated in the EIR for the short-term mining permit for Solano Concrete and has already been installed, in accordance with the existing Streambed Alteration Agreement. The applicant is currently in compliance with these regulations.

Response to Comment 4-119:

During mining, the applicant proposes, consistent with the OCMP, to segregate the upper organic-rich topsoil (A-horizon), subsoil (B-horizon), and undifferentiated overburden soil (C-horizon) overburden material. Backfill for the mining pits to be placed below the water level in the pits would be restricted to C-horizon soils. Topsoil would be reserved for placement at the surface of reclaimed lands (i.e. above the water level). These proposed mining and reclamation practices are described in Section 3.4 of the DEIR.

Response to Comment 4-120:

The discussion of Impact 4.5-2 on page 4.5-15 describes the improvement of approximately 90 acres of Class III and IV soils at the project site. The applicant would be required to identify additional offset for permanent conversion of 162 affected prime farmland for offset, as a condition of approval.

Response to Comment 4-121:

Mitigation Measure 4.5-2 requires the individual aggregate mining applications to comply with Mitigation Measure 4.5-2 in the OCMP EIR, which in turn requires a 1:1 replacement of prime agricultural lands lost to slopes or other non-agricultural uses. The replacement can be provided by placing conservation easements on prime lands. Although agricultural lands not under protective easement are already zoned for agricultural uses, as the commentor notes, the lands could be rezoned for other uses. The effect of placing conservation easements on prime lands would be to ensure that the lands would be protected from urbanization in perpetuity.

Response to Comment 4-122:

The comment suggests that the offset for permanent loss of prime farmland must occur at the project site. This is not required by Mitigation Measure 4.5-2a. The offset could be met by improvements in areas without available water.

The requirement for the 1:1 offset for the permanent loss of prime agricultural land is a mitigation measure for the proposed project. Mitigation Measure 4.5-2a provides for options for meeting this measure. The applicant would be required to demonstrate compliance with this mitigation measure as a condition of approval. This measure is widely used by many jurisdictions, including Yolo County and the City of Davis, in order to offset impacts to agriculture.

Response to Comment 4-123:

Historical crop production on lands within the project boundary is discussed on page 4.5-2 of the DEIR. The discussion under Impact 4.5-2 notes that the reclamation plan for the project proposes to mix soils to reduce the current adverse effects of clayey soils and low permeability. The productivity of the reclaimed lands would be monitored annually to ensure that the crop yields are equal to or better than the historic crop yields on the site, as required by the OCMP and the implementing ordinances, and SMARA.

Response to Comment 4-124:

Potential impacts associated with increases in energy use as a result of project implementation was not included in this DEIR. The Initial Study for the OCMP EIR found that energy was not an area of potential significant impacts. This project DEIR tiers off the OCMP Program EIR and is part of the projects evaluated in the OCMP EIR. The OCMP EIR notes (page 5-7) the "The OCMP would result in the irretrievable commitment of energy resources (primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline for automobiles, trucks, and construction equipment) to fuel mining, processing, and subsequent reclamation activities." Response to Comment 13-170 in the OCMP EIR discusses this issue and did not find it to be a significant concern.

Response to Comment 4-125:

The DEIR did not address the issue of forest fire hazards associated with tree crops or habitat areas because the issue was not identified as a potentially significant environmental impact in the OCMP EIR. The potential for increased fire danger due to the planting of poplars and other tree crops in place of row crops, or the creation of habitat, is expected to be low. No local fire districts or other public agencies have raised concerns about the issue during the review of the OCMP. The project proposes planting of poplars as a tree crop, not eucalyptus, which could present a more significant fire hazard. Eucalyptus produces an oil that is highly flammable. In addition, the bark of eucalyptus peels producing fuel for ground fires. Frost damage can produce significant dead wood. Poplars are deciduous and not susceptible to frost damage. Shading provided by the canopy of a plantation reduces understory growth and limits the development of lower branches, reducing potential for fire.

The potential fire hazards associated with poplars would be similar to those posed by similar trees within the riparian corridor along Cache Creek or an orchard crop. Although fire could result in damage to the tree crops, the project does not present significant sources of ignition. In addition, fire within the tree crop areas would not present an increased danger to the structures or project improvements. Poplar trees would also be harvested on a five-year schedule, since they mature much quicker than species such as eucalyptus.

Response to Comment 4-126:

The DEIR discusses the tree crops proposed by the applicant on page 4.5-20. In addition, the viability of tree crop agriculture within the project site boundaries was evaluated in the EIR for the Solano Concrete Short-Term, Off-Channel Mining Permit Application (BASELINE, 1995). No major pest problems have been reported as linked to hybrid poplar plantations. Pesticide and herbicide treatments are not typically required for these crops. The Surface Mining and Reclamation Act (SMARA) requires that reclamation of agricultural land shall be deemed complete when productive capability of the reclaimed land is equivalent to or exceeds, for two consecutive crop years, that of the pre-mining condition. After reclamation is deemed complete, the reclaimed land is considered capable of maintaining production. Continued production of agricultural crops is then the prerogative of the land owner.

The "warranty" to which the comment refers is not clear. Regarding the issue of fire hazards of tree crops, see Response to Comment 4-125, above.

Response to Comment 4-127:

The DEIR requires, in compliance with Mitigation Measure 4.4-8a of the OCMP, that the applicant demonstrate the location of the average seasonal high groundwater level. The possible changes in conditions that would cause significant difference in groundwater levels (e.g., change in climate, construction of dam, increases or decreases in agricultural

use of groundwater) would be speculative. Also, please refer to Response to Comment 4-23.

Response to Comment 4-128:

The tree crop plantations proposed at the project site would provide similar habitat for birds as the riparian corridor for Cache Creek. Existing vegetation does not present a significant pest population for adjacent row crops. If adverse populations develop, non-destructive mitigations are available to discourage habitation in the plantation. The commentor's remarks regarding bird populations and control are noted for the record.

Response to Comment 4-129:

The issue of whether the economic revenue over a ten year period from tree crop production versus conventional row crop production has not been investigated in the OCMP EIR or in this DEIR. The California Environmental Quality Act (CEQA) requires an analysis of environmental, not economic impacts. Also see Response to Comment 4-22. For comparison of the tree crop gross income per acre versus other crops produced in Yolo County, please refer to Attachment K of the 10 July 1996 staff report to the Planning Commission. The areas reclaimed to tree crop uses would be backfilled with processing fines and overburden.

Response to Comment 4-130:

Please refer to Response to Comment 4-28.

Response to Comment 4-131:

Staff acknowledges that the dragline process requires buckets with cutting teeth, which facilitate excavation. However, staff does not agree with the commentor's reference to "suction" as a part of this process.

Response to Comment 4-132:

Portions of the side slopes above the water level would be excavated by scrapers and bulldozer, not by draglines as inferred in the comment. Although the exposed soil and sediment could be eroded, Mitigation Measure 4.3-2a requires that erosion control be established by November 1, the beginning of the rainy season. This mitigation would reduce the potential for erosion to a less-than-significant level.

Response to Comment 4-133:

Staff agrees with the commentor that revegetation of mining and reclamation slopes could present challenges in the control of erosion. Mitigation Measure 4.3-2a of the DEIR requires implementation of performance standards for erosion control contained in Section 10-5.508 of the Surface Mining Reclamation Ordinance. These performance standards

require that the required slope cover be established on reclaimed slopes prior to November 1 in areas where mining of materials above the groundwater table has been completed. Alternatively, erosion control is required. Annual inspection of mining and reclamation slopes by a qualified professional for erosion problems is required by Section 10-5.506 of the Surface Mining Reclamation Ordinance. In addition, Section 10-5.1202 of the Ordinance requires annual inspection of all mining operations. These inspections and resulting requirements for corrective action will ensure identification of conditions related to erosion which are not in compliance with the provisions of the Ordinance.

Staff does not agree that the comparison of cultivation of grain crops in the Dunnigan Hills is relevant to the discussion of revegetation of mining and reclamation slopes. Moisture requirements for these crops is typically higher than those for grass cover. A more appropriate comparison would be for open space/rangeland vegetation in the area. Once established, this vegetation provides ground cover without irrigation or maintenance.

Response to Comment 4-134:

As discussed in the Response to Comment 4-133, the applicant is required to establish vegetation on the mining and reclamation slopes or provide alternate erosion control prior to November 1. Failure to control significant erosion would result in a violation of the mining permits. The DEIR neither requires nor prohibits the practice of hydro-seeding, as this practice may or may not be effective in establishing the required vegetation. As pointed out by the commentor, reseeding of the slopes does not ensure the establishment of the vegetation. Therefore, the requirement of annual reseeding, suggested by the commentor, is not superior to the Yolo County's requirements for the proposed project.

Response to Comment 4-135:

Please refer to Response to Comment 4-28 for a discussion of the potential for siltation during mining. The commentor is generally correct in pointing out that the proposed mining pits will extend to the depth of the top of the bottom clay. The accumulation of fine-grained sediments at the bottom of the completed mining pit would not significantly reduce the permeability of this stratum.

Response to Comment 4-136:

The commentor is referred to Response to Comment 4-51 for a discussion of wave action erosion and related sediment production and deposition.

Response to Comment 4-137:

Please refer to Response to Comment 4-28. Staff and the preparers of the DEIR do not agree with the commentor's suggestion that the accumulation of biological sludge in percolation ponds, used to treat cannery waste, is comparable to the biological material which could be expected in the proposed mining pit lakes. The loading and treatment of processing waste from a cannery would be expected to develop significant amounts of

sludge which would affect the performance of the percolation ponds. A comparison of the mining pit lakes to the existing Solano Concrete lakes or similar mining pit lakes is more appropriate.

Response to Comment 4-138:

The EIR preparers include Registered Geologists and a Certified Hydrogeologist with experience in conducting groundwater investigations and contamination remediation. The commentor is referred to Response to Comment 4-152.

Response to Comment 4-139:

The hydrogeologic modeling conducted for the Technical Studies was performed by respected and qualified professionals. In the judgement of these professionals, clogging of the pit walls and pit bottoms would not occur to the degree described by the commentor (please refer to Response to Comment 4-109). The modeling was applied to the analysis of the completely backfilled mining pits. This scenario would represent more restricted flow conditions than those described by the commentor and demonstrated that flow conditions and groundwater levels would be affected only very near the backfilled pits. For example, a 135-acre pit excavated and backfilled to a depth of 80 feet would result in approximately one foot of groundwater level lowering 570 feet downgradient of the simulated pit. One foot of groundwater elevation change at this distance (and therefore less change further from the pit) would not be considered significant under most circumstances. These modeling results were considered when developing mitigation measures presented in the OCMP EIR and the project level EIRs.

Response to Comment 4-140:

The discussion of potential impacts of the creation and backfilling of mining pits was discussed in Impact 4.4-5 of the DEIR. Whereas the filling of the pits would be expected to result in groundwater levels in the area adjacent to the pits. No wells are located within 1,000 feet of the pits. Therefore, no wells would be adversely impacted by localized changes in the vicinity of the pits. The Technical Studies for the CCRMP and the EIR for the OCMP concluded that wells located greater than 1,000 feet from filled mining pits would not be significantly affected by expected groundwater flow changes caused by the pits. This determination was made by qualified hydrogeologists on the basis of data on the characteristics of the aquifer and site-specific information on groundwater conditions, including those in the vicinity of formerly mined and backfilled pits at the project site.

Response to Comment 4-141:

The presence of habitat features in the surrounding regional environment, such as the Madison and Esparto sewage oxidation ponds located west of I-505, livestock reservoirs in the Dunnigan Hills to the north, and vegetated irrigation canals in the project vicinity, are noted for the record. The importance of some of these features was recognized in the OCMP EIR. With the exception of the proposed relocation of approximately 1,000 linear

feet of the drainage ditch in the southeastern portion of the site, discussed on page 4.6-43 of the DEIR, none of these features would be directly affected by proposed mining activities, and because no significant impacts would occur, they were not identified in the DEIR.

Response to Comment 4-142:

The concerns of the commentor regarding the number of species identified for grassland habitat on the site is noted for the record. The species identified in the discussion on page 4.6-7 of the DEIR were intended to simply characterize the grassland habitat, not provide an exhaustive list of all grassland plant species on the site. More detailed lists of plant species occurring on the site are contained in the Vegetation and Wildlife Analysis prepared by the applicant's biologist, and referenced on page 4.6-1 of the DEIR.

Response to Comment 4-143:

The commentor has correctly identified a typographical error. The text of the DEIR has been changed accordingly in Text Change # 30.

Response to Comment 4-144:

The commentor is referred to Response to Comment 4-24.

Response to Comment 4-145:

The project site does not currently include, nor does the project propose, a transit-mix concrete plant.

Response to Comment 4-146:

Any increase in truck emissions related to the vertical lift from reclaimed agricultural surfaces would be off-set by the reduced emissions from the same vehicles driving down to the agricultural surfaces. Vehicles hauling agricultural products from the reclaimed surfaces would be a minor and intermittent source of pollutants.

Response to Comment 4-147:

Pollutant stratification is not a potentially significant impact for the proposed project. This issue was addressed in the OCMP EIR (Response to Comment 13-176).

Response to Comment 4-148:

The DEIR, page 4.12-1, lists four items as being a public health concern. The third item is drowning hazards to the public due to steep pit slopes. The commentor suggests that we erroneously omitted accidents from bicycles, hiking, motorcycles, ATMs [*sic*] associated

with on-site slopes. Access roads to the mining areas would be gated and signs posted to indicate that the site is restricted. The mining areas would be fenced as well.

Response to Comment 4-149:

Please refer to Response to Comment 4-19. The views of the commentor regarding child care practices as related to ethnic background are not relevant CEQA issues. The comments regarding the County's legal obligations and the ability of the local school districts to provide for swimming pools are noted for the record.

Response to Comment 4-150:

The views of the commentor regarding the ability to read as related to ethnic background are not relevant CEQA issues. Please refer to Response to Comment 4-19.

Response to Comment 4-151:

CEQA requires an evaluation of a project's impact on public services. The Initial Study prepared for this project concluded that the project would not create any foreseeable increase in the need for fire or sheriff equipment or personnel. OCMP requirements for signage and fencing, in combination with lake design, would sufficiently mitigate impacts related to hazards of drowning. It should be noted that the existing Solano Concrete wet pit mine has been in operation for 15 years in general proximity to Madison and the Migrant Center without any reported drownings or other accidents involving trespassers. Therefore, there is not expected to be a significant increase in demand on emergency services related to drowning.

Response to Comment 4-152:

The DEIR preparers are listed in Chapter 6 of the DEIR. The state guidelines for preparers of EIRs are identified in the CEQA Guidelines Section 15142: " The EIR shall be prepared using an interdisciplinary approach which will ensure the integrated use of the natural and social sciences and the consideration of qualitative as well as quantitative factors. The interdisciplinary analysis shall be conducted by competent individuals, but no single discipline shall be designated or required to undertake this analysis." The preparers of the DEIR far exceed the qualifications requirements of the CEQA Guidelines. Neither staff nor the EIR preparers have committed any infractions of the registration law and are available to respond to any concerns that the California Board of Registration may offer.

Response to Comment 4-153:

The views of the commentor regarding family size and literacy as related to ethnic background are not relevant CEQA issues. Neither CEQA statutes nor Guidelines require the preparation of an EIR in a language other than English. This has been supported in litigation, though the decision was not published. Under State law English is the official language; non-English requirements are very few and must be expressly authorized.

The County has received no requests for bilingual meetings.

Response to Comment 4-154:

The commentor's explanation of slopes is appreciated. Please refer to Response to Comment 4-19 for a discussion of design of the wet pits and potential safety hazards.

LETTER #5

THE LEAGUE OF WOMEN VOTERS OF WOODLAND

P. O. Box 2463, Woodland, CA 95776

1121 West Street
Woodland, CA 95695
July 18, 1996

To: David Morrison and Heidi Tschudin
Yolo County Planning Department

Subject: Specific comments on Solano Concrete Long-term Off-channel Mining Permit Application

The following are the specific comments of the League of Women Voters of Woodland.

The League does not believe it is legal for the Solano Concrete application to be able to "tier" off of the Off-Channel mining plan. The OCMP has not been adopted by any official body. At the County Planning Commission meeting on July 10, the vote for accepting the plan was deadlocked 2 to 2. This results in a negative recommendation to be taken to the Board of Supervisors. The other document referenced in the Solano application is the Cache Creek Resources Management Plan (CCRMP) and this will not even appear before the Planning Commission for action until July 24. Therefore, this application is "tiering" off of two plans which have no official status yet. How can this be consistent with CEQA? 5-1

Ever since the schedule for these off-channel mining plans was released last fall, the League has maintained that the five specific long-term applications should not be considered until the OCMP, the CCRMP , the long term ordinances and reclamation plans are in place. 5-2

It appears that Solano Concrete is asking for a benefit for land in the Williamson Act that is not available to farmers. The Williamson Act was created to protect farmland and any farmer asking to have his land taken out of this Act without waiting for the 10 year period would have to pay the back taxes for the land as it would have been normally assessed, without Williamson. The League understands the Board of Supervisors has not looked too kindly on such requests.

Yet if the zoning changes are adopted as requested in the OCMP, and recommended by staff, Solano will be able to mine on Williamson land without any penalty at all. If the request and recommendation is adopted, it would appear to give the mining industry a great financial advantage, not enjoyed by the farming industry in Yolo County.. The complaint is frequently heard that this County is very short of tax revenues. If the Board of Supervisors is indeed this short of funds, they 5-3

will not approve this recommendation.

The staff report available for the June 26, 1996, meeting of the County Planning Commission listed the approvals necessary for each long term application to be accepted. A development aggreement was listed as a necessary component of each plan. But such a development agreememt was not available. There is none available in the DEIR for Solano's long -term application. Therefore, the public has been denied the opportunity to comment on such an agreement. 5-4

For such an agreement to be in effect, the County must first adopt a so-called "generic" aggreement. That agreement, in the form of an ordinance, was not available to the public until July 3, and then only to those of us who made an effort to go to the County Development Agency and pick up the staff report documents for the July 10 Planning Commission meeting on the OCMP. There was no discussion of such an agreement by the Planning Commission because the Commission deadlocked 2 to 2 to deny the OCMP project, and therefore, never considered the recommended action. 5-5

The public has had no opportunity to make specific comments on any development agreement. The League submits that the development agreements have never been subjected to CEQA review and that is a requirement before they can be adopted.

This is in direct contrast to the manner in which the off-channel mining ordinance has been presented. It came out last fall with the first draft of the Off-channel Mining Plan, and the zoning changes, and was thus available for pulic scrutiny. How can we comment when we haven't seen Solano's Development Agreement to know what should be in their final agreement? Similarily the Department of Fish and Game, and the Department of Conservation have had no opportunity to comment. 5-6

For example, if it is appropriate to have the net benefits that Solano Concrete's proposal would provide, spelled out in the July 10 Planning Commission staff report, why aren't these benefits specifically spelled out in this DEIR document to clarify the section 201(a)of a draft model Development Agreement.? Because the adoption of this development agreement will be a legislative act, the Lead Agency can specify the kinds of public benefits which will accrue, as well as the restrictions. This DEIR is totally vague about the specifics that Solano's agreement will contain, and thus leaves far too much to the discretion of the Board of Supervisors, without adequate information on which to base their decision. 5-7

Solano's DEIR has also not discussed a reasonable array of alternatives 5-8

to the proposed project, as required by CEQA. While they have listed two shallow mining alternatives neither of them goes any deeper than ten feet above the seasonal high groundwater level. Therefore, the proposed project concludes they do not offer enough gravel to be feasible. According to the chart on 4.4-5 mining that went to the average high groundwater level would allow for twenty feet of mining thus producing about twice the amount of gravel. 5-8

Such an alternative would have been reasonable and could have been seriously considered.

It would not preclude extraction of resources at some later date. It would not create permanent lakes and leave the threat of contamination with all the monitoring aspects. It would continue employment of 14 people. It would be consistent with the agricultural policies of the Yolo County Resource Conservation District since lands would be reclaimed to agriculture. Pit capture would be minimized. Direct release of hazardous materials, accidents on pit slopes,and mosquite breeding in the open pits would not occur 5-9

The topography of Solano's mining site is different from that of the other mining sites. Was that taken into consideration? What calculations and figures were used to arrive at Solano's mining allocation? 5-10 5-11

The League believes the DEIR is deficient in that it mas not complied with CEQA in producing the reasonable array of alternatives required. 5-12

Patricia Murray
Patricia Murray, Co-president

(not available for signature)
B.j. Ford, Co-president

Lois V. Linford
Lois V. Linford, Natural Resources Chair

LETTER 5: THE LEAGUE OF WOMEN VOTERS OF WOODLAND

Response to Comment 5-1:

Thank you for your correspondence. Staff disagrees with the commentor's opinion that the tiering of the proposed project from the program-level EIRs for the OCMP and CCRMP is inconsistent with CEQA. Under CEQA, tiering is strongly encouraged to avoid repetitive discussion of the same issues in successive EIRs, and to allow successive EIRs to concentrate on environmental effects that can be mitigated or avoided in connection with the decision on each later project. The schedule and process of staggered evaluation of the OCMP, CCRMP, and long-term mining applications were established by the Board of Supervisors in 1994. In evaluating the program-level EIRs first, significant environmental impacts associated with off-channel mining were addressed and underwent extensive public review. The analysis of those general environmental impacts were incorporated into the evaluation of the proposed project to ensure compliance of the project with the OCMP and CCRMP. The DEIR is very clear on its relationship with the OCMP program EIR. The environmental impact analysis and development of mitigation measures presented in this DEIR are contingent on approval of the OCMP and CCRMP, their implementing ordinances, and the environmental analysis presented in the EIR reports for each of these two program-level projects. The EIRs for the OCMP and CCRMP were certified on 30 July 1996 and 20 August 1996, respectively, and the Plans were adopted on those dates as well.

Response to Comment 5-2:

The direction of the Board of Supervisors is generally consistent with this comment. The subject application will not be considered until 13 and 14 November 1996. The plans and ordinances are "in place" as of 30 July 1996 and 20 August 1996.

Response to Comment 5-3:

The commentor is correct that adoption of the OCMP resulted in changes to the Yolo County Zoning Ordinance that would allow mining of lands under active Williamson Act contract, consistent with state requirements. The legislative intent of the Land Conservation Act of 1965 (the Williamson Act) is to conserve open space lands for agricultural, wildlife habitat, and other compatible open space uses. The Williamson Act requires payment of a large financial penalty if a landowner requests cancellation of the contract, and the County agrees to the cancellation. A request for cancellation of a Williamson Act contract usually occurs when the land is planned for immediate conversion to intensive urban uses such as a residential subdivision.

Under state law, aggregate mining is a compatible open space use, and cancellation of contracts is not required in order to mine agricultural lands, provided certain conditions and findings are met. The most recent legislative amendments to the Williamson Act, which are discussed on page 4.2-8 of the DEIR, specifically allow jurisdictions to find that aggregate mining is a compatible use under the Act. The proposed zoning changes in the

OCMP area would allow mining on contracted lands, consistent with the requirements of State law which requires that mined lands designated as prime farmlands be returned to agricultural production. Mined areas on non-prime farmlands could be returned to open space uses. There is no financial "benefit" that applies to the aggregate industry and not to the agricultural industry. In fact, approved mining operations would be taxed on the full entitlement for mining operations during the mining period, irrespective of any Williamson Act contracts held on the project site. The property taxes would be applied on the basis of the tonnage of gravel entitled for mining. As the entitled tonnage diminishes during the period of mining and land reverts to open space or agricultural use, the property taxes would be adjusted accordingly on an annual basis.

Furthermore, in order to comply with Williamson Act requirements, Solano Concrete has filed Notices of Nonrenewal for all parcels within the project site. These contracts will expire before mining begins (except for Kaupke which will be returned to agricultural production). Once the contracts expire, property will be taxed at its full assessment.

Response to Comment 5-4:

The intent of the County and the aggregate applicants is to negotiate a development agreement for each separate long-term mining and reclamation plan that is approved. The development agreement will contain financial and other commitments between the County and the applicant, based on the mitigation measures that are adopted from the EIR and the conditions of approval that are attached to the approved use permit. Under State law enabling local jurisdictions to adopt development agreements, one public hearing on the development agreement must be held at the Board of Supervisors. Action by the Planning Commission to approve, or recommend approval of, the development agreement is not required, although the County's newly enacted ordinance does so require. Regarding the Solano project, a draft development agreement will be considered by the Planning Commission at their November 13, 1996 meeting, after the election. The Board of Supervisors will hear the development agreement on November 26, 1996. Please also refer to Text Change # 9.

Response to Comment 5-5:

The comments regarding the lack of time for the public to review the proposed "generic" development agreement ordinance are noted. As has been explained, the County has <u>not</u> adopted any development agreements, generic or otherwise. The County did adopt an enabling ordinance on 30 July 1996. As the agreements are formulated, they will not contain any actions that have not been proposed by the project, required by the OCMP or CCRMP, or required by the environmental impact mitigation measures presented in the EIRs prepared for the individual long-term mining applications. Therefore, development agreements will rely on environmental analysis presented in the EIRs prepared for the individual long-term mining applications, as allowed under CEQA.

Response to Comment 5-6:

Please see Responses to Comments 5-4 and 5-5, above. The development agreement is a contract between the County and the applicant, and does not require approval by the California Departments of Fish and Game or Conservation.

Response to Comment 5-7:

The "net gains" that are proposed as part of the Solano Concrete long-term mining application are discussed in the DEIR Project Description, Chapter 3, under the heading "Net Gain." As the decision-making body for this project, it is unclear how the Board of Supervisors can have "too much discretion." Please also refer to Response to Comment 5-5.

Response to Comment 5-8:

In addition to the nine alternatives examined in the OCMP EIR and the seven alternatives examined in the CCRMP EIR, the Solano project EIR examines five project-level alternatives. Two of those are shallow mining alternatives, one expanded area and the other decreased volume.

The staff believes these alternatives exceed the CEQA standard of a reasonable range of alternatives. The additional impacts associated with allowing an additional 10 feet of depth under Project Alternative 2a or 2b can be extrapolated from the alternative analysis provided. The CEQA goal of fostering meaningful public participation and informed decision making has clearly been met.

Response to Comment 5-9:

Section 5.3 of the DEIR provides an evaluation of the environmental impacts of each alternative presented in the DEIR (including Shallow Mining Alternatives 2a and 2b) and compares the impacts of the alternatives to the impacts identified for the proposed project. The commentor's views in this regard are noted for the record. Threat of contamination and minimizing potential for pit capture are dependent on monitoring, regulation, design, control, and reclamation, none of which is spoken to in the comment. Impacts from "direct release of hazardous materials," accidents on pit slopes, and mosquito breeding would appear to be similar between the project and the described alternative. The potential for pit capture would not be significantly reduced. Continued employment of 14 people would also not be assured under the referenced alternative.

Response to Comment 5-10:

The site-specific physical characteristics of the project site (including topographic information) were used in calculations and impact assessment of the project and each alternative. Site characteristics were determined from maps and other information

provided in the project application, published and unpublished data from other sources, and observations made by the DEIR team at the project site and surrounding areas.

Response to Comment 5-11:

Allocations for the alternatives were based either on the proposed allocation in the permit application or existing allocations. The DEIR does not establish an allocation, but it does analyze the tonnage requested in the application. The commentor is referred to Response to Comment 6-3.

Response to Comment 5-12:

The commentor's opinion is noted for the record. Please refer to the responses to Letter 6 regarding the alternatives analysis.

LETTER #6

JULY 18.1996
Comments On Solano Concrete Long-Term Off-channel Mining Permit DEIR:

This DEIR makes the same error that the program OCMP made. In its' selection of the Environmentally Superior Alternative, this document fails to identify the reasonable array of possibilities, and instead limits itself to a choice (Alt. 3b) that is inherently self-defeating. There was a total lack of consideration of the possibility of analyzing the impacts of extending the mining just ten feet (or so) more-to within one foot of the water table- thereby ignoring an Alternative that might meet the objectives of the Plan far better, and give us the best (for Solano) site-specific plan. When only given a choice of two extremes, we must opt for the opposite extreme of the proposed project. **6-1**

From Table 5-2, listing the impacts of the 6 options, it is somewhat possible to extrapolate that between the Project (before mitigation) and Alt 3b. Decreased Mining, there could be a middle ground that would minimize some of the more horrendous, significant/unavoidable impacts. **6-2**
Why was this not explored? A big part of the problem is an underlying assumption that the County should approve the doubling of the tonnage allotments. Implicit in some of the Planning Commissioners rejection of the OCMP was the failure to substantiate the need/reason to allow such high tonnage levels. The OCMP was denied partly on this basis. **6-3**
Therefore, it is incorrect for this DEIR to predicate its Project on the approval of 5.5 M tons. Further, how was the figure arrived at for Solano's particular situation? What calculations and factors were used? Alt. 3a and 3b are rejected for failing to meet that tonnage level, but we need to be able to know if a modification of 3a and 3b might generate a more acceptable tonnage. **6-4**

Even if the depth of mining analyzed is only a matter of degree, the two decreased mining alternatives, 3a-reduced-tonnage, and 3b-reduced time, should be joined by 3c, (which might be called more correctly 2c) modified elevation/tonnage. It is stated, p. 5-19, that both 3a and 3b 'would fail to meet the project objective' of harvesting a (questionable) tonnage level, but still states that 'the goals of moving mining to off-channel areas, reclamation to permanent lakes, and continued employment would be met. This is taken further at the summary, 5.4, where it is stated that 3b 'is environmentally superior to the proposed project, since land use, biological, geologic and agricultural impacts would be less than the proposed project'-in other words, a material reduction in environmental impacts. An alternative modified as suggested would provide increased production and maintain the potential of high ag land reclamation. **6-5**

A modification in the nature of 2/3c provides all the benefits and reduced impacts as previously stated, plus would eliminate potential mercury and zoonoses impacts of digging into the water table. There is no reason that these benefits would not be equally applicable at approximately 10 more feet, and this needs to be analyzed. The preparers actually postulated a similar scenario, in the OCMP Response to Comments, at 13-40, where they talk about shallow and deep mining areas "for demonstration purposes", but then seem to overlook looking into it further. Your response to our comment at 13-40 should be considered as a possibility. (This also reflects the OCMP's failure to identify a truly Environmentally Superior Alternative). 6-6

Because the DEIR does not explore a more 'real world' best alternative, this EIR must be rejected for its' failure to comply with CEQAs' requirement that a 'reasonable array of alternatives' be explored. If analysis taking into account the specific topographical and hydrological conditions existing at the Solano project site was focused on mining to within one foot of the water table, the decision makers in this process would have more options to choose from. As it stands, the best suited alternative for this project has not been investigated, so there is no truly workable, feasible alternative. 6-7 6-8

Janet Levers

Janet E Levers

Cache Creek Basin Resource Coalition

LETTER 6: JANET LEVERS, CACHE CREEK BASIN RESOURCE COALITION

Response to Comment 6-1:

Thank you for your correspondence. Staff disagrees with the commentor's opinion that the alternatives analysis presented in the DEIR failed to present a reasonable array of project alternatives. In addition to the No Project Alternative, the DEIR developed and evaluated two Shallow Mining Alternatives (Alternatives 2a and 2b) and two Decreased Mining Alternatives (Alternatives 3a and 3b). This range of alternatives was uniformly evaluated in each of the long-term, off-channel mining application EIRs. The consistency of each alternative with the project objectives was analyzed and discussed. The DEIR correctly presents a range of alternatives that evaluate the potential differences between the project and alternate mine design, mining methods, and scales of extraction (including the No Project Alternative).

In an effort to reduce all impacts associated with wet pit mining, staff elected to restrict the mining depth under the Shallow Mining Alternatives to 10 feet above the average seasonal high groundwater level. This choice was made to ensure a reduction in the potential impacts associated with degradation of water quality associated with possible releases of hazardous materials during mining and reclamation and the potential impacts of infiltration of agricultural chemicals from lowered reclamation surfaces.

There are many possible variations to a shallow mining alternative, each of which varies with regard to the availability of aggregate at a specific site, the feasibility of agricultural reclamation, and relative protection of groundwater resources. The commentor's suggestion that mining extend to within one foot of the groundwater table, could present increased risks to groundwater quality relative to the shallow mining alternatives presented in the DEIR. Other impacts would be similar to those described in for the Shallow Mining Alternatives presented in the DEIR. The scale of the impacts related to increased surface area disturbance (increased air emissions, conflicts with adjoining land, temporary loss of agricultural uses, increased potential for disturbance of cultural and biological resources, and other effects) is related to the size of the proposed shallow mining project. The commentor does not specify the size of the proposed additional alternative.

Staff does not agree that the identification of Alternative 3b as the Environmentally Superior Alternative was inappropriate or "self-defeating." Alternative 3b was identified as the Environmentally Superior Alternative on the basis of the comparison of alternatives and the project presented in Section 5.3 (and summarized in Table 5-2) of the DEIR. The alternative is feasible and would result in a reduction in environmental impacts.

See also Response to Comment 5-8.

Response to Comment 6-2:

A range of alternatives were considered in the EIR. The alternative with the least impacts was the No Project Alternative. The alternative with the most impacts was the Shallow

Mining/Expanded Surface Area Alternative (2a). In between these alternatives were the Decreased Mining/Limited Period Alternative (3a), the Decreased Mining/Limited Extraction Alternative (3b), and the Shallow Mining/No Expansion Alternative (2b). Each of the alternatives would reduce some of the impacts associated with the project, although some of the alternatives would also increase some of the impacts associated with the project. This is thoroughly discussed in Chapter 5 of the DEIR and summarized in both Table 5-1 and Section 5.4.

The purpose of the alternatives analysis is to determine whether an alternative exists which would substantially lessen impacts which have been identified in the DEIR as significantly adverse and unavoidable. The alternative identified by the commentor would not substantially lessen such impacts as a whole. Impacts to air quality would be increased because of the larger amount of overburden to excavate and replace. Therefore impacts to PM_{10} would increase. Also, ozone emissions from additional hauling would increase. Cumulative impacts to agricultural land may be somewhat lessened due to increased reclamation to agriculture. Accordingly, the DEIR did not analyze this alternative since it did not present the potential to substantially lessen identified significant, unmitigated impacts.

Response to Comment 6-3:

The OCMP was approved by the Board of Supervisors on 30 July 1996. The project assessed in this DEIR is that proposed by the applicant. It is not the job of the EIR to determine the size of the project. A range of project sizes was explored in the Alternatives section of the DEIR as required by CEQA Section 15126 in order to determine if a project alternative could mitigate or avoid impacts of the project.

Response to Comment 6-4:

Neither Alternative 3a nor 3b were rejected because they did not meet a specified tonnage objective. The DEIR presented an evaluation of the potential environmental impacts for each alternative and a comparison of the impacts of each alternative with the proposed project. A decision regarding acceptable tonnage is not addressed in the DEIR and would not be required by CEQA.

Response to Comment 6-5:

The commentor requests analysis of a variation of the decreased mining alternatives but does not specify the characteristics of this "modified elevation/tonnage" alternative. Staff assumes that the commentor is referring to a mining alternative which would limit the depth of mining to within one foot of the water table. Staff agrees with the commentor's remarks regarding statements cited in the DEIR pertaining to Alternatives 3a and 3b. The commentor's opinion that a mining alternative of this general nature would provide "increased production and maintain the potential of high agricultural land reclamation" cannot be supported by staff without additional details regarding the location (including the required area) of mining. Comparison of the environmental impacts of the shallow mining

alternative proposed by the commentor with the wet pit mining of Alternatives 3a and 3b would require specific analysis.

Response to Comment 6-6:

Staff acknowledges the commentor's preference for including a shallow mining alternative that would avoid excavation below the groundwater table as discussed in Response to Comment 6-1. The commentor is not specific as to the groundwater datum which would define the depth of mining. Excavation to depths not greater than the average seasonal high groundwater would avoid creation of an open water body in the mining during most years. However, one foot of unsaturated zone thickness would not provide sufficient impedance to reduce the potential water quality impact related to releases of hazardous materials to a less than significant level. Part of the rationale in development of Alternative 2a and 2b of the DEIR was to provide adequate separation between the bottom of the mining pits and the average high groundwater level to minimize the potential impact of such releases and infiltration of agricultural chemicals applied to reclaimed surfaces.

Excavation to greater depths (e.g. one foot above the average groundwater level) could result in seasonal lakes in the mining pits. Water quality impacts associated with open pit lakes would be limited to occurring on a seasonal basis but would still be considered significant.

The commentor's focus on the Response to Comment 13-40 in the OCMP EIR Responses to Comments document requires clarification. In that response, the assumption was made that excavation of the shallower mining would extend to below the groundwater table but to a lesser depth than "deep wet pit mining" reference in the comment. The purpose of the response was to demonstrate the additional area required to maximize the mining depth and also allow for reclamation back to an agricultural surface that was five feet above the average groundwater level. This example presents a conservative estimate of the amount of additional area required for mining of a similar amount of aggregate that would be removed for deep wet pit mining. Under both the shallow and deep pit mining scenarios presented in the Response to Comment 13-40 of the OCMP EIR, the potential impacts to water quality associated with open water would be similar during the mining period.

Response to Comment 6-7:

Staff does not agree with the commentor's conclusion that the DEIR does not present a reasonable array of alternatives. The rationale for development of the shallow mining alternatives presented in the DEIR is described in the Response to Comment 6-1. In development of the alternatives and their environmental analysis, staff and the preparers of the DEIR considered the physical conditions at the site and surrounding areas, the practical methods of aggregate mining, and the potential environmental effects of mining. This analysis was, therefore, mindful and respectful of "real world" conditions.

Information on the surface topography and subsurface conditions at the project site were evaluated in providing estimates for the availability of aggregate for each alternative. The restriction of mining to not more than ten feet above the average groundwater level for Alternatives 2a and 2b was included to provide the readers of the DEIR with options which realistically reduced water quality impacts associated with aggregate mining operations to a less-than-significant level. If the requested allocation for aggregate production is to be met, any shallow mining alternative (mining above the average groundwater level) would result in significant increases in impacts related to disturbance of agricultural land, wildlife habitat and cultural resources, air emissions, and noise. Staff does not agree that such an alternative would be "best suited" for the project.

Economically, the shallow mining scenario proposed by the commentor may also be infeasible. The commentor is not specific as to whether the mining would be restricted to the proposed project site or expanded to other areas to meet the requested allocation. The cost of overburden removal would be similar (for the same area) or greatly increase relative to the proposed project. Reclamation would be increased as agricultural reclamation is typically more expensive than reclamation to habitat.

CEQA does not require a presentation of all possible alternatives. The "rule of reason" used by CEQA (Section 15126(d)(5)) requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.

The EIR does not limit the decision makers' choices in policy decisions. The EIR is an informational document, not a rigid set of choices that unduly restricts decision makers. The Planning Commission and Board of Supervisors may still adopt a modified alternative, as urged by the commentor, or other variations that balance environmental, economic, and social concerns.

LETTER #7

July 18, 1996

To: Dave Morrison & Heidi Tschudin,
Yolo County Planning Department

Subject: **Comments & Statements of Concern - DEIR - Off Channel Mining Plan Applications.**

JUL 2 2 1996

GRAVEL PIT RECHARGE INFORMATION

The State Department of Conservation has found that the Fundamental Commitments for Gravel Pit Recharge do not exist.

In a series of letters dated Feb. 15, 16, and 20 addressed to the Yolo County Resources Management Coordinator from the California Department of Conservation Office of Land Conservation (OLC) commenting on EIR documents of several gravel mining permit applications, an extremely serious deficiency is pointed out. **The OLC stated that there is no firm commitment by the Yolo County Water Agency to groundwater recharge on any of the Gravel Mining Applications now pending!** 7-1

The permits under consideration are:

Teichert (Esparto) LTOCMP Application SCH# 9600012031

Teichert (Woodland) LTOCMP Application SCH# 96013031

Solano Concrete LTOCMP Application SCH# 96012034

Cache Creek Aggregates LTOCMP Application SCH# 96012035

Syar LTOCMP Application Sch# 960 12030

The OLC comments: "A firm commitment to ground water recharge is not apparent in the reclamation plans. Discussions with the Yolo County Agency are referenced, but no details regarding the substance of these discussions is given."

Firm commitments that would be acceptable to the OLC would necessarily have to be made by the Board of Directors of the YCFC&WCD. This must be a commitment made in perpetuity obligating future Boards of Directors. Failure to honor the commitment at some time in the future would be a violation of the reclamation plan and the miners' agreement with Yolo County. It therefore becomes apparent that no employee or officer of the YCFC&WCD can legally make such a binding commitment. All that they can legally do is have a discussion. It would be a gross misuse of the CEQA process to allow casual informal conversations to become the basis for the most important mitigation measure proposed in the reclamation plan! 7-2

It is noted that no cost-benefit studies have been released to the public on the recharge basin concept and the Corps of Engineers discounts the concept because no detailed investigation and field research has been conducted. All that can be said at this time is that the idea has been publicly presented but no responsible public body has thus far given official approval to a specific plan nor has the financing been officially established. 7-3

In summary, Yolo County residents are being presented with a scheme for the next 30 years that has no assurance by any responsible public body that the groundwater recharge mitigation measure concept will ever become a reality!

The only way that the Planning Staff and its consultants can demonstrate credence for the "recharge mitigations" claimed by the above applicator EIR documents is to produce an official Board Action by the YCFC&WCD documenting that it specifically accepts, approves and will implement the "recharge" mitigation measures in a timely manner so as to comply with the reclamation plan schedule.

Planning Staff must surely recognize that in order for the YCFC&WCD to make such commitments the agency would need to have site specific plans and an economic feasibilty study in hand as well as a schedule for the required construction. Financing arrangements would be the most crucial because by State law the YCFC&WCD is not organized as a philanthropic institution and therefore can only commit funds on projects that have demonstrated economic feasibility. 7-4

The YCFC&WCD came into being as the result of a specific bill passed by the State Legislature to form the district. The YCFC&WCD is therefore subject to the State regulations applicable to all special districts and as such must routinely demonstrate financial accountability.

Bob & Mitzi Speirs
Environmental Issues Committee
Western Yolo Grange #423

Janet Levers
Cache Creek Coalition

Lois Linford
Natural Resources Committee
League of Women Voters,
Woodland

Ian Ekholm
Citizens for Responsible Mining

LETTER 7: ENVIRONMENTAL ISSUES COMMITTEE WESTERN YOLO GRANGE #423, CACHE CREEK COALITION, NATURAL RESOURCES COMMITTEE LEAGUE OF WOMEN VOTERS WOODLAND, CITIZENS FOR RESPONSIBLE MINING

Response to Comment 7-1:

Staff agrees with the commentor that the Yolo County Flood Control and Water Conservation District has made no commitments for using existing or proposed aggregate mining pits as aquifer recharge basins. Impact 4.4-5 of the OCMP EIR provided a lengthy discussion of this issue. A water management plan incorporating recharge basins has not been completed by YCFCWCD. As a result of this analysis, all policies and standards related to groundwater recharge were deleted from the OCMP. Recharge basins are not proposed by the project. The referenced comments were made regarding the Notice of Preparation for this project and have not been mentioned in any subsequent correspondence from the Department of Conservation.

Response to Comment 7-2:

The comment is noted for the record. Staff agrees that "casual informal conversations" should not be the basis for development of mitigation measures. No mitigation measures for the DEIR were developed on this basis. Since there are no mitigation measures in the DEIR for this project that reference groundwater recharge, the commentor's remarks are unclear.

Response to Comment 7-3:

Staff agrees with the commentor's point that complete studies of the potential development of recharge basins have not been prepared or presented. As stated in the Response to Comment 7-1, no recharge basins are proposed by the project under review in this DEIR.

Response to Comment 7-4:

Groundwater recharge is not included in any of the mitigation measures for this DEIR, so no actions by the Yolo County Flood Control and Water Conservation District are required to implement the project. The commentor's opinion regarding the planning process for recharge basins is noted for the record.

LETTER #8

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 3, SACRAMENTO AREA OFFICE * MS 41
P. O. BOX 942874
SACRAMENTO, CA 94274-0001
TDD 916 741-4509
FAX no. 916 323-7669
Telephone 916 324-6642

JUL 19 1996

July 18, 1996

HYOL048
03-YOL-16
Solano Concrete
Long Term Mining Permit
DEIR
SCH#96012034

Mr. David Morrison
Yolo County Community Development Agency
292 West Beamer Street
Woodland, CA 95695

Dear Mr. Morrison:

Thank you for the opportunity to review and comment on the above referenced document.

COMMENTS:

- We concur with the need for Mitigation #4.8-1a (refer to page 4.8-29). The left turn lane construction should be required within two years of this long term mining permit approval. An encroachment permit will be required for the lane construction with improvements built to Caltrans standards. Section 405.2 of the Highway Design Manual describes the left turn channelization design standards. The plans must be reviewed and approved through the permit process. For permit assistance, contact Rich Jones at (916) 741-5374. 8-1

Please provide our office with copies of supplemental information, the FEIR, and staff reports as they are made available. If you have any questions regarding these comments, please contact Ken Champion at (916) 324-6642.

Sincerely,

JEFFREY PULVERMAN
Office of Transportation
Planning - Metropolitan

cc: Antero A. Rivasplata, State Clearinghouse
John Joyce, Yolo County Public Works

LETTER 8: CALIFORNIA DEPARTMENT OF TRANSPORTATION

Response to Comment 8-1:

The timing for the left turn lane is shown in the project level Mitigation Monitoring Plan as "within one year of permit approval."

The second bullet on page 3-20 of the DEIR will be modified as shown in Text Change # 7 regarding the encroachment permit.

It is understood that Caltrans review of the improvement plans is required.

LETTER #9

State of California

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO 95814

PETE WILSON
GOVERNOR

LEE GRISSOM
DIRECTOR

July 18, 1996

JUL 22 1996

DAVID MORRISON
YOLO COUNTY
292 WEST BEAMER STREET
WOODLAND, CA 95695

Subject: SOLANO LONG TERM OFF CHANNEL MINING PERMIT EIR SCH #: 96012034

Dear DAVID MORRISON:

The State Clearinghouse submitted the above named environmental document to selected state agencies for review. The review period is closed and none of the state agencies have comments. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. 9-1

Please call Kristen Derscheid at (916) 445-0613 if you have any questions regarding the environmental review process. When contacting the Clearinghouse in this matter, please use the eight-digit State Clearinghouse number so that we may respond promptly.

Sincerely,

Antero A. Rivasplata

ANTERO A. RIVASPLATA
Chief, State Clearinghouse

Notice of Completion *Supplementary Document M*

See NOTE below

SCH # 96012034

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 916/445-0613

Project Title: Solano Long-Term off-Channel Mining Permit EIR

Lead Agency: Yolo County — **Contact Person:** David Morrison

Street Address: 292 West Beamer St — **Phone:** 916-666-8041

City: Woodland CA **Zip:** 95695 — **County:** Yolo

Project Location

County: Yolo — **City/Nearest Community:** Madison

Cross Streets: St 16 I-505 — **Zip Code:** _____ — **Total Acres:** 598

Assessor's Parcel No.: _____ — **Section:** _____ **Twp.:** _____ **Range:** _____ **Base:** _____

Within 2 Miles: **State Hwy #:** 16; 505 — **Waterways:** Cache Creek

Airports: _____ — **Railways:** _____ — **Schools:** _____

Document Type

CEQA: ☐ NOP ☐ Early Cons ☐ Neg Dec ☒ Draft EIR ☐ Supplement/Subsequent ☐ EIR (Prior SCH No.) _____ ☐ Other _____

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other _____

Local Action Type JAN 3

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan

☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan

☒ Rezone ☐ Prezone ☒ Use Permit ☐ Land Division (Subdivision, Parcel Map, Tract Map, etc.)

☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☒ Other Mining Permit

Development Type

☐ Residential: Units _____ Acres _____

☐ Office: Sq.ft. _____ Acres _____ Employees _____

☐ Commercial: Sq.ft. _____ Acres _____ Employees _____

☐ Industrial: Sq.ft. _____ Acres _____ Employees _____

☐ Educational _____

☐ Recreational _____

☐ Water Facilities: Type _____ MGD _____

☐ Transportation: Type _____

☒ Mining: Mineral Aggregate

☐ Power: Type _____ Watts _____

☐ Waste Treatment: Type _____

☐ Hazardous Waste: Type _____

☐ Other: _____

Project Issues Discussed in Document

☒ Aesthetic/Visual ☒ Agricultural Land ☒ Air Quality ☒ Archeological/Historical ☐ Coastal Zone ☒ Drainage/Absorption ☐ Economic/Jobs ☐ Fiscal

☒ Flood Plain/Flooding ☐ Forest Land/Fire Hazard ☒ Geologic/Seismic ☐ Minerals ☒ Noise ☐ Population/Housing Balance ☒ Public Services/Facilities ☒ Recreation/Parks

☐ Schools/Universities ☐ Septic Systems ☐ Sewer Capacity ☒ Soil Erosion/Compaction/Grading ☐ Solid Waste ☐ Toxic/Hazardous ☒ Traffic/Circulation ☒ Vegetation

☒ Water Quality ☒ Water Supply/Groundwater ☒ Wetland/Riparian ☒ Wildlife ☐ Growth Inducing ☒ Landuse ☐ Cumulative Effects ☐ Other _____

Present Land Use/Zoning/General Plan Use Agriculture + Mining
Agricultural Preserve (AP) and General Agriculture w/ Sand & Gravel Overlay
Agriculture

Project Description Commercial mining of sand + gravel on 598 acres south of Cache Creek. Thirty year permit for 1.2 million tons per year. Reclamation to row crops, tree crops, habitat and four lakes.

State Clearinghouse Contact: Ms. Dana Lidster (916) 445-0613

State Review Began: 6.3.96

Dept. Review to Agency: 7.3 11

Agency Rev to SCH: 7.3 16

SCH COMPLIANCE: 7.3 18

Please note SCH Number on all Comments

Please forward late comments directly to the Lead Agency

AQMD/APCD 4D (Resources: #1, 8) 6/8

Project Sent to the following State Agencies

- X Resources
- ___ Boating
- ___ Coastal Comm
- ___ Coastal Cnsv
- ___ Colorado Rvr Bd
- X Conservation
- X Fish & Game # 2
- ___ Delta Protection Commission
- ___ Forestry
- ___ Parks & Rec/OHP
- ___ Reclamation
- ___ BCDC
- X DWR
- ___ OES
- ___ Bus Transp Hous
- ___ Aeronautics
- X CHP
- X Caltrans # 3
- ___ Trans Planning
- ___ Housing & Devel
- ___ Health & Welfare
- ___ Drinking H20
- ___ Medical Waste

State/Consumer Svcs
- ___ General Services
- ___ Cal/EPA
- X ARB
- ___ CA Waste Mgmt Bd
- ___ SWRCB: Grants
- ___ SWRCB: Delta
- X SWRCB: Wtr Quality
- ___ SWRCB: Wtr Rights
- X Reg. WQCB # 5
- ___ DTSC/CTC ESCO

Yth/Adlt Corrections
- ___ Corrections
- ___ Independent Comm
- ___ Energy Comm
- ___ NAHC
- ___ PUC
- ___ Santa Mn Mtns
- X State Lands Comm
- ___ Tahoe Rgl Plan
- ___ Other: _____

LETTER 9: CALIFORNIA GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

Response to Comment 9-1:

This letter acknowledges distribution of the DEIR to state agencies. No response is necessary.

APPENDIX A: REFERENCE TABLE FOR OCMP MITIGATION MEASURES

REFERENCE CHART for LOCATING ADOPTED OCMP MITIGATION MEASURES in the FINAL OCMP and IMPLEMENTING ORDINANCES					
OCMP Mitigation Measure[1]	OCMP Reference[2]	Implementing Ordinance Reference		Other	Notes
		Mining Ordinance[3]	Reclamation Ordinance[4]		
4.2-1a	Obj. 5.3-1				None required
4.2-2a				Zoning Ord Amendments (Ord 681-164)	
4.2-3a					None required
4.2-4a					See 4.4-2a and 4.4-3b
4.2-5a	Obj. 5.3-1				None required
4.2-6a thru 4.2-9a					None required
4.2-10a	Action 2.4-11				
4.2-11a		Sec. 10-4.435			
4.2-12a					None required
4.3-1a			Secs. 10-5.504 10-5.505, 10-5.512, & 10-5.526		
4.3-2a		Secs. 10-4.406, 10-4.413, & 10-4.431	Secs. 10-5.507, 10-5.508, & 10-5.530		
4.3-2d		Sec. 10-4.411			
4.3-3a	Actions 4.4-1, 4.4-2, & 4.4-5	Secs. 10-4.416 & 10-4.429	Sec. 10-5.506		Std. 4.5-2 deleted
4.3-4a					None required
4.4-1a		Sec. 10-4.502	Sec. 10-5.503		

OCMP Mitigation Measure[1]	OCMP Reference[2]	Implementing Ordinance Reference		Other	Notes
		Mining Ordinance[3]	Reclamation Ordinance[4]		
4.4-2a	Action 3.4-4	Secs. 10-4.113, 10-4.417, 10-4.427, & 10-4.428	Secs. 10-5.507, 10-5.510, 10-5.519, 10-5.524, 10-5.528, & 10-5.530		Action 2.4-11 deleted
4.4-3a			Secs. 10-5.510, 10-5.517, 10-5.519, 10-5.528, 10-5.530, & 10-5.532		See 4.4-2a
4.4-4a			Sec. 10-5.529		
4.4-5a					Obj. 3.3-2; Actions 3.4-2, 3.4-6 thru 3.4-8; and Stds. 3.5-7, 3.5-9, 3.5-14, 3.5-15 deleted
4.4-6a	Action 4.4-7	Sec. 10-4.416			
4.4-7a					None required
4.4-8a			Sec. 10-5.516		
4.5-1a					None required
4.5-2a			Secs. 10-5.525 & 10-5.601		
4.5-3a			Sec. 10-5.522		
4.5-4a		Sec. 10-4.433			
4.5-5a					None required

OCMP Mitigation Measure[1]	OCMP Reference[2]	Implementing Ordinance Reference		Other	Notes
		Mining Ordinance[3]	Reclamation Ordinance[4]		
4.5-6a			Sec. 10-5.511		
4.5-7a					See 4.5-2a
4.6-1a					None required
4.6-2a		Secs. 10-4.440 & 10-4.502			
4.6-3a		Sec. 10-4.440	Sec. 10-5.509		
4.6-4a	Action 6.4-5	Secs. 10-4.418, 10-4.433, & 10-4.440	Secs. 10-5.515 & 10-5.523		
4.6-5a		Sec. 10-4.439	Secs. 10-5.515 & 10-5.523		
4.6-6a	Actions 6.4-1 & 6.4-7		Secs. 10-5.515 & 10-5.527		
4.7-1a		Sec. 10-4.407			
4.7-2a		Secs. 10-4.407 & 10-4.415			
4.7-3a thru 4.7-4a					None available
4.8-1a					None required
4.8-2a		Sec. 10-4.409			
4.8-3a		Sec. 10-4.408			
4.8-4a thru 4.8-15a					See 4.8-3a
4.8-16a					See 4.8-2a

OCMP Mitigation Measure[1]	OCMP Reference[2]	Implementing Ordinance Reference		Other	Notes
		Mining Ordinance[3]	Reclamation Ordinance[4]		
4.9-1a		Sec. 10-4.421			
4.9-2a					None required
4.9-3a		Sec. 10-4.423			
4.9-4a		Sec. 10-4.422			
4.10-1a		Secs. 10-4.404 & 10-4.429			
			Sec. 10-5.502		
4.10-3a thru 4.10-6a					None required
4.11-1a		Sec. 10-4.410			
4.12-1a	Goal 2.2-4; Obj. 2.3-3, 3.3-2; Action 2.4-2, 3.4-3	Sec. 10-4.415			
4.12-2a					None required
4.12-3a	Goals 2.2-4 & 2.3-3	Secs. 10-4.406 & 10-4.431	Secs. 10-5.510 & 10-5.530		
4.12-4a thru 4.13-1a					None required
4.13-2a	Action 2.4-16				None required

[1] Certified by Resolution 96.117A.
[2] Amended into the General Plan by Resolution 96-117.
[3] Ordinance 1190 entitled Off-Channel Surface Mining Ordinance.
[4] Ordinance 1191 entitled Surface Mining Reclamation Ordinance.

C:\WP51\HEIDI\YOLO\OCMPFNL.REF

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Land Use and Planning						
Impact 4.2-1: Consistency with Yolo County General Plan	*Mitigation Measure 4.2-1a* *None required. However, the amendment to draft OCMP Objective 5.3-1 proposed in Mitigation Measure 4.2-5a would reinforce Implementation Strategy #2 of the Capay Valley Area Plan by encouraging the reclamation of land within the Capay Valley Area to agricultural uses (i.e., areas of creek maintenance). This action would enhance the compatibility of the OCMP with the Capay Valley Area Plan.*	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
Impact 4.2-2: Consistency with the Yolo County Zoning Ordinance and County Code	*Mitigation Measure 4.2-2a* *The following sections of the Yolo County Zoning Ordinance shall be amended to implement the OCMP and its implementing ordinances: Sections 8-2.404(g), 8-2.404(j), 8-2.604(n), 8-2.2311, 8-2.2312(a), and 8-2.2312(b). New sections shall be added to the Yolo County Zoning Ordinance at Section 8-2.404 (to address land use contracts in the A-P Zone), and at 8-2.23.8 (to address the Special Sand and Gravel Combining Zone [SGR]).*	Prior to Mining	Planning	Add Amendment to Zoning Ordinance	Incorporate into Zoning Ordinance	
Impact 4.2-3: Consistency with the State Mining and Reclamation Act (SMARA) and the State Mining and Geology Board Reclamation Regulations	*None Required.*					
Impact 4.2-4: Consistency with the Regional Water Quality Control Board's Basin Plan	*None Required.*					
Impact 4.2-5: Consistency with the RCD Agriculture Policies	*Mitigation Measure 4.2-5a* *None required. As an improvement measure, however, it is recommended that the following language be added to Objective 5.3-1 of the OCMP:* *Reclamation of agricultural lands to other uses, however, is discouraged, wherever agricultural reclamation is feasible.*	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
Impact 4.2-6: Compatibility with Existing and Planned Land Uses	*None required.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.2-7: Change in Land Use Intensity	*None required at the program level.*					
Impact 4.2-8: Land Use Incompatibility Due to Changes in the Creek Boundary	*None required.*					
Impact 4.2-9: Land Disturbance During Mining	*None required.*					
Impact 4.2-10: Potential for Additional Mining Above That Which Is Currently Known	*Mitigation Measure 4.2-10a* *The final OCMP boundaries shall be defined as including only those 2,932 acres (including a 45-acre borrow area) presently under consideration for rezoning.*	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
Impact 4.2-11: Potential Impacts from the Future Sale or Transfer of Property Included within a Current Mining/Reclamation Application	*Mitigation Measure 4.2-11a* *The OCMP and its implementing ordinances shall be expanded and clarified to address the issue of transferability of mining permits. The clarification would indicate that if a property is sold or transferred, the tonnage attributed to that property transfers as well. If that tonnage is still processed at the original plant site pursuant to the original permit approval, no additional environmental assessment or permits would be required. If that transferred tonnage is processed elsewhere, additional analysis and approvals would be required.*	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
Impact 4.2-12: Compatibility with Watts-Woodland Airport Comprehensive Land Use Plan	*None required at the program level.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Geology and Soils						
Impact 4.3-1: Potential for Damage from Seismic Shaking	*Mitigation Measure 4.3-1a* *The following performance standards shall be added to the Aggregate Resources Element of the OCMP and its implementing ordinances.*					
	Performance Standard 2.5-25: Improvements, including the construction of buildings, roadways or other public facilities proposed for construction in reclaimed mining pits shall require a geotechnical investigation of the stability of fills conducted by a qualified and licensed geotechnical engineer. A report on the results and recommendation of the investigation shall be submitted to the Yolo County Community Development Agency prior to the issuance of building permits. The recommendation of the geotechnical investigation shall be fully implemented by the applicant.	Post-Reclamation	Applicant	Submittal of Geotechnical Report	Require as Permit Condition	
	Performance Standard 2.5-26: Backfilled mining areas and slopes shall be inspected by the Yolo County Community Development Agency following strong seismic shaking events. Observable damage shall be reported to the landowner. If the YCCDA determines that the damage requires repair to meet the intended use of the reclaimed land, the landowner shall perform the required repairs.	Ongoing - Following Strong Seismic Shaking Event	Planning	Inspection	Incorporate into OCMP	
	Performance Standard 2.5-27: The cost of implementing recommendations for repair of reclaimed land caused during earthquakes or other natural events shall be met through application of contingency costs provided for by the project's financial assurances as required by SMARA.	Ongoing - Mining and Reclamation	Applicant	Application of Contingency Costs	Financial Assurances	
	The following performance standard of the OCMP shall be modified as follows:					
	Performance Standard 5.5-3: The operator shall retain a licensed Land Surveyor to resurvey any areas reclaimed to agricultural usage after the first two (2) crop seasons have been completed. Any areas where settling has occurred shall be re-leveled to the field grade specified in the approved reclamation.	Following Completion of 2 Crop Seasons	Planning	Resurvey and Re-leveling	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.3-2: Potential Impacts Related to Slope Stability, Erosion, and Sedimentation	*Mitigation Measure 4.3-2a* *The following performance standards of the OCMP shall be modified as follows:* *Performance Standard 2.5-4: During mining operations, a series of benches may be excavated in a slope provided that the excavations are made in compliance with the requirements of the state Mine Safety Orders (California Code of Regulations, Title 8, Subchapter 17). The vertical height and slope of benches constructed for permanent reclaimed slopes shall not exceed maximum standards for the specific soil types presented in California Code of Regulations, Title 8, Article 6. In general, vertical cutslopes between benches shall not exceed four (4) feet in height in topsoil and overburden sediments. Benching shall be allowed in cohesive soil (clay, sandy or silty clay, clayey silt) only. Slopes above the elevation of groundwater (determined at the time of excavation by the level of exposed water in the excavation) that exceed the maximum vertical height shall be excavated and maintained at slopes not greater than 2:1. Slopes located five (5) feet or less below the average summer low groundwater level shall not be steeper than 2:1. Slopes located more than five (5) feet below the average summer low groundwater level shall not be steeper than 1:1 (horizontal to vertical).* *Vertical cutslopes in excess of four feet in height may be approved for development of special habitat (e.g. bank swallows) if a site specific slope stability analysis, performed by a licensed engineer, indicates that the slope does not exceed critical height for the on-site soil conditions. Projects proposing such slopes will be required to submit a long-term maintenance plan to ensure that the function of the slopes as habitat is met.*	During Mining	Planning	Submittal of Slope Stability Study	Require as Permit Condition	
	Performance Standard 2.5-16: Except where benches are used, all banks above groundwater level shall be sloped no steeper than 2:1 (horizontal:vertical). Proposed steeper slopes shall be evaluated by a slope stability study, prepared by a qualified engineer. Slopes below the groundwater level shall be no steeper than 1:1 (horizontal:vertical). Slopes located five feet or less below the summer low groundwater level shall not be steeper than 2:1.	Post-Reclamation	Planning	Submittal of Slope Stability Study	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Performance Standard 2.5-17: Upon the completion of operations, grading and revegetation shall minimize erosion and convey storm water runoff from reclaimed mining areas to natural outlets or interior basins. The condition of the land shall allow sufficient drainage to prevent water pockets or undue erosion. Natural and storm water drainage shall be designed so as to prevent flooding on surrounding properties and County rights-of-way. *Storm water runoff from mining areas shall be conveyed to lowered areas (detention basins) to provide detention of runoff generated during a 20-year, one-hour storm event. All drainage conveyance channels or pipes (including spillways for detention areas) shall be designed to ensure positive drainage and minimize erosion. The drainage conveyance system and storm water detention areas shall be designed and maintained in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined areas. The design and maintenance procedures shall be documented in the Storm Water Pollution Prevention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion and Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion and sedimentation are not occurring. The annual inspection shall be documented in the Annual Mining and Reclamation Report.*	Prior to Reclamation and then Ongoing (Annually)	Planning	Submittal of Storm Water Pollution Prevention Plan/Annual Inspection	Incorporate into Annual Mining and Reclamation Report	
	Performance Standard 2.5-18: All final reclaimed slopes shall have a minimum safety factor equal to or greater than the critical gradient as determined by an engineering analysis of the slope stability. Final slopes less than five (5) feet below the average summer low groundwater level shall be designed in accordance with the reclaimed use and shall not be steeper than 2:1. Reclaimed wet pit slopes located five (5) feet or more below the average summer low groundwater level shall not be steeper than 1:1 (horizontal:vertical), in order to minimize the effects of sedimentation and biological clogging on groundwater flow, to prevent stagnation and to protect the public health.	Prior to Reclamation	Planning	Submittal of Slope Stability Study	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	The maximum slope angle for all final reclaimed slopes shall be determined by slope stability analysis performed by a licensed and qualified civil or geotechnical engineer and submitted with any mining and reclamation application for review by the Yolo County Community Development Agency (YCCDA). The slope stability analysis shall conform with industry standard methodologies rotational slope failures under static and pseudostatic (seismic) conditions. The minimum factor of safety for all design reclamation slopes located adjacent to levees or below existing structures shall not be less than 1.5 for static and 1.1 for pseudostatic (seismic) conditions. Other reclamation slopes shall meet a minimum factor of safety that is consistent with the post-reclamation use proposed for the mining area.					
	Performance Standard 2.5-21: The grading of final slopes, the replacement soil, and associated erosion control measures shall take place prior to November 1 in areas where mining has been completed. To minimize erosion, the finish grading of mining pit slopes above the average seasonal high groundwater level, with the exception of the location of designated haul roads, shall be performed as soon as practical after the completion of mining of overburden and unsaturated aggregate resources. A drought-tolerant, weed-free mix of native and non-native grass species shall be established on slopes prior to November 1 or alternate erosion control (mulch or netting) shall be placed on exposed soil on the slopes prior to this date. Phasing of mining to minimize the length of exposed mining slopes during the rainy season is encouraged.	During Mining	Planning	Submittal of Mining and Permit Application	Require as Permit Condition	
	Mitigation Measure 4.3-2d *An application for construction shall be filed with the California Division of Safety for Dams and approved prior to start of construction for any new dam that falls under the State jurisdiction for safety.*	Prior to Mining	Planning and California Division of Safety of Dames	Submittal of Application for Construction	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.3-3: Potential for Erosion from Surface Water Discharge, Including "Pit Capture"	*Mitigation Measure 4.3-3a* *The following text shall be added to Action 4.4-2:* *Action 4.4-2: Designate the streamway influence boundary described in the Technical Studies as part of the Off-Channel Mining Plan. The boundary describes the general area of the creek subject to meandering, as defined by the historical activities of the channel. The streamway influence boundary also defines the area where in-stream and off-channel issues overlap and are addressed in each both plans. Whereas the streamway influence boundary shall be recognized as representative of historical conditions, the current hydraulic conditions of creek shall be considered in decision-making regarding channel and floodplain management.* *Action 4.4-3 of the OCMP shall be replaced by the following action:* *Action 4.4-3: Evaluation of proposed significant modifications to the flood plain, including off-channel mining areas, shall be made with reference to the channel improvement strategy and guidelines presented in the Cache Creek Resource Management Plan. This would ensure a consistent frame of reference and allow consideration of such modifications in the context of an integrated creek management program.* *Action 4.4-6 shall be amended as follows:* *Action 4.4-6: Allow for the design of spillways or other engineered features that provide controlled flooding of off-channel mining pits during flood events which exceed the 100-year flood event.* *Performance Standard 4.5-1 shall be amended as follows:* *Performance Standard 4.5-1: All off-channel surface mining operations shall be provided with a minimum one-hundred (100) year flood protection. Off-channel excavations shall be designed to minimize the possibility of levee breaching and/or pit capture.*	Prior to Mining Prior to Mining Prior to Mining Prior to Mining	Planning Planning Planning Planning	Adoption of OCMP Adoption of OCMP Submittal of Mining and Reclamation Application Submittal of Mining and Reclamation Application	Incorporate into OCMP Incorporate into OCMP Require as Permit Condition Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Performance Standard 4.5-2 shall be deleted from the OCMP.	Prior to Mining	Planning	Adoption of OCMP	Delete from OCMP	
	Performance Standard 4.5-3 shall be amended as follows:					
	Performance Standard 4.5-3: Proposed off-channel excavations within the streamway influence boundary shall be set back a minimum of seven-hundred (700) feet from the existing channel bank, unless it is demonstrated that a smaller distance would not adversely affect channel stability. Under no circumstances shall the setback be less than two-hundred (200) feet. The evaluation of the potential for adverse effects of bank erosion or failure of the land separating pits located less than 700 feet from the active channel shall include, at minimum, the following analyses: • *The 200-foot setback area shall not include portions of the former historic active floodplain or formerly mined lands separated from the active channel by levees or unmined areas less than 200 feet wide (measured perpendicular to the active channel).* • *Identification of the former historic positions of the Cache Creek channels as delineated in the CCRMP Technical Studies, and determination if proposed project is located within the limits of the historic channel.* • *Description of current channel hydraulic conditions (based on existing or site-specific hydraulic models) for the Cache Creek channel adjacent to the site and extending not less than 1,000 feet upstream and downstream of the site.* • *Determination of erosion potential of stream bank adjacent to the site made on the basis of stream flow velocity and estimated shear stress on bank materials during 100-year flood flows and historic patterns of erosion.* • *Analytical slope stability analysis in conformance with Performance Standards 2.5-16 and 2.5-18. This slope stability analysis of the slopes separating the mining area from the creek channel shall include evaluation of stability conditions during 100-year flood flows in the channel.* • *Future proposed bank stabilization designs, if recommended, shall not conflict with channel design recommendations of the Cache Creek Resource Management Plan unless approved by the Technical Advisory Committee.*	Prior to Mining	Planning	Submittal of Slope Stability Study	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	The following performance standard shall be added to the OCMP and implementing ordinances: *Performance Standard 4.5-8: Financial assurances for off-channel mining operations which include mining within 700 feet of the active channel of Cache Creek shall include adequate funding for maintenance during the mining and reclamation period of any bank stabilization features approved for the mining permit. Maintenance of the bank stabilization features following the completion of reclamation shall be the responsibility of the property owners under the Cache Creek Resource Management Plan.*	During Mining and Reclamation	Property Owners	Application of Contingency Costs	Financial Assurances	
	The condition of flood protection structures and the integrity of the land within the approved setback zone separating the mining areas and the stream channel shall be inspected annually by a licensed engineer and reported to the Yolo County Community Development Agency. *The annual report shall include recommendations for remedial action for identified erosion problems. Following reclamation, the YCCDA shall inspect the land separating the mining areas and creek channel every five years. Observable damage shall be reported to the property owner. If the YCCDA determines that damage requires repair to meet the intended performance of the separator, the property owner shall perform the required repairs.*	Annually During Mining and Every Five Years Following Reclamation	Property Owners and Planning	Inspection and Report	Incorporate into OCMP and Require as Permit Condition	
Impact 4.3-4: Decreased Availability of Aggregate Resources	*None required.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Hydrology and Water Quality						
Impact 4.4-1: Potential Impacts to Groundwater Levels, Rate of Flow, and Direction of Flow	*Mitigation Measure 4.4-1a* *Performance Standard 3.5-1 included in the OCMP shall be as follows:* *Performance Standard 3.5-1: The area of backfilled off-channel excavations extending below the groundwater table shall be minimized to reduce changes to groundwater levels and flow. Backfilled pits shall be oriented with regard to the direction of groundwater flow to prevent localized obstructions. If a backfilled off-channel excavation is proposed to penetrate either fifty (50) feet or one-half (½) into the saturated thickness of the shallow aquifer, then at least six months prior to the commencement of excavation below average high groundwater level the applicant shall demonstrate in a manner consistent with the Technical Studies, that the pit design would not adversely affect active off-site wells within one-thousand (1,000) feet of the proposed pit boundary. If the application includes a series of backfilled pits, then the applicant shall also demonstrate that the cumulative effects of the multiple backfilled pits would not adversely affect groundwater flow, if there are any active off-site wells within one-thousand (1,000) feet of the pit boundaries.* *The applicant shall demonstrate, using MODFLOW,[1] (or a similar model of equal capability and proven reliability, as approved by the Yolo County Community Development Director) that the proposed pit design will not adversely impact active off-site well within 1,000 feet of the proposed pit boundary or results in well failure. Average, historic low groundwater levels, which represent the condition of maximum threat to water levels in the subject well, shall be used for this simulation. If an adverse impact were identified by the MODFLOW (or other selected model) simulation, the mining and reclamation plan will be modified or the applicant shall submit a written agreement that the well owner has agreed to relocate or redesign the well, or accept the potential impact (at no expense to the County)*	Prior to Mining	Planning	Submittal of Groundwater Flow Simulation	Modification of Mining and Reclamation Plan or Submittal of Written Agreement	

[1]MODFLOW is a three-dimensional finite difference model used to simulate groundwater flow. A three-dimensional model would be necessary since aquifer permeability would vary with depth after reclamation.

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	In addition, the following performance standards shall be added to the OCMP:					
	Performance Standard 3.5-16: Site-specific aquifer testing shall be conducted, if needed, to determine aquifer properties for the required modeling.	Prior to Mining	Environmental Health	Aquifer Testing and Well Survey	Approval of Well Installation	
	Performance Standard 3.5-17: A well survey shall be conducted and all wells within 1,000 feet of the limits of mining plotted on a scaled map. Each property owner owning a parcel(s) within 1,000 feet of the proposed limits of wet pit mining shall be contacted and queried about wells that may be located near the wet pit mining area.	Prior to Mining		Well Survey and Statement from Property Owners	Incorporate into Mining and Reclamation Plan	
Impact 4.4-2: Potential Degradation of Water Quality During Aggregate Mining and Reclamation	*Mitigation Measure 4.4-2a* *Mitigation of potential water quality impacts would be addressed as described in the flowchart presented as Figure 4.4-9. The OCMP and implementing ordinances shall be modified as described below.* *Pollution Prevention*					
	Performance Standard 3.5-6 of the OCMP and the associated ordinance shall both be modified as follows:	As required in Performance Standard	Environmental Health	Submittal of Capture Zone Analysis and Hydrogeologic Report	Require as Permit Condition	
	If any off-channel excavation proposes to extend below the level of seasonal high groundwater , then six months prior to the commencement of excavation below average high groundwater level the applicant shall identify and locate all off-site municipal wells within 1,000 feet and all domestic wells within 500 feet of the proposed wet pit mining boundary If active wells are identified, well characteristics (pumping rate, depth, and locations of screens) shall be determined. If wells are not located within 1,000 feet, the pre-mining impact evaluation would be considered complete.					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	If wet pit mining is proposed within 1,000 feet of a municipal water supply well or within 500 feet of a domestic water supply well, a capture zone analysis shall be conducted using the U.S. Environmental Protection Agency model WHPA (or a similar model of equal capability and proven reliability, as approved by the Yolo County Community Development Director). The simulation shall assume 30 days of continuous pumping of the water supply well (at its maximum probable yield) under analysis. A mining setback shall be established so that the capture zone and the pit do not coincide. Alternatively, the applicant shall submit a written agreement that the well owner has agreed to relocate or redesign the well (at no expense to the County). The analysis shall be prepared and signed by a Registered Professional Engineer or Certified Hydrogeologist and submitted to the County for review and shall be submitted to, and approved by, the County at least six months prior to commencement of excavation below the seasonal high groundwater level. *Any new drinking water wells proposed for installation within 1,000 feet of a proposed wet pit mining area shall be subject to review by the Yolo County Environmental Health Department. The County shall determine, based on site-specific hydrogeology and available water quality data, whether to approve the proposed well installation.* *The County may retain appropriate staff or a contract consultant to provide third party critical review of all hydrogeologic reports related to mining applications.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Performance Standard 3.5-3 of the OCMP and the associated ordinance shall be replaced with the following Performance Standard: *Surface water shall be prevented from entering mined areas, through perimeter berms or ditches and grading. Appropriate erosion control measures shall be incorporated into all surface drainage systems. Drainage and detention facilities within the proposed mining areas and vicinity shall be designed to prevent discharges to the wet pits and surface water conveyances (i.e. creeks and sloughs) from the 20 year/1-hour storm or less. For events greater than the 20 year/1 hour storm, runoff from around the perimeter of the mining areas should be directed to surface water conveyances. Runoff from within the lowered mining area shall be directed away from wet pits to detention/infiltration areas. Drainage plans shall not rely solely on ditches and berms to direct runoff away from the wet pit. Without proper maintenance, berms and ditches may deteriorate with time and become ineffective. Drainage plans shall emphasize grading of disturbed areas that results in broad gentle slopes that drain away from the pits. Grading plans shall be reviewed by the County to evaluate compliance with drainage plan objectives prior to project approval.*	Prior to Mining	Planning	Submittal of Grading and Drainage Plans	Require as Permit Condition	
	In addition, a restriction shall be recorded on the deed that requires berms and ditches to be permanently maintained in a condition consistent with the final approval. The deed restriction shall require an inspection easement which allows County staff or other authorized personnel access for inspection of the berms and ditches. If the County determines that evidence of damage to these facilities exists, the County shall require that the owner have an inspection report for the property prepared by a registered geologist or professional engineer. The inspection report including recommendations for corrective action, if needed, shall be submitted to the Yolo County Community Development Agency. The property owner shall be required to implement recommended corrective action, if any.	Prior to Mining	Planning	Submittal of Inspection Report	Deed Restriction	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Performance Standard 2.5-8 of the OCMP and the associated ordinance shall be modified as follows:					
	Unnecessary personnel shall be excluded from off-channel excavations. Open pits shall be fenced with a 42-inch minimum, four strand barbed wire fence or the equivalent, prior to the commencement of excavation, during excavation, and during reclamation. Fencing may enclose the property of which mining is a part, the mining site, or both. In addition, signs shall be installed at the project site boundaries and access road, indicating that the excavation area is restricted. Additional security (e.g., gates with protected locks and wing fences to prevent drive-arounds) shall be provided at all vehicular access routes. The fencing and gates shall be maintained throughout the mining and reclamation period and after completion of reclamation. A requirement shall be recorded on the deed of the property which requires the landowner to maintain fences and gates.	Ongoing	Applicant	Submittal of Mining and Reclamation Application	Require as Permit Condition	
	Performance Standard 3.5-5 of the OCMP and the associated ordinance shall be modified as follows:					
	At least one toilet shall be provided for each off-channel mining operation. Chemical toilets shall be properly maintained and serviced regularly. Permanent toilets shall be properly engineered and the design approved by both the Yolo County Building Official and the Environmental Health Department prior to installation. All on-site water storage facilities shall be labeled "potable" or "non-potable."	Prior to Mining	Building and Environmental Health	County Approval	Require as Permit Condition	
	The potential for water quality degradation resulting from operation of motorized watercraft is adequately mitigated by Performance Standards 3.5-10 and 2.5-8.	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	The potential for eutrophication of the wet pit lakes would be adequately mitigated by Performance Standards 2.5-18 and 3.5-11 (discussed in Impact 4.4-3).	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	Performance Standard 2.4-11 of the OCMP and associated ordinance shall be deleted.	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Monitoring *Performance Standard 3.5-4 of the OCMP and the associated ordinance shall be modified as follows:*					
	All surface mining operations that propose off-channel excavations extending below the groundwater table shall develop and maintain a groundwater monitoring program consisting of two components; water level measurements and water quality testing. A groundwater level monitoring program shall be initiated at least six months prior to removal of overburden. At a minimum, the groundwater level monitoring program shall consist of three monitoring wells, with at least one well upgradient of the wet pit and one well downgradient of the wet pit. Monitoring programs for proposed mining areas exceeding 100 acres (total proposed mining area over the life of the project) shall include one additional well for each 100 acres to be mined. Therefore, proposed mining areas of 1 to 99 acres would require 3 wells, 100 to 199 acres would require four wells, 200 to 299 acres would require 5 wells, and so on. These wells shall be distributed through the vicinity of the proposed mining area and used for groundwater level measurements. Groundwater levels shall be collected from the monitoring wells on a quarterly basis for six months prior to mining and for the duration of the mining period. All wellheads shall be surveyed with horizontal and vertical control to allow calculation of groundwater elevations and development of groundwater contour maps. Groundwater levels shall be measured with an accuracy of plus or minus 0.01 foot, at minimum.	Quarterly Beginning Six Months Prior to Mining Through Duration of Mining	Applicant	Submittal of Groundwater Monitoring Program Results	Require as Permit Condition	
	Water quality in the vicinity of each active wet pit mining location would be evaluated by analyzing samples from selected monitoring wells (one upgradient and one downgradient) and wet pit surface water sampling locations. Since mining would be conducted in phases over a relatively long period of time, pit boundaries would change with time. Selection, and installation if necessary, of downgradient monitoring wells, which would be critical to adequately characterize the groundwater quality in the vicinity of the wet pits, would be proposed by the applicant for review and approval by the County. The selected monitoring wells shall be installed and sampled at least six months prior to removal of overburden. The downgradient wells shall be located as near to active wet pit mining areas as is practical. The upgradient wells shall be located an adequate distance from the proposed mining area to ensure that effect of the wet pit on water quality in the well would be negligible. The water samples from the wet pit shall be collected in a manner so as to ensure that they are representative of water quality within the wet pit. The minimum sampling schedule and required analyses are described below.	As required within Performance Standard	Planning and Environmental Health	Submittal of Groundwater Monitoring Program Results	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Groundwater level and pit water surface level measurements: *Quarterly in all wells for the duration of mining and reclamation.* *For proposed wet pit mining, sample collection and analysis of physical, chemical, and biological constituents shall be conducted according the following specifications:* • *Prior to removal of overburden- One upgradient and one downgradient well shall be sampled at least six months prior to removal of overburden and again at the start of excavation. The samples shall, at minimum, be analyzed for general minerals, inorganics, nitrates, total petroleum hydrocarbons (TPH) as diesel and motor oil, benzene, toluene, ethylbenzene, and xylenes (BTEX), pesticides (EPA 8140 and 8150), and coliform (with E. coli confirmation).* • *During wet pit mining and active reclamation- The wet pit shall be sampled semi-annually for the duration of mining and active reclamation. The samples shall, at minimum, be analyzed for general minerals, inorganics, nitrates, TPH as diesel and motor oil, BTEX, pesticides (EPA 8140 and 8150), and coliform (with E. coli confirmation).* *One upgradient and one downgradient well shall be analyzed, at minimum, for general minerals, inorganics, nitrates, TPH as diesel and motor oil, BTEX, pesticides (EPA 8140 and 8150), and coliform (with E. coli confirmation). The wells shall be sampled according to the following schedule:* *0-2 years: Semi-annually* *2 years to completion of reclamation: Annually* • *After active reclamation- One year after all heavy equipment work has been completed in the vicinity of the pit, the TPH and BTEX analyses may be discontinued. The wet pit and one upgradient and one downgradient well shall be sampled and analyzed for pH, temperature, nutrients (phosphorus and nitrogen), total dissolved solids, total coliform (with E. coli confirmation), and biological oxygen demand. This monitoring shall be conducted every two years for a ten year period after completion of reclamation.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	A report to the Yolo County Community Development Agency and Department of Environmental Health shall be submitted within 30 days of the required groundwater testing. *If, at the completion of the mining and reclamation period, water quality has not been impacted, all monitoring wells shall be destroyed in accordance with California Department of Water Resources Well Standards (DWR, 1991). If the County or other agency wishes to maintain the wells for future water resources evaluation, selected wells could be preserved for this use.* *The County may retain appropriate staff or a contract consultant to provide third party critical review of all hydrogeologic reports related to monitoring.* *Data Evaluation/Corrective Action* *The following performance standard shall be added to the Water Resources Element of the OCMP and implementing ordinance.* *PS. 3.5-16: Monitoring during the mining and reclamation period shall be a condition of the permit. The applicant shall ensure that monitoring continues for ten years after the completion of reclamation.*	Prior to Mining	Planning	Proof of Performance Bond	Financial Assurances	
	Action 3.4-4 of the OCMP shall be modified as follows: *The Yolo County Community Development Agency shall designate staff and resources to coordinate with City, County, regional, State, and Federal agencies that may wish to receive copies of data generated from the off-channel mining operations, including the towns of Capay, Esparto, Yolo, and Madison, the city of Woodland, and the Yolo County Flood Control and Water Conservation District, the Water Resources Agency, the Central Valley Regional Water Quality Control Board, and the California Department of Water Resources. The data base shall be expanded to include other relevant sources of information, so that it can be used as reference material for regional water planning efforts.*	Ongoing on an As-Needed Basis	Planning	Submittal of Groundwater Database	Incorporate into OCMP	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Additional tests and analysis shall be required only if a new condition is recognized that may threaten water quality or results of previous tests fall outside allowable ranges. If at any time during the monitoring period, testing results indicate that sampling parameters exceed Maximum Contaminant Levels (MCLs), as reported in the California Code of Regulations, or established background levels, a qualified professional shall evaluate potential sources of the contaminants. The evaluation shall determine the source and process of migration (surface or subsurface) of the contaminants. A report shall be submitted to the regulatory agencies (Yolo County Community Development Agency, the Yolo County Department of Health Services, the Central Valley Regional Water Quality Control Board, and the U.S. EPA) which identifies the source of the detected contaminants and specifies remedial actions to be implemented by the applicant for corrective action. If it is determined that the source of water quality degradation is off- site, and County and RWQCB are in agreement with this conclusion, the applicant shall not be responsible for corrective action. *If corrective action is ineffective or infeasible, the responsible party must provide reparation to affected well owners, either by treatment of water at the wellhead or by procurement of alternate water supply.* *Analysis of environmental impact for projects in the vicinity of the wet pits shall include consideration of potential water quality impacts on the open water bodies.*	During Mining	Planning and CVRWQ CB	Submittal of Testing Results	Require as Permit Condition	
Impact 4.4-3: Potential Degradation of Water Quality after Reclamation of Mined Lands	*Mitigation Measure 4.4-3a* *In addition to the policies included in the OCMP, the following mitigation measures shall be implemented:*					
	The potential for eutrophication and biological degradation of wet pit lakes would be adequately mitigated by Performance Standards 2.5-18 and 3.5-11, and Mitigation Measure 4.4-2a.	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	The potential for illegal discharges to occur would be adequately mitigated by Mitigation Measure 4.4-2a.	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	Performance Standard 3.5-10 of the OCMP shall be modified as follows:	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Only motorized dredges shall be allowed on the wet pit lakes. All other fuel-powered (gasoline or diesel) watercraft shall not be used on the wet pit lakes. Electric-powered boats would be permissible. *The potential impacts associated with illegal operation of watercraft in the lakes is adequately mitigated by the requirement for fencing and locked gates, discussed above (Performance Standard 2.5-8).* *The potential impacts associated with groundwater quality degradation would be partially mitigated by implementation of the monitoring program described in Mitigation Measure 4.2-2. In addition, the following Performance Standard shall be added to the OCMP and implementing ordinance:* *Overburden and processing fines shall be used whenever possible to support reclamation activities around reclaimed wet pits. These materials may be used in reclamation activities without testing for agricultural chemicals. If topsoil (A-horizon soil), formerly in agricultural production, is proposed for use within the drainage area of a wet pit, the soils must be sampled prior to placement and analyzed for pesticides and herbicides (EPA 8140 and 8150). Samples shall be collected and analyzed in accordance with EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846, Third Edition (as updated). Topsoil that contains pesticides or herbicides above the Maximum Contaminant Levels for primary drinking water (California Code or Regulations) shall not be placed in areas that drain to the wet pits.*	During Reclamation	Planning and Environmental Health	Submittal of Soil Samples	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	The following performance standards shall be added to the Water Resources Element of the OCMP: *Prior to approval of reclamation of aggregate mining areas to permanent lakes, the County shall commission a sampling and analysis program, to be implemented in one existing wet pit mining area within the OCMP planning area, to evaluate the potential for increased methylmercury production associated with wet pit mining and reclamation of mining areas to permanent lakes. The program shall include sampling of water and sediments from the bottom of the existing pit and analysis of the samples for organic content, pH, dissolved oxygen content, dissolved carbon content, and total mercury. In addition, samples of predatory fish (preferably, largemouth bass) shall be collected and analyzed for mercury content. If the initial sampling indicates either of the following conditions, the County shall perform verification sampling:* • *Average concentrations of total mercury in excess of 0.000012 mg/l in the water;* • *Average mercury levels in fish samples in excess of 0.5 mg/kg.* *If verification sampling indicates exceedance of these mercury criteria, the County shall approve reclamation of mining areas to permanent lakes Only if the average level of mercury in fish collected from the existing mining pits is shown to be equal to or less than ambient (background) mercury levels determined from a representative sample of similar species of fish (of similar size) collected in the Cache Creek channel within the planning area. The determination of the ambient mercury level shall be performed by the County prior to the excavation of any net wet pit mine, and at years 10, 20, and 30 in the permit time period, and shall be paid for by the mining permit applicants on a fair-share basis. The County shall evaluate available data to determine any significant change in ambient concentrations of mercury in fish within the Cache Creek channel.*	As Required within Performance Standard	Planning, Environmental Health, RWQCB, CDFG	Submittal of Sampling and Analysis Program and Mitigation Plan as Necessary	Incorporate into OCMP	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	In the event of approval of reclamation of mined areas to permanent lakes, each mining area to be reclaimed to a permanent lake as part of each approved long-range mining plan shall be evaluated annually by the operator for five years after creation of the lake for conditions that could result in significant methylmercury production. An additional ten years of biennial monitoring shall be performed afeter reclamation of the lake has been completed. The evaluations shall be conducted by a qualified aquatic biologist or limnologist acceptable to the County and shall include the following analyses: • *Lake condition profiling during the period June through September, including measurements of pH, eH (or redox potential), temperature, dissolved oxygen, and total dissolved carbon.* • *Collection of a representative sample of fish specimens (including minimum of five predator fish if available) and analysis of the specimens for mercury and content. Sampling and analysis shall be conducted using methodologies which are consistent with the California State Water Resources Control Board Toxic Substances Monitoring Program procedures, or more stringent procedures. Prior to monitoring, the operator shall stock the lake with representative numbers of fish species similar to those found in Cache Creek including predator fish. The operator shall consult with a qualified biologist or limnologist to determine the appropriate numbers and types of fish to be used in stocking the lake.* • *The results of the evaluation shall be summarized in a report and submitted to the County. The report shall include a comparison of the site specific data to available data on the background concentrations of mercury in fish within the Cache Creek watershed. The County shall be responsible for submitting the data on mercury levels in fish to the California Department of Fish and Game and the Office of Environmental Health Hazard Assessment for a determination of whether a fish advisory should be issued.* • *If a fish advisory is issued, the owner/operator shall be required to post warnings on fences surrounding the mining pit lakes which prohibit fishing in the lakes an describe the fish advisory.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	If the average fish specimen mercury content exceeds the statistically verified ambient mercury concentrations for comparable fish species (of similar size) collected within the CCRMP planning area for two consecutive years, wet pit mining on property controlled by the mining operator/owner shall be suspended and the owner/operator shall either: • *Present a revised reclamation plan to the Yolo County Community Development Agency which provides for filling the reclaimed lake to a level five feet above the average seasonal high groundwater level with a suitable backfill material, or* • *Present a mitigation plan to the Yolo County Community Development Agency which provides a feasible and reliable method for reducing methylmercury production or exposure to elevated mercury levels. Potential mitigation could include permanent aeration of bottom levels of the lake, alteration of water chemistry (increasing pH or dissolved organic carbon levels), control of anaerobic bacteria populations, or removal and replacement of affected fish populations. The mitigation plan would require approval by the Regional Water Quality Control Board, Department of Fish and Game, and the Yolo County Department of Environmental Health. (Removal and replacement of fish is not intended to be a long-term solution.)* *The reclamation plan shall be modified to provide mitigation approved for methylmercury reduction shall be applied to all other mining areas proposed for reclamation to permanent lakes within the reclamation plan.*					
Impact 4.4-4: Loss of Water from Aquifer Storage Due to Evaporation	*Mitigation Measure 4.4-4a* *Performance Standard 3.5-12 of the OCMP shall be modified as follows:* *All permanent wet pits shall be reclaimed to include valuable wildlife habitat to offset evaporation losses from wet pits.*	Prior to Mining	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
Impact 4.4-5: Potential Impacts Associated with Groundwater Recharge	*Mitigation Measure 4.4-5a* *The County shall eliminate the following Actions and Performance Standards from the OCMP: Objective 3.3-2, Actions 3.4-2, 3.4-6 through 3.4-8, Performance Standards 3.5-7, 3.5-9, 3.5-14, and 3.5-15.*	Prior to Mining	Planning	Adoption of OCMP	Delete from OCMP	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.4-6: Potential Impacts Resulting from Storm-Related Flooding	*Mitigation Measure 4.4-6a* *The following performance standard shall be added to the OCMP:* *Performance Standard 4.5-8: Flood protection upgrades shall be completed in the vicinity of the mining and processing areas, if necessary, to ensure protection from the 100-year flood event. Flood protection shall be provided from flooding associated with overtopping of the alluvial separators or levees along Cache Creek and all tributaries and drainage channels (including, but not limited to, Willow Slough and Lamb Valley Slough).* *The flood protection upgrades shall be designed and constructed to provide the necessary 100-year protection without exacerbating downstream flooding problems. Downstream flooding could be increased if floodplain storage areas were removed from the drainage system by constructing levees in areas where they did not exist before (or raising levees that are overtopped in floods up to the 100-year event). Alternative flood management design systems (potentially using detention basins, infiltration galleries, and/or floodplain storage in noncritical areas) shall be required as a condition of project approval.* *The following performance standard shall be added to the OCMP:* *Performance Standard 4.5-9: The County Floodplain Administrator shall file for a Letter of Map Revision with FEMA, to update the FIRMs affected by channel maintenance activities and levee improvements with the planning area every ten years.*	Prior to Mining Every 10 Years	Planning Planning and FEMA	Submittal of Mining and Reclamation Application Submittal of Letter of Map Revision	Require as Permit Condition Incorporate into OCMP	
Impact 4.4-7: Potential Impacts from Flooding Related to Dam Failure	*None required.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.4-8: Potential Impacts Associated with Inundation of Dry Pits or Lowered Reclaimed Surfaces by High Groundwater Conditions	*Mitigation Measure 4.4-8a* *The following performance standard shall be added to the OCMP and associated ordinance:* *Performance Standard 3.5-16: The final distance between reclaimed lowered surfaces and average high groundwater shall not be less than five feet. The average high groundwater level shall be established for each proposed mining area. The degree of groundwater level fluctuation varies with location throughout the basin and within relatively small areas (proposed mining sites). The determination of average high groundwater level shall be conducted by a professional engineer or certified hydrogeologist and shall be based on wet season water level elevation data collected at the proposed site or adjacent areas with similar hydrogeological conditions. Water level records prior to 1977 shall not be used since they would reflect conditions prior to installation of the Indian Valley Dam. The dam caused a significant change in hydrology of the basin and data collected before its installation shall not be used in estimation current average high groundwater levels. The wells shall be adequately distributed throughout the proposed mining site to reflect spatial variation in groundwater levels and fluctuations.*	Prior to Mining and Post Reclamation	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
Agriculture						
Impact 4.5-1: Consistency with the California Land Conservation Act of 1965 (Williamson Act) Regulations	*None required.*					
Impact 4.5-2: Potential Impact of Permanent Loss of Agricultural Land Caused by Conversion of Agricultural Land to Other Post-Reclamation Uses	*Mitigation Measure 4.5-2a* *The following performance standards shall be included in OCMP:* *Performance Standard 4.5-8: All proposed mining and reclamation plans shall provide information in permit applications to allow identification of portions of the proposed mined lands that meet the definition of "prime farmlands" as defined under the Williamson Act.*	Prior to Mining	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Performance Standard 4.5-9: All mining permit applications that include "prime farmlands" as defined by the provisions of the Williamson Act shall identify the location and acreage of "prime farmlands" which, as a result of reclamation, would be permanently converted to non-agricultural uses. For each acre of "prime farmland" that would be converted to non-agricultural use, the reclamation plan shall present provisions to offset (at a 1:1 ratio) the conversion of these lands. The potential offsets can include, but not be limited to one or more of the following options: • *Identification of improvements by a qualified soil scientist to the agricultural capability of non-prime lands within or outside the project site that convert non-prime to prime agricultural conditions. These improvements can include permanent improvement of soil capability though soil amendments, reduction of soil limitations (such as excessive levels of toxins), or improvements in drainage for areas limited by flooding or low permeability soils.* • *Placement of conservation easements on lands meeting Williamson Act definition of "prime farmland". The operator shall be encouraged to target property "at risk" of conversion to non-agricultural uses in selecting areas for the offset. Prior to approval of the conservation easement, the operator shall consult with the County and/or an appropriate non-profit agency to determine the relative risk of conversion, to which the property might otherwise be subject.* • *Demonstration of the ability to provide irrigation to non-prime lands limited only by lack of irrigation water supply. The identified water supply cannot be made at the expense of "prime farmlands" currently using the same water supply.*	Prior to Mining	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
Impact 4.5-3: Potential Impacts of the Temporary Loss of Agricultural Productivity Due to Disturbance by Mining	*Mitigation Measure 4.5-3a* *The following performance standard shall be added to OCMP:* *Performance Standard 5.5-3: All proposed mining and reclamation plans shall present a phasing plan for mining and reclamation activities. The phasing plan shall be structured to minimize the area of disturbed agricultural lands during each mining phase, and encourage the early completion of reclamation of agricultural land.*	Prior to Mining	Planning	Submittal of Phasing Plan	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.5-4: Permanent Loss of Agricultural Soils Due to Wind or Water Erosion	*Mitigation Measure 4.5-4a* *OCMP Action 5.5-2 shall be amended as follows :* *Action 5.5-2: Topsoil, subsoil, and subgrade materials in stockpiles shall not exceed (40) feet in height, with slopes no steeper than 2:1 (horizontal:vertical). Stockpiles, other than aggregate stockpiles, shall be seeded with a vegetative cover to prevent erosion and leaching. The use of topsoil for purposes other than reclamation shall not be allowed without the prior approval of the Yolo County Community Development Director.*	Ongoing	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
Impact 4.5-5: Potential Impacts on Agricultural Capability Caused by Soil Management During Removal, Stockpiling, and Reuse	*None required.*					
Impact 4.5-6: Potential Impacts on Agricultural Production Related to Lowered Reclaimed Surfaces	*Mitigation Measure 4.5-6a* *The OCMP and implementing ordinances shall be augmented with the following standard:* *Performance Standard 5.5-5: Reclaimed agricultural surfaces shall be graded to provide adequate field gradients to allow surface/furrow irrigation of crops and allow for adequate storm water drainage.*	Post-Reclamation	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
Impact 4.5-7: Potential Cumulative Loss of Productive Agricultural Land Within Yolo County	*Mitigation Measure 4.5-7a* *Implementation of Mitigation Measure 4.5-2a would reduce the cumulative impact of permanent conversion of agricultural land to non-agricultural uses but not to a less-than-significant level.*	See Mitigation Measure 4.5-2a				
Biological Resources						
Impact 4.6-1: Impact on Existing Vegetative Cover	*None required.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.6-2: Impact on Sensitive Natural Community Types	*Mitigation Measure 4.6-2a* *Section 10-4.502(b)(1) of the Off-Channel Surface Mining Ordinance shall be revised as follows:* *...The analysis shall propose appropriate measures to reduce any potential adverse impacts to species of concern, sensitive natural communities, or significant habitat.*	Prior to Mining	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
	The following revisions shall be made to Performance Standard 6.5-2 of the OCMP: *6.5-2. Avoid disturbance of riparian vegetation, including identified off-channel vegetation. Replacement habitat shall be established where complete avoidance is not possible according to a habitat restoration plan prepared by a qualified biologist, consistent with the goals of this plan.*	Ongoing	Planning	Submittal of Habitat Restoration Plan	Require as Permit Condition	
	The following shall be included as an additional performance standard in Chapter 6 of the OCMP: *6.4-12. Avoid disturbance of oak woodland vegetation and mature oaks Replacement habitat and plantings shall be established where complete avoidance is not possible according to a habitat restoration plan prepared by a qualified biologist, consistent with the goals of this plan.*	Ongoing	Planning	Submittal of Habitat Restoration Plan	Require as Permit Condition	
Impact 4.6-3: Disturbance to Wildlife Habitat and Disruption of Movement Corridors	*Mitigation Measure 4.6-3a* *The following shall be incorporated as an additional action policy in Chapter 6 of the OCMP:* *6.4-13. Where fence row or field margin habitat previously existed, reestablish similar habitat as part of reclamation to agricultural use to replace and improve the wildlife habitat value of agricultural lands, allowing for reestablishment of scattered native trees, shrubs, and ground covers along the margins of reclaimed fields. Reestablished habitat can be in locations other than where occurred originally. Restoration plans shall specify ultimate fence row or field margin locations, identify planting densities for trees and shrubs, and include provisions for monitoring and maintenance to ensure establishment.*	During Reclamation	Planning	Submittal of Habitat Restoration Plan	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	The following shall be incorporated as an additional action policy in Chapters 6 and 7 of the OCMP: *6.4-14 and 7.4-9. Avoid disturbance to important wildlife habitat features such as nest trees, colonial breeding locations, elderberry host plants for VELB, and essential cover associated with riparian forest and oak woodland habitat. This shall include sensitive siting of haul roads, trails, and recreational facilities away from these features.*	Ongoing	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
Impact 4.6-4: Impact on Special-Status Species	*Mitigation Measure 4.6-4a* *The following shall be included as additional action policies in Chapter 6 of the OCMP:* *6.4-15. Essential habitat for special-status species shall be protected and enhanced, or replaced as part of mitigation plans prepared by a qualified biologist.*	Ongoing	Planning	Submittal of Habitat Restoration or Mitigation Plan	Require as Permit Condition	
	6.4-16. Restoration components of reclamation plans shall include provisions to enhance habitat for special-status species, where feasible. *Performance Standard 6.5-3 of the OCMP shall be replaced with the following:*	Prior to Mining	Planning	Submittal of Habitat Restoration or Mitigation Plan	Require as Permit Condition	
	6.5-3. Slopes on stockpiled soils shall be graded to 2:1 for long-term storage to prevent use by bank swallows. At no time during the active breeding season (1 May through 31 July) shall slopes on stockpiles exceed 1:1, even on a temporary basis. Stockpiles shall be graded to a minimum 1:1 slope at the end of each work day where stockpiles have been disturbed during the active breeding season. *Performance Standard 6.5-7 of the OCMP shall be revised as follows:*	Ongoing	Planning	Submittal of Mining and Reclamation Plan	Require as Permit Condition	
	6.5-7. Proposed habitat restoration or mitigation plans shall be sent to the California Department of Fish and Game, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers for review and comment to ensure that the projects do not conflict with other existing habitat enhancement efforts.	Prior to Mining	Planning	Submittal of Habitat Restoration Plan	Incorporate into OCMP	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Performance Standard 6.5-8 of the OCMP shall be revised as follows: *6.5-8 All surface mining operations and reclamation plans shall complement the preservation and enhancement measures in the Yolo County Habitat Conservation Plan. Mining operators with lands designated as having a moderate to high potential for use as mitigation areas in the HCP shall be encouraged to participate in the Developer HCP Participation Options, including use of lands as mitigation sites.*	Prior to Mining	Planning	Submittal of Habitat Restoration or Mitigation Plan	Require as Permit Condition	
Impact 4.6-5: Modifications to Jurisdictional Wetlands or Other Waters	*Mitigation Measure 4.6-5a* *The following shall be included as an additional action policy in Chapter 6 of the OCMP:* *6.4-14. Existing jurisdictional wetlands shall be retained to the extent possible. Replacement wetlands shall be provided where complete avoidance is not possible according to a habitat restoration plan prepared by a qualified wetland specialist and approved by jurisdictional agencies, ensuring no net loss of wetland acreage or habitat value.* *Performance Standard 6.5-7 of the OCMP shall be revised as recommended in Mitigation Measure 4.6-4a.*	Prior to Mining	Planning, CDFG, USFWS, Corps	Submittal of Habitat Restoration Plan	Require as Permit Condition	
Impact 4.6-6: Compatibility and Consistency of Restoration Provisions	*Mitigation Measure 4.6-6a* *Action Policy 6.4-2 of the OCMP shall be revised as follows:* *6.4-2. Coordinate with the California Department of Fish and Game, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers to ensure that proposed habitat restoration projects are consistent with or complement the Off-Channel Mining Plan.* *Performance Standard 6.4-10 of the OCMP shall be revised as follows:* *6.4-10. Restore riparian habitat throughout the planning area, wherever appropriate. However, revegetative efforts shall be primarily focussed on implementing recommendations described in the Technical Studies and the subsequent Restoration Recommendations incorporated into the CCRMP.*	Prior to Mining During Reclamation	Planning Planning	Submittal of Habitat Restoration Plan Adoption of OCMP	Incorporate into OCMP Incorporate into OCMP	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Performance Standard 6.5-9 of the OCMP shall be revised as follows: *6.5-9. If any wet pit is proposed to be reclaimed for recreational uses and/or riparian habitat, the design shall account for fluctuations in the groundwater table.* *Performance Standard 6.5-7 of the OCMP shall be revised as recommended in Mitigation Measure 4.6-4a.*	Prior to Mining See Mitigation Measure 4.6-4a	Planning	Submittal of Habitat Restoration Plan	Require as Permit Condition	
Air Quality						
Impact 4.7-1: Potential Emissions of PM_{10}	*Mitigation Measure 4.7-1a* *The following performance standard shall be added to the OCMP:* *Wherever practical and economically feasible, portable or movable conveyor systems shall be used to transport raw materials and overburden.*	Prior to Mining	Planning	Submittal of Mining and Reclamation Plan	Require as Permit Condition	
Impact 4.7-2: Potential Emissions of Ozone Precursors (ROG and NO_X)	*Mitigation Measure 4.7-2a* *The following performance standard shall be added to the OCMP:* *Wherever practical and economically feasible, portable or movable conveyor systems shall be used to transport raw materials and overburden.* *OCMP Performance Standard 2.5-7 and proposed Off-Channel Surface Mining Ordinance Section 10.4.11 shall be amended as follows:* *All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuels. No vehicles or equipment shall be left idling longer than 10 minutes.*	See Mitigation Measure 4.7-1a Ongoing	Applicant	Compliance with Manufacturer's Specifications and Proper Maintenance	Require as Permit Condition	
Impact 4.7-3: Cumulative Effects on Attainment of State and Federal Standards	*Mitigation Measure 4.7-3b* *No enforceable mitigation measures are available.*	None available				
Impact 4.7-4: Potential Impacts on Sensitive Receptors	*None required.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Traffic and Circulation						
Impact 4.8-1: Potential Increase in Trips Associated with Recycling	*None required.*					
Impact 4.8-2 Potential for Increase in Vehicle Trips	*Mitigation Measure 4.8-2a* *Performance Standard 2.5-5 of the OCMP and Section 10-4.407 of the Off-Channel Surface Mining Ordinance shall be amended as follows:* *As a condition of approval, the operator shall agree to assume joint pavement maintenance responsibility with the County (or shared with another producer using the same roadway) for all County roads along a designated haul route from the access point of the surface mining operation to the nearest State Highway. The operator shall agree to submit an evaluation of the structural integrity of the identified roadways on or before December 1 of each year in which mining operations are permitted. The report shall be prepared by a registered professional engineer and/or Country staff with expertise in the area of roadway pavement and shall be subject to the approval of the Public Works Department. Based on the results of this annual evaluation, the Public Works Department shall identify the improvements required to maintain safe and efficient traffic operations on the road for the upcoming year. The County agrees to implement maintenance improvements similar to other County roads (i.e., fill cracks and chip seal). The operator agrees to implement the improvements beyond the typical County improvements in a timeframe set forth by the Public Works Department. The operator does not assume the liability for the roadway, except for cases where the operator has not fulfilled its maintenance obligations.* *If a subsequent mining operation utilizes a road previously required to be improved pursuant to this subsection, then the subsequent operator shall be responsible for compliance with the agreements and requirements of the previous operator.*	Annually during Mining	Public Works	Submittal of Roadway Evaluation	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.8-3: Potential Change in LOS at the State Route 16 / Road 98 / Main Street Intersection	*Mitigation Measure 4.8-3a:* *The following performance standard shall be added to the OCMP and its implementing ordinance:* *Each operator shall pay its fair share toward improvements required to maintain LOS C operations on County roads or LOS D operations on State Highways within the OCMP planning area. Fair share mitigation shall also be required to improve existing operational deficiencies of the transportation system. Specific locations shall be identified through the project-specific environmental review process for each operator's long-term mining permit application. Each operator shall participate in a funding program operated by Yolo County which is designed to ensure that all improvements are made in a timely manner and that a reimbursement mechanism is in place to ensure repayment of any costs contributed in excess of fair share amounts. The program shall be initiated upon the approval of the long-term mining permits and shall be updated biennially by Yolo County to ensure any new or modified impacts or funding sources are being addressed.* *Each operator shall have the option to complete the work at their expense without triggering the competitive bid process, as long as they comply with the applicable legal requirements of the County. If the operator declines the option, the County shall utilize the competitive bid process.*	Biannually upon Approval of Mining	Public Works	Participation in Funding Program	Require as Permit Condition	
Impact 4.8-4: Potential Change in LOS at the State Route 16 / Road 89 Intersection	*Mitigation Measure 4.8-4a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 3, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-5: Potential Impacts to the Non-Standard Segment of Road 19, West of Interstate 505	*Mitigation Measure 4.8-5a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 4, 5a, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-6: Potential Impacts to the Non-Standard Segment of State Route 16 Between I-505 and the Entrance to the Solano Concrete Plant	*Mitigation Measure 4.8-6a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 3, 5b and 6.*	See Mitigation Measure 4.8-3a				

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.8-7: Potential Impacts to the Non-Standard Segment of Road 14, West of Interstate 505	*Mitigation Measure 4.8-7a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 4, 5a, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-8: Potential Impacts to the Non-Standard Pavement Segment of Road 14, West of Interstate 505	*Mitigation Measure 4.8-8a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 4, 5a, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-9: Potential Impacts to Two Non-Standard Bridges on Road 89, North of State Route 16	*Mitigation Measure 4.8-9a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 3, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-10: Potential Impacts to a Non-Standard Bridge on Road 19, West of Interstate 505	*Mitigation Measure 4.8-10a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 4, 5a, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-11: Potential Impacts to a Non-Standard Bridge on Road 85, North of Road 16A	*Mitigation Measure 4.8-11a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 4, 5a, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-12: Potential Impacts to a Non-Standard Bridge on Road 14, West of Interstate 505	*Mitigation Measure 4.8-12a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 4, 5a, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-13: Potential Impacts to the Non-Standard Curve Radii at the Road 85 / Road 14 Intersection	*Mitigation Measure 4.8-13a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 5a, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-14: Potential Impacts to the Non-Standard Curve Radii at the State Route 16 / Road 89 Intersection	*Mitigation Measure 4.8-14a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 3, 5b and 6.*	See Mitigation Measure 4.8-3a				

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.8-15: Potential Impacts to the Non-Standard Curve Radii at the Road 20 / Road 96 Intersection	*Mitigation Measure 4.8-15a* *Implementation of Mitigation Measure 4.8-3a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 3, 5b and 6.*	See Mitigation Measure 4.8-3a				
Impact 4.8-16: Potential for Accelerated Pavement Deterioration	*Mitigation Measure 4.8-16a* *Implementation of Mitigation Measure 4.8-2a would reduce this impact to a less-than-significant level for the OCMP and Alternatives 1a, 3, 4, 5a, 5b and 6.*	See Mitigation Measure 4.8-2a				
Noise						
Impact 4.9-1: Exposure to Unacceptable Noise Levels from Mining, Processing, Hauling, Reclamation, and Post-Reclamation Activities On Site	*Mitigation Measure 4.9-1a* *The performance standards in the Off-Channel Surface Mining Ordinance (Section 10-4.418) shall be modified so that the residential noise limit is a CNEL of 60 dB rather than the currently specified L_{eq} of 60 dB. This change shall also be made in the Off-Channel Mining Plan.* *Mitigation Measure 4.9-1b* *From 6:00 a.m. to 6:00 p.m., noise levels shall not exceed an average noise level equivalent (L_{eq}) of eighty (80) decibels (dBA) measured at the property boundaries of the site. However, noise levels may not exceed an average noise level equivalent (L_{eq}) of sixty (60) decibels for any nearby off-site residences or other noise-sensitive land uses.* *From 6:00 p.m. to 6:00 a.m., noise levels shall not exceed an average noise level equivalent (L_{eq}) of sixty-five (65) decibels (dBA) measured at the property boundaries of the site.* *Noise levels shall not exceed a community noise equivalent level (CNEL) of sixty (60) decibels (dBA) for any nearby off-site residence or other noise-sensitive land uses.*	Prior to Mining Prior to Mining	Planning Planning	Adoption of OCMP and Ordinances Submittal of Acoustical Analysis	Incorporate into OCMP Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Mitigation Measure 4.9-1c *The following Performance Standard shall be added to the OCMP:* *Mining activities shall not exceed the noise limit of CNEL 60 dB at existing residences. An existing residence shall be considered the property line of any residentially zoned area or, in the case of agricultural land, any occupied residential structures. Achieving the noise standards could involve setbacks as proposed in the Off-Channel Surface Mining Ordinance (Section 10.4.425), the use of quieter equipment adjacent to residences, or the construction of landscaped berms between mining activities and residences.*	During Mining	Planning	Submittal of Acoustical Analysis	Require as Permit Condition	
Impact 4.9-2: Exposure to Unacceptable Increases in Noise Generated by Off-Site Truck Traffic	*None required.*					
Impact 4.9-3: Contribution to Increase in Cumulative Noise	*Mitigation Measure 4.9-3a* *The following performance standard shall be added to the OCMP and its implementing ordinances:* *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 dB and reduce the increase over existing conditions to 5 dB or less. Typical measures that can be employed include construction of noise barriers (wood or masonry), earthen berms, or re-routing of truck traffic.*	Prior to Mining	Planning	Submittal of Acoustical Analysis	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.9-4: Generation of Vibration or Nuisance Noise	*Mitigation Measure 4.9-4a* *The following performance standard shall be added to the OCMP:* *If mining occurs within 1500 feet of residences, equipment used during nighttime activities shall be equipped with non-sonic warning devices consistent with 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. Prior to commencement of operations without sonic warning devices, operators shall file a variance request with the Cal OSHA Standards Board showing that the proposed operation would provide equivalent safety to adopted safety procedures, including sonic devices.*	During Mining	Planning and CalOSHA Standards Board	Adoption of Safety Procedures or Submittal of Variance Request	Require as Permit Condition	
Aesthetics						
Impact 4.10-1: Effects on Existing Views or Vistas During Mining	*Mitigation Measure 4.10-1a* *In conjunction with the environmental review of individual projects permitted under the OCMP, means of minimizing the visibility of mining operations, facilities and landform alterations from public viewpoints shall be assessed based on site-specific visual characteristics and viewing conditions. The use of berms, vegetative screens, seeding, special plant materials and contouring the sides and top surfaces of modified landforms, or other measures, shall be incorporated into the individual mine and reclamation plans as appropriate.* *Mitigation Measure 4.10-1b* *Where mining occurs within 1,000 feet of a public right-of-way, the operators shall phase mining such that no more than 50 acres of the area that lies within 1,000 feet of the right-of-way would be actively disturbed at any time except where operations are adequately screened from public view. Where adequate screening exists in the form of mature vegetation and/or constructed berms that effectively block public view, the area of active disturbance within 1,000 feet of the right-of-way shall not exceed the area that is screened by more than 50 acres at any time. Actively disturbed areas are defined as those on which mining operations of any kind, or the implementation of reclamation such as grading, seeding or installation of plant material are taking place.*	During Mining During Mining	Planning Planning	Submittal of Mining and Reclamation Application Submittal of Phasing Plan	Require as Permit Condition Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.10-2: Effects on Views or Vistas Following Reclamation	*Mitigation Measure 4.10-2a* *None required. However, the following condition would further reduce impacts:* *In conjunction with the environmental review of individual projects permitted under the OCMP, further means of improving the appearance of the landscape after reclamation shall be assessed based on site-specific visual characteristics, site lines and view corridors. The use and placement of berms, vegetative screens, special plant materials, grading slopes and contouring the sides and top surfaces of modified landforms to mimic surrounding landforms, or other measures, shall be incorporated into the mine reclamation plans as appropriate.*	Prior to Mining	Planning	Submittal of Mining and Reclamation Application	Require as Permit Condition	
Impact 4.10-3: Potential for Visual Incompatibility with Surrounding Land Uses	*None required.*					
Impact 4.10-4: Introduction of Light and Glare	*None required.*					
Impact 4.10-5: Consistency with Yolo County General Plan Policies	*None required.*					
Issue 4.10-6: Contribution to Cumulative Visual Impacts	*None required.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Cultural Resources						
Impact 4.11-1: Potential Impacts to Cultural Resources	*Mitigation Measure 4.11-1a* *The following performance standard shall be added to the OCMP:* *All resource records shall be checked for the presence of and the potential for prehistoric and historic sites. Damaging effects on cultural resources shall be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional prior to commencement of mining operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.*	Prior to Mining	Planning	Submittal of Mitigation Plan	Require as Permit Condition	
	In addition, Performance Standard 2.5-3 of the OCMP shall be modified as follows: *If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing of, with appropriate dignity, the remains and associated grave goods shall be developed. If any cultural resources such as chipped or ground stone, historical debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the County.*	During Mining	Applicant and County Coroner	Adoption of OCMP	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Hazards						
Impact 4.12-1: Potential Human Health And/Or Environmental Impacts from the Accidental Release of Petroleum Products and Other Chemicals Used During Mining and Reclamation And/Or at Processing Plants	*Mitigation Measure 4.12-1a* *Goal 2.2-4 shall be revised as follows:* *Eliminate or minimize hazards to the public health and safety that are associated with surface mining operations and reclamation.*	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	Objective 2.3-3 shall be revised as follows: *Provide standards and procedures for regulating surface mining operations and reclamation so that hazards are eliminated or minimized and potential adverse environmental effects are reduced or prevented.*	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	Action 2.4-2 shall be revised as follows: *Hazardous materials business plans must be submitted biannually as required by the Health and Safety Code, unless the types of hazardous materials used change, in which case revised business plans must be submitted within 30 days of the change.*	Biannually During Mining	Planning	Submittal of Materials Business Plan	Require as Permit Condition	
	The following performance standard shall be added to the Aggregate Resources Element of the OCMP: *PS 4.5-9: Fueling and maintenance activities of heavy equipment (except draglines and floating suction dredges) are prohibited within 100 feet of open bodies of water during mining and reclamation. All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for draglines and floating suction dredges.*	During Mining and Reclamation	Planning	Submittal of SWPPP	Require as Permit Condition	
	Objective 3.3-3 and Action 3.4-3 shall be revised as follows: *Objective 3.3-3: Ensure that off-channel surface mines are operated such that surface and groundwater supplies are not adversely affected by erosion, lowering of the water table, and/or contamination during mining and reclamation.*	During Mining and Reclamation	Planning	Submittal of Groundwater Monitoring Program	Require as Permit Condition	
	Action 3.4-3: Include a groundwater monitoring program as a condition of approval for any surface mining and reclamation operation that proposes off-channel excavations that extend below the groundwater level. The monitoring program shall require regular groundwater level data, as well as a water quality monitoring program based on a set of developed standards.	During Mining and Reclamation	Planning	Submittal of Groundwater Monitoring Program	Require as Permit Condition	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.12-2: Historic Pesticide Use May Affect the Health and Safety of Workers Engaged in Mining or Reclamation Activities	*None required.*					
Impact 4.12-3: Steep Pit Slopes May Present a Drowning Hazard to the Public	*Mitigation Measure 4.12-3a* *Goals 2.2-4 and 2.3-3 shall be revised to include references to reclamation. Refer to Mitigation Measure 4.12-1a.* *Performance Standards 2.5-4, 2.5-16, and 2.5-18 shall be revised as required by Mitigation Measure 4.3-2a to require that slopes shall not be steeper than 2:1 five feet below the average summer low groundwater level.* *Performance Standard 2.5-8 shall be revised to include signage and fencing requirements during and after reclamation. These changes have been included in Mitigation Measure 4.4-2a in the Hydrology section.*	See Mitigation Measure 4.12-1a See Mitigation Measure 4.3-2a See Mitigation Measure 4.4-2a				
Impact 4.12-4: Open Bodies of Water May Become Breeding Areas for Mosquitoes. An Increase in the Mosquito Population Could Adversely Affect the Public Health	*None required.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Public Services and Utilities						
Impact 4.13-1: Potential for Long-Term Impacts to Open Space and Recreational Opportunities in the Lower Cache Creek Area	*None required.*					
Impact 4.13-2: Potential Increase in Demand for Public Services	*Mitigation Measure 4.13-2a* *None required; however, the following is recommended:* *The County shall identify the costs of implementing the policies contained in the OCMP, and determine a fair-share cost program for reimbursement by gravel operators and any other affected parties.*	Prior to Mining	Planning	Preparation of Fair-Share Cost Program	Incorporate into OCMP	

APPENDIX B: REVISED SUMMARY TABLE

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES					
Environmental Impact	**Level of Significance Before Mitigation**		**Mitigation Measures**	**Level of Significance After Mitigation**	
	LS	**S**		**LS**	**SU**
Land Use and Planning					
Impact 4.2-1: The project as proposed is inconsistent with some of the policies of the OCMP.		•	*Mitigation Measure 4.2-1a* *Implementation of Mitigation Measures 4.4-3a, 4.4-4a, and 4.4-7a will reduce this impact to a less than significant level.*	•	
Impact 4.2-2: The proposed project would be consistent with policies of the Yolo County General Plan.	•		*Mitigation Measure 4.2-2a* *None required.*	•	
Impact 4.2-3: The proposed project may be inconsistent with the Yolo County Zoning Ordinance and the Williamson Act.		•	*Mitigation Measure 4.2-3a* *The project mining schedule or reclamation plan shall be modified to ensure that if Phase III lands are to be mined before the Williamson Act contracts expire, then reclamation shall be to prime agricultural uses only. Alternatively, if mining in Phase III does not begin until after 2006, no change to the proposed reclamation plan would be required.*	•	
Impact 4.2-4: The proposed project would be consistent with the State Mining and Reclamation Act (SMARA) and Regulations.	•		*Mitigation Measure 4.2-4a* *None required.*	•	
Impact 4.2-5: The proposed project would be consistent with the draft Yolo County Habitat Conservation Plan.	•		*Mitigation Measure 4.2-5a* *None required.*	•	
Impact 4.2-6: The proposed project would be consistent with the Regional Water Quality Control Board Basin Plan.	•		*Mitigation Measure 4.2-6a* *None required.*	•	
Impact 4.2-7: The proposed project is inconsistent with agricultural policies adopted by the Yolo County Resource Conservation District.		•	*Mitigation Measure 4.2-7a* *None available. This is a significant, unavoidable impact of the project.*		•
Impact 4.2-8: The proposed project may be incompatible with some existing and planned land uses.		•	*Mitigation Measure 4.2-8a* *The County shall determine whether the applicant's offer to dedicate reclaimed lands in Phase V and VI for the proposed Recreation Node would fulfill the policy of the CCRMP. The County and the applicant should enter into discussions to resolve how public access to the future recreation facility can be accommodated. If determined to be feasible, the project plans should be modified to include a public access road along the eastern boundary of the site.*	•	

Key: LS = less than significant
S = significant
SU = significant and unavoidable

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)					
Environmental Impact	**Level of Significance Before Mitigation**		**Mitigation Measures**	**Level of Significance After Mitigation**	
	LS	**S**		**LS**	**SU**
Impact 4.2-9: During the mining phases, the proposed project would result in an intensification of land use for the mining sites.	•		*Mitigation Measure 4.2-9a* *None required.*	•	
Geology and Soils					
Impact 4.3-1: Expected seismic shaking at the project could result in ground failures and damage to reclamation features.		•	*Mitigation Measure 4.3-1a* *Implement performance standards presented in Mitigation Measure 4.3-1a of the OCMP Program EIR.*	•	
Impact 4.3-2: Potential failure and/or erosion of slopes could result in unstable slope conditions or adverse sedimentation of open water bodies.		•	*Mitigation Measure 4.3-2a* *Compliance with Mitigation Measure 4.3-2a of the OCMP Program EIR.*	•	
Impact 4.3-3: Aggregate extraction proposed by the project would result in the decreased availability of aggregate resources.	•		*Mitigation Measure 4.3-3a* *None required.*	•	
Impact 4.3-4: Erosion, failure, or overtopping of the channel bank separating the proposed mining areas from the active channel of Cache Creek could result in flooding of the pits and potential permanent inundation of the mining or reclaimed lower agricultural fields.		•	*Mitigation Measure 4.3-4a* *The County shall revise the CCRMP channel boundary in the vicinity of the site to reflect the Cunningham Engineering (1995) 100-year floodplain boundary. The hydraulic model used to determine the boundary assumes replacement of the Capay bridge with a three-span bridge. If this assumption changes, additional HEC-2 modeling will be required to establish the revised CCRMP boundary. If this boundary changes significantly upon modeling, additional review may be required.* *Mitigation Measure 4.3-4b* *Portions of the northern margin of the proposed Mining Areas II, III, V, VI, and VII shall be redesigned to provide a minimum 200-foot setback from the existing Cache Creek stream bank, in conformance with the requirements of Performance Standard 4.5-3 and all other pertinent performance standards in the OCMP. The revised project design shall be submitted prior to commencement of mining within Phase 3 and be consistent with the recommended slope design presented in the current application. If the redesigned project results in changes in any other mining area boundaries, additional CEQA review may be required.* *Mitigation Measure 4.3-4c* *Obtain an exception to Performance Standard 4.5-3 for the northeastern portions of Mining Areas III, V, and VI. Such approval shall require submittal and approval of engineering design for controlled flow inlet channels for each of the former mining areas. The design of the inlets shall be prepared by an experienced, licensed engineer. Inlet channels shall be designed and constructed to concentrate and control flow into the former mining areas. The design shall provide channel materials which will not erode during inundation events. Design shall be approved and work completed prior to commencement of mining within affected phases.*	•	

			Alternatively, the portions of the levee in these areas could be raised to provide 100-year flood protection for these areas ~~with a minimum of three feet of freeboard~~. Prior to raising the levee, if that is the selected alternative, a hydraulic analysis prepared and signed by a licensed engineer, demonstrated that off-site flooding impacts would not be created, must be submitted to the County for review. This mitigation measure would be consistent with the proposed project and the requirements of the OCMP. Any levee work performed shall be completed prior to commencement of mining within the affected phases. *Mitigation Measure 4.3-4d* *Implement Mitigation Measure 4.3-3a of the OCMP EIR. Specifically, the applicant shall conduct annual monitoring and maintenance of the channel banks and levees at the northern margin of the project site during the mining and reclamation period. The monitoring shall be conducted by a licensed engineer and shall minimally include visual inspection of channel banks and levees for evidence of erosion or slope instability. Evidence of erosion shall include, but not be limited to, the existence of oversteepened banks and loss of vegetation. Evidence of slope instability shall include formation tension cracks, arcuate scarps, or unexcavated benches.* *The annual report of channel bank and levee conditions shall be submitted to the Yolo County Community Development Agency with the Annual Mining and Reclamation Report. The report shall include the identification of the location (on scaled maps and photographs), estimated area and volume of eroded materials or slope failure, a determine of the cause(s) of erosion or slope failure, and recommendations for remedial action. Recommended remedial actions shall be implemented prior to November 1.* *Mitigation Measure 4.3-4e* *Following reclamation, the YCCDA shall determine, on the basis of inspection of the performance of the channel banks and levees during the mining and reclamation period, the need for continued channel bank and levee monitoring and reporting. The landowner shall be responsible for continuing monitoring and maintenance. A restriction shall be place on the deed for the underlying property requiring continued inspection and maintenance of channel banks and levees, and allowing access by the County for same.* *Mitigation Measure 4.3-4f* *The proposed project design shall be revised to provide a biotechnical bank protection design to replace the proposed placement of rip rap on that section of the south bank of Cache Creek extending 1,500 feet downstream from the I-505 bridge unless engineering evaluations demonstrate that riprap must be used to control erosion. The proposed ~~biotechnical~~ bank protection shall be submitted to the Yolo County Community Development Agency and Caltrans for approval prior to the commencement of mining in Mining Area VII.*		

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S = significant
SU = significant and unavoidable

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LS	S		LS	SU
			Mitigation Measure 4.3-4g *Mining within Mining Area VII shall not be conducted within 700 feet of the existing stream bank until stream bank stabilization is provided for that portion of the south bank of Cache Creek upstream from the I-505 bridge. The bank protection shall be performed in accordance with the guidelines presented in the Cache Creek Resource Management Plan and Cache Creek Improvements Program. The proposed ~~biotechnical~~ bank protection design shall be submitted to the Yolo County Community Development Agency for approval prior to the commencement of mining in Mining Area VII.* *Mitigation Measure 4.3-4h* *Recommendations of the geotechnical report for stabilization of the south bank of Cache Creek shall be implemented within one year after the commencement of mining. Prior to the construction of the improvements, detailed plans identifying the type of stream bank protection shall be submitted to the Technical Advisory Committee (TAC) for review and approval. The bank protection plans shall incorporate biotechnical methods of bank stabilization when appropriate for erosion control.* *Mitigation Measure 4.3-4i* *The applicant shall enter into a legally-binding agreement with the County that commits the applicant to participate in implementation of the Cache Creek Improvements Program. Participation shall include, but not be limited to, contribution of equipment and labor for channel widening projects and channel maintenance mining recommended by the County ~~and channel modification at the Esparto bridge~~.* *Mitigation Measure 4.3-4j* *Prior to the commencement of mining below the groundwater level, the applicant shall contact the California Division of Safety of Dams (DSD) for a determination on whether the alluvial separators that would be created by the project fall under DSD jurisdiction.*		
Hydrology and Water Quality					
Impact 4.4-1: Flooding at the site could cause property damage and injury to on-site workers.		•	~~*Mitigation Measure 4.4-1a*~~ ~~*Prior to initiation of mining proposed in this application, the applicant shall increase levee heights to provide three feet of freeboard above 100-year flood elevations in the vicinity of the project site, except as discussed in Mitigation Measure 4.3-4c.*~~ *Mitigation Measure 4.4-1~~b~~a* *The applicant must apply for, and receive, a floodplain development permit from Yolo County prior to mining activities within U.S. Department of Housing and Urban Development designated 100-year floodplains.*	•	

Impact 4.4-2: Evaporation from a wet pit water surface would represent a loss of water from groundwater storage.	•		*Mitigation Measure 4.4-2a* *None required.*	•	
Impact 4.4-3: Creation of wet pit lakes exposes surface and groundwater to potential degradation of water quality during the mining and reclamation period.		•	*Mitigation Measure 4.4-3a* *Implement Mitigation Measure 4.4-2a of the OCMP Program EIR.*	•	
Impact 4.4-4: Creation of wet pit lakes exposes surface and groundwater to potential degradation of water quality during the post-reclamation period.		•	*Mitigation Measure 4.4-4a* *Implement Mitigation Measures 4.4-2a and 4.4-3a of the OCMP Program EIR.*	•	
Impact 4.4-5: Creation of wet pit lakes and the subsequent backfilling with fine-grained sediments (processing fines and overburden) could cause impacts to groundwater levels, rate of flow and direction of flow.	•		*Mitigation Measure 4.4-5a* *None required.*	•	
Impact 4.4-6: Mining of aggregate and subsequent reclamation of the mined areas would result in alteration of the topography and drainage patterns at the site.	•		*Mitigation Measure 4.4-6a* *None required.*	•	
Impact 4.4-7: Reclaimed lowered agricultural surfaces could be inundated during parts of the year by high groundwater conditions, adversely impacting productivity.		•	*Mitigation Measure 4.4-7a* *All reclaimed lowered agricultural surfaces shall be, at minimum, five feet above average high groundwater. The reclamation plan for the Solano West mining area shall be modified to meet this requirement.*	•	
Impact 4.4-8: Increased pumping of groundwater at the processing plant to support the proposed increase in aggregate extraction and processing could adversely affect water supply wells in the vicinity.	•		*Mitigation Measure 4.4-8a* *None required.*	•	
Agriculture					
Impact 4.5-1: The proposed project would result in the temporary loss of agricultural production during mining and reclamation.	•		*Mitigation Measure 4.5-1a* *None required.*	•	
Impact 4.5-2: The proposed project would result in permanent conversion of 252 acres of prime farmland to nonagricultural uses.		•	*Mitigation Measure 4.5-2a* *Compliance of the project with Mitigation Measure 4.5-2a of the OCMP Program EIR would reduce the impact of the permanent loss of agricultural land. Compliance with the mitigation may be phased to track with the phasing of the mining. Compliance shall be verified by phase.*		•

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Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LS	S		LS	SU
Impact 4.5-3: Water or wind erosion of stockpiles of agricultural soils at the project site could result in permanent loss of an important agricultural resource.	•		*Mitigation Measure 4.5-3a* *None required.*	•	
Impact 4.5-4: Proposed post-reclamation uses could result in impacts to agricultural lands and operations on- and off-site.	•		*Mitigation Measure 4.5-4a* *None required.*	•	
Impact 4.5-5: Lowering of reclaimed agricultural fields could result in adverse conditions for agricultural production.		•	*Mitigation Measure 4.5-5a* *Compliance with Mitigation Measure 4.4-8a of the OCMP Program EIR would mitigate the potential impacts of high seasonal groundwater on crop productivity. The mitigation requires that all reclaimed agricultural surface are a minimum of five feet above the average seasonal high groundwater level. To meet this standard, the elevation of the reclaimed agricultural fields within Mining Area VII shall be raised two or more feet above the proposed reclaimed surface elevation.*	•	
Impact 4.5-6: The nonrenewal of current Williamson Act contracts for land affected by mining could result in a reduction of land under conservation for agriculture or open space uses.	•		*Mitigation Measure 4.5-6a* *None required. However, permanent conservation of the project site for agricultural and open space use would be better assured if all parcels within the site were re-enrolled in Williamson contracts upon completion of mining.*	•	
Impact 4.5-7: Proposed reclamation of portions of mined areas to tree crop agriculture could potentially conflict with adjacent agricultural uses.	•		*Mitigation Measure 4.5-7* *None required.*	•	
Impact 4.5-8: Implementation of the proposed project would contribute to the cumulative loss of agricultural land.		•	*Mitigation Measure 4.5-8a* *Implementation of Mitigation Measure 4.5-2a would reduce the impact of the cumulative loss of agricultural land in Yolo County.*		•
Biological Resources					
Impact 4.6-1: Project implementation would result in approximately 598 acres of primarily agricultural cover, revegetation of disturbed areas, and enhancement of native habitat.	•		*Mitigation Measure 4.6-1a* *None required.*	•	
Impact 4.6-2: Grading in the proposed mining area would result in the loss of mature oaks and could result in inadvertent disturbance to remnant sensitive natural communities along the Cache Creek corridor.		•	*Mitigation Measure 4.6-2a* *Figure 8 of the HRP shall be revised to indicate the location of hedgerow plantings, proposed by the applicant~~, on any side slopes around the perimeter of areas identified as "Integrated Agriculture" (tree crops) and "Reclaimed Agriculture"~~ around the Hutson parcel or as specified as part of habitat enhancement in a Section 2081 permit if required by the CDFG or to mitigate at a 1:1 ratio the actual loss of fence row habitat.*	•	

			Mitigation Measure 4.6-2b *Mature oak trees at the fringe of proposed mining areas shall be preserved. These shall include: the two oaks at the southwestern corner of the mining area on the Solano West parcel; the two oaks at the southwest corner of the mining area along the boundary between the Farnham West and Hutson parcels; and the single oak at the southeastern edge of the mining area on the Snyder West parcel. Stockpiling of topsoil and overburden proposed in the vicinity of these five trees shall be restricted to beyond the tree driplines. As required by Performance Standard 6.5-1 of the OCMP, temporary fencing shall be provided around the dripline of these trees to prevent possible construction-related damage. Fencing shall remain in place until stockpiles are removed and the surrounding lands are returned to agricultural production.* *Mitigation Measure 4.6-2c* *As required by Performance Standard 6.5-1 of the OCMP, temporary fencing shall be installed at the boundary of the habitat restoration area along the Cache Creek corridor, prior to initiation of any mining activity for each phase of the project. The fencing shall remain in place throughout the duration of active mining until reclamation has been completed for each project phase.* *Mitigation Measure 4.6-2d* *Proposed levee and channel stabilization improvements shall be designed to avoid impacts to riparian habitat on the site. Levee improvements on the Snyder East and West parcels shall be set back from the edge of the upper terrace to eliminate fill slopes which would extend into the riparian habitat. The proposed project design shall be revised to provide a biotechnical bank protection design to replace the proposed placement of rip rap on that section of the south bank of Cache Creek extending 1,500 feet downstream from the I-505 bridge, unless engineering evaluations demonstrate that riprap must be used at certain locations to control severe erosion.* *Mitigation Measure 4.6-2e* *The proposed HRP shall be revised to include provisions to remove tamarisk and giant reed from the site as part of the creek restoration effort and to modify restoration plans for the depression on the Snyder East parcel to enhance the existing riparian woodland rather than establishing seasonal marsh at this location.*		
Impact 4.6-3: Mining and reclamation activities would disturb existing wildlife habitat and components of the proposed HRP would be of limited habitat value.		•	*Mitigation Measure 4.6-3a* *At least one permanent island shall be created on ~~each~~ one of the proposed lakes to improve their wildlife habitat value. ~~The permanent islands would replace the proposed artificial islands. The~~ artificial islands and submerged peninsulas proposed in the HRP should be retained on all lakes. Characteristics of the permanent island shall include the following:* • *The elevation of the islands shall extend a minimum of five feet above the average high groundwater level (approximately 125-foot elevation) to prevent complete inundation during the winter months. Slopes of the island shall not exceed 3:1 above the average low groundwater level.*	•	

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Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LS	S		LS	SU
			• *The channel of water separating the island from the mainland shall have a minimum distance of 20 feet and a depth reaching at least 5 feet during the average summer low groundwater level to prevent predators from wading to the island during the summer months. A temporary levee to permit vehicle access and maintenance of restoration plantings on the island shall be included in the design, but the levee shall be removed following completion of the minimum five year monitoring program for the restoration effort.* • *~~Each~~ The island shall be revegetated according to the HRP, with perennial marsh at the lowest elevations and low terrace riparian species up to the average high groundwater level, with a cover of grassland and scattered shrubs provided over the top of the island.* • *Each island shall be revegetated according to the HRP, with perennial marsh at the lowest elevations and low terrace riparian species up to the average high groundwater level, with a cover of grassland and scattered shrubs provided over the top of the island.* *Mitigation Measure 4.6-3b* *The unique bluff habitat between the upper terrace and the existing haul road on the Snyder East parcel shall be preserved. Mitigation Measure 4.3-4a in the Geology section provides appropriate mitigation for this impact.*		
Impact 4.6-4: Mining activities and aspects of the proposed reclamation would result in the loss of suitable foraging habitat for Swainson's hawk.		•	*Mitigation Measure 4.6-4a* *~~As required by Action 6.4-4 of the OCMP, a~~ A CDFG Code Section 2081 authorization, or the posting of a reclamation bond or letter of credit naming CDFG as the beneficiary, or other alternative mechanism acceptable to CDFG, shall be executed prior to ~~project approval~~ commencement of mining.*	•	
Impact 4.6-5: Mining activities would affect suitable habitat for special-status species, such as valley elderberry longhorn beetle, bank swallow, and other species of concern.		•	*Mitigation Measure 4.6-5a* *The proposed HRP shall be revised to include specific provisions to ensure compliance with the USFWS "General Compensation Guidelines for the Valley Elderberry Longhorn Beetle". This shall include measures to: protect all elderberry shrubs to be retained; transplanting shrubs that cannot be avoided; planting replacement elderberry seedlings and associated riparian vegetation at appropriate ratios; and defining short and long-term maintenance, monitoring, and protection methods for the designated mitigation areas. A preconstruction survey for elderberry shrubs shall be performed by a qualified biologist prior to each phase of mining. The survey shall serve to confirm previous mapping of elderberry locations and determine whether any new shrubs have become established within the new mining area for which protection or replacement should be provided. The results of the survey shall be submitted to the USFWS as a report summarizing the purpose, findings, and recommendations consistent with the provisions of the revised HRP. All elderberry shrubs to be retained shall be flagged and fencing provided where necessary to preclude possible damage or loss of shrubs.* *Mitigation Measure 4.6-5b* *Implement Mitigation Measure 4.6-4a of the OCMP Program EIR to prevent inadvertent take of bank swallows.*	•	

			Mitigation Measure 4.6-5c *The proposed HRP shall be revised to include specific provisions to replace the artificial bank swallow nesting habitat created by past mining activities on the Hutson parcel. These provisions shall include design, construction, and maintenance activities necessary to implement one or more of the following options: establishing suitable nesting habitat on designated side slopes of the permanent lakes, replicating the conditions on the Hutson parcel at a new location; restoring the vertical bluffs above the mining-related riparian habitat in the northern portion of the Snyder East parcel; and/or creating and perpetuating a vertical bank along a designated segment of the active channel of Cache Creek.* *Mitigation Measure 4.6-5d* *A pre-construction raptor survey shall be conducted by a qualified wildlife biologist prior to initiation of each phase of mining to determine the presence or absence of active raptor nests which could be disturbed or lost within the new mining area. The results of the survey shall be submitted to the CDFG as a report summarizing the purpose, findings, recommendations, and status of any nests encountered. Elements of the required pre-construction nesting survey and construction restrictions shall include the following:* • *Conduct the survey 30 days prior to any grading or other habitat modifications if proposed during the breeding season for tree nesting raptors (from March 1 through August 15). Confirmation surveys on presence or absence of burrowing owl ground nesting colonies shall be required prior to initiation of a particular phase of mining at any time of the year to ensure absence of any resident owls.* • *If an active raptor nest is encountered, establish an appropriate buffer around the nest location, as determined in consultation with representatives of CDFG. The perimeter of the buffer zone shall be flagged in the field at 50-foot intervals, and all construction activities, including grading, tree removal, equipment storage, and stockpiling of soils, shall be prohibited within this buffer zone.* • *Prohibit construction activities within the designated buffer zone until the consulting wildlife biologist has determined that breeding was unsuccessful, that the young have fledged from the nest, or that a CDFG-approved relocation plan has been successfully implemented.* • *Prohibit construction activities, including removal of any nest tree or burrow, within the designated buffer zone unless written confirmation from the wildlife biologist on the status of nesting activity has been submitted in writing to CDFG.*		
Impact 4.6-6: Proposed mining and reclamation activities would affect jurisdictional wetlands or other waters of the United States.		•	*Mitigation Measure 4.6-6a* *Proposed channel bank modifications shall be coordinated with the Corps and California Department of Fish and Game. If required by jurisdictional agencies, appropriate authorization to modify jurisdictional habitat shall be obtained prior to grading or other modifications. ~~Consistent with Action 4.4-1 of the CCHMP, u~~ Use of biotechnical bank protection design methods shall be encouraged where bank stabilization is required, such as the segment of active erosion on the Kaupke parcel.*	•	

Key: LS = less than significant
S = significant
SU = significant and unavoidable

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LS	S		LS	SU
Air Quality					
Impact 4.7-1: The proposed project would result in increases in PM_{10} emissions.		•	*Mitigation Measure 4.7-1a* *Implement Mitigation Measure 4.7-1a of the OCMP Program EIR.*		•
Impact 4.7-2: The project would result in an increase in emissions of ozone precursors.		•	*Mitigation Measure 4.7-2a* *Implement Mitigation Measure 4.7-2a of the OCMP Program EIR.*		•
Impact 4.7-3: The project would affect the attainment of local or regional air quality goals.		•	*Mitigation Measure 4.7-3a* *See Mitigation Measures 4.7-1 and 4.7-2. No additional measures are available to reduce the impact to a less-than-significant level.*		•
Impact 4.7-4: The project could generate vehicle trips that cause a CO hot spot.	•		*Mitigation Measure 4.7-4a* *None required.*	•	
Impact 4.7-5: Emissions from the proposed project could affect sensitive air quality receptors.	•		*Mitigation Measure 4.7-5a* *None required.*	•	
Impact 4.7-6: The project could create or subject sensitive air quality receptors to an objectionable odor.	•		Mitigation Measure 4.7-6a *None required.*	•	
Traffic and Circulation					
Impact 4.8-1: The proposed project would result in additional truck traffic on the nonstandard segment of SR 16 between I-505 and the entrance to the Solano Concrete Plant.		•	*Mitigation Measure 4.8-1a* *The applicant shall construct a left-turn lane for eastbound movements into the Solano Concrete Plant.*	•	
Impact 4.8-2: The proposed project would exacerbate unacceptable operations at the SR 16/County Road 98/Main Street intersection in the city of Woodland.		•	*Mitigation Measure 4.8-2a* *The applicant shall pay its fair share toward the construction of left-turn lanes on each approach, and the installation of a traffic signal, at the SR 16/County Road 98/Main Street intersection to maintain acceptable levels of service.*	•	
Noise					
Impact 4.9-1: The proposed project may result in an increase in ambient noise levels. This is considered to be a significant impact.		•	*Mitigation Measure 4.9-1a* *Daytime noise levels at the property boundary shall not exceed 80 dBA L_{eq} during mining and reclamation of the site. If earth moving operations are conducted at grade within less than 58 feet from the property boundary, the applicant shall ensure that no more than one scraper is used at any one time.* *Mitigation Measure 4.9-1b* *Implement Mitigation Measures 4.9-1b and 4.9-1c of the OCMP Program EIR.*	•	

Impact 4.9-2: Project activities may result in exposure of sensitive receptors to increased noise levels.		•	*Mitigation Measure 4.9-2a* *Implement OCMP policies as modified in Mitigation Measure 4.9-1c of the OCMP Program EIR.*	•	
Impact 4.9-3: Proposed project may create vibration or nuisance noise on adjoining properties.		•	*Mitigation Measure 4.9-3a* *Implement OCMP Program EIR Mitigation Measure 4.9-4a.*	•	
Aesthetics					
Impact 4.10-1: Mining and reclamation activities could adversely impact public views and vistas.		•	*Mitigation Measure 4.10-1a* *Implement Mitigation Measure 4.10-1b of the OCMP Program EIR.*	•	
Impact 4.10-2: Changes to the site's original character and topography following reclamation activities may result in long-term changes to public views and vistas.	•		*Mitigation Measure 4.10-2a* *None required.*	•	
Impact 4.10-3 Mining, reclamation, and post-reclamation activities may result in visual incompatibility with surrounding land uses.	•		*Mitigation Measure 4.10-3a* *None required.*	•	
Impact 4.10-4: Light and glare may be created from nighttime mining operations.	•		*Mitigation Measure 4.10-4a* *None required.*	•	
Cultural Resources					
Impact 4.11-1: Proposed mining activities could disturb paleontofogical resources.		•	*Mitigation Measure 4.11-1a* *Implement Mitigation Measure 4.11-1a of the OCMP Program EIR.* *Mitigation Measure 4.11-1b* *The applicant shall implement a training program that alerts project employees involved with earth-moving as to the nature of paleontological and archaeological resources in the region, the laws that protect the resources, and responsibilities for reporting potential findings to appropriate authorities. This program shall be developed by a qualified cultural resource professional.*	•	
Impact 4.11-2: Proposed mining activities would disturb archaeological resources.		•	*Mitigation Measure 4.11-2a* *No mining within the Snyder west parcel (phases IV and VI) shall be conducted until an accurate mapping of Yol-69 is completed, and the site is evaluated by an archaeologist to determine its significance and uniqueness. The following tasks shall be performed:*		•

Key: LS = less than significant
S = significant
SU = significant and unavoidable

Table 2-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (*continued*)

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measures	Level of Significance After Mitigation	
	LS	S		LS	SU
			• *Contract a surveyor to accurately map the cultural resource site on a topographic map, based on information, preliminary map, and recommendations contained in the Yol-69 mechanical subsurface testing report (Holman & Associates, 1996). Upon completion of mechanical testing, the borders of the deposits shall be staked by the archaeologist.* • *Mapping of the resource shall be completed prior to commencement of mining in mining areas that include the resources.* • *Register the information obtained, including a map of the Yol-69 site, on State of California Archaeological Site Survey forms for filing at the State Historical Preservation Regional Office located at Sonoma State University. Prepare a professional report with all cultural resources information obtained and submit it for approval to the Northwest Information Center. A copy shall also be sent to Yolo County.* • *~~After mapping~~ Before mining begins on Yol-69, an archaeologist shall be contracted to evaluate the Yol-69 site and determine its significance and uniqueness as defined in Appendix K of CEQA. A program of in-field evaluation testing shall be undertaken inside the newly recorded borders of Yol-69 to determine its significance. The evaluation of this site shall be extensive enough to guide the development of a mitigation program if the site is found to be significant. If the site is not found to be significant or unique, no archaeological mitigation program, such as in-field data retrieval through hand excavation and recording of findings, will be required. However, an archaeologist must be present during the excavation of this site to monitor for indications of human skeletal remains.* • *If it is determined that the site contains significant cultural resources, an appropriate mitigation program shall be developed, before mining begins on Yol-69, based on the information obtained during the site evaluation. This mitigation program shall include an extensive in-field data retrieval through hand excavation. This program of data retrieval must be conducted by an archaeologist and could include but not be limited to professional in-field excavation of a percent of the area to be destroyed by the project to record the artifacts encountered and other data that might contribute to the scientific understanding of the culture and the way of life of the prehistoric people who lived in the region. In addition, an archaeologist must be present during the mining of the portion of the site that was not hand excavated to monitor for any indication of human skeletal remains.* *Mitigation Measure 4.11-2b* *Implement Mitigation Measure 4.11-1b.* *Mitigation Measure 4.11-2c* *Implement Mitigation Measure 4.11-1a of the OCMP Program EIR.*		
Impact 4.11-3: Proposed mining activities could disturb or destroy historical resources.	•		*Mitigation Measure 4.11-3a* *None required.*	•	

Hazards					
Impact 4.12-1: Accidental releases of fuels and related compounds could affect public health and the environment.		•	*Mitigation Measure 4.12-1a* *Implement OCMP Program EIR Mitigation Measure 4.12-1a.*	•	
Impact 4.12-2: Workers may be exposed to agricultural chemicals during mining and reclamation activities.	•		*Mitigation Measure 4.12-2a* *None required.*	•	
Impact 4.12-3: Open pits have the potential to be attractive nuisance hazards.		•	*Mitigation Measure 4.12-3a* *Implement OCMP Program EIR Mitigation Measure 4.12-3a.*	•	
Impact 4.12-4: Mosquito populations may increase due to expanded open bodies of water.	•		*Mitigation Measure 4.12-4a* *None required.*	•	

Key: LS = less than significant
S = significant
SU = significant and unavoidable

APPENDIX C: MITIGATION MONITORING PLAN

MITIGATION MONITORING PLAN

ENVIRONMENTAL IMPACT REPORT for

SOLANO LONG-TERM OFF-CHANNEL MINING PERMIT APPLICATION

SCH #96012034

Yolo County

September 16, 1996

INTRODUCTION

The California Environmental Quality Act requires public agencies to report on and monitor measures adopted as part of the environmental review process (PRC Section 21081.6). This Mitigation Monitoring Plan (MMP) is designed to ensure that the measures identified in this EIR are fully implemented. The MMP describes the actions that must take place as a part of each measure, the timing of these actions, who is responsible for implementation, and the agency responsible for enforcing each action.

For most of the mitigation measures noted in this MMP, the County has ultimate responsibility for implementation. Therefore, it is recommended that the Resources Management Coordinator of the Community Development Agency be assigned chief monitor and be responsible for assigning monitoring actions to responsible agencies. The Resources Management Coordinator would track the overall progress of each action.

If another agency or entity is responsible for implementation, it is recommended that the Resources Management Coordinator contact these agencies or entities and request detailed information to be appended to this Plan, in order to ensure coordination in monitoring and reporting.

As required by Section 21081.6 of the PRC, the Yolo County Community Development Agency is the "custodian of documents and other material" which constitute the "record of proceedings" upon which a decision to approve the proposed project was based. Inquiries should be directed to:

David Morrison, Resources Management Coordinator,
Yolo County Community Development Agency
(916) 666-8041

The location of this information is:

Yolo County Community Development Agency
292 West Beamer Street
Woodland, California 95695

In order to assist implementation of the EIR mitigation measures, the Plan has been formatted as a table with the following information:

- Impacts - listed verbatim in order of the EIR;
- Mitigation Measures - listed verbatim in order of the EIR;
- Reporting/Monitoring Requirement - applicable milestones;
- Responsibility for Compliance - applicable entity;
- Method of Compliance - how actions will be implemented;
- Enforcement - how implementation of action will be assured; and
- Checkoff - verification of implementation.

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Land Use and Planning						
Impact 4.2-1: The project as proposed is inconsistent with some of the policies of the OCMP.	*Mitigation Measure 4.2-1a* *Implementation of Mitigation Measures 4.4-3a, 4.4-4a, and 4.4-7a will reduce this impact to a less than significant level.*	See Mitigation Measures 4.4-3a, 4.4-4a, and 4.4-7a	Planning	Implementation of Mitigation Measures 4.4-3a, 4.4-4a, and 4.4-7a	Require as permit condition	
Impact 4.2-2: The proposed project would be consistent with policies of the Yolo County General Plan.	*Mitigation Measure 4.2-2a* *None required.*	--	--	--	--	
Impact 4.2-3: The proposed project may be inconsistent with the Yolo County Zoning Ordinance and the Williamson Act.	*Mitigation Measure 4.2-3a* *The project mining schedule or reclamation plan shall be modified to ensure that if Phase III lands are to be mined before the Williamson Act contracts expire, then reclamation shall be to prime agricultural uses only. Alternatively, if mining in Phase III does not begin until after 2006, no change to the proposed reclamation plan would be required.*	Prior to mining	Planning	Submit revised reclamation plan	Require as permit condition	
Impact 4.2-4: The proposed project would be consistent with the State Mining and Reclamation Act (SMARA) and Regulations.	*Mitigation Measure 4.2-4a* *None required.*	--	--	--	--	
Impact 4.2-5: The proposed project would be consistent with the draft Yolo County Habitat Conservation Plan.	*Mitigation Measure 4.2-5a* *None required.*	--	--	--	--	
Impact 4.2-6: The proposed project would be consistent with the Regional Water Quality Control Board Basin Plan.	*Mitigation Measure 4.2-6a* *None required.*	--	--	--	--	
Impact 4.2-7: The proposed project is inconsistent with agricultural policies adopted by the Yolo County Resource Conservation District.	*Mitigation Measure 4.2-7a* *None available. This is a significant, unavoidable impact of the project.*	--	--	--	--	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.2-8: The proposed project may be incompatible with some existing and planned land uses.	*Mitigation Measure 4.2-8a* *The County shall determine whether the applicant's offer to dedicate reclaimed lands in Phase V and VI for the proposed Recreation Node would fulfill the policy of the CCRMP. The County and the applicant should enter into discussions to resolve how public access to the future recreation facility can be accommodated. If determined to be feasible, the project plans should be modified to include a public access road along the eastern boundary of the site.*	Prior to mining	Planning	Develop agreement with County	Letter of agreement with County, if applicable	
Impact 4.2-9: During the mining phases, the proposed project would result in an intensification of land use for the mining sites.	*Mitigation Measure 4.2-9a* *None required.*	--	--	--	--	
Geology and Soils						
Impact 4.3-1: Expected seismic shaking at the project could result in ground failures and damage to reclamation features.	*Mitigation Measure 4.3-1a* *Implement performance standards presented in Mitigation Measure 4.3-1a of the OCMP Program EIR.*	Post Reclamation Ongoing Ongoing Post-Reclamation	Applicant Planning Applicant Planning	Submit geotechnical report for improvements Inspect site following earthquakes Apply contingency funds to earthquake damage Resurvey and relevel	Require as condition of approval	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.3-2: Potential failure and/or erosion of slopes could result in unstable slope conditions or adverse sedimentation of open water bodies.	*Mitigation Measure 4.3-2a* *Compliance with Mitigation Measure 4.3-2a of the OCMP Program EIR.*	During Mining	Applicant/ Planning	Implement erosion control by November 1 and document in annual report submitted to County	Require as permit condition	
		Prior to Mining	Applicant/ Planning	Submit application for construction to California Division of Safety of Dams, if required		
Impact 4.3-3: Aggregate extraction proposed by the project would result in the decreased availability of aggregate resources.	*Mitigation Measure 4.3-3a* *None required.*	--	--	--	--	
Impact 4.3-4: Erosion, failure, or overtopping of the channel bank separating the proposed mining areas from the active channel of Cache Creek could result in flooding of the pits and potential permanent inundation of the mining or reclaimed lower agricultural fields.	*Mitigation Measure 4.3-4a* *The County shall revise the CCRMP channel boundary in the vicinity of the site to reflect the Cunningham Engineering (1995) 100-year floodplain boundary. The hydraulic model used to determine the boundary assumes replacement of the Capay bridge with a three-span bridge. If this assumption changes, additional HEC-2 modeling will be required to establish the revised CCRMP boundary. If this boundary changes significantly upon modeling, additional review may be required.*	Prior to mining	Planning	Revise CCRMP	Adopt revision of CCRMP	
	Mitigation Measure 4.3-4b *Portions of the northern margin of the proposed Mining Areas II, III, V, VI, and VII shall be redesigned to provide a minimum 200-foot setback from the existing Cache Creek stream bank, in conformance with the requirements of Performance Standard 4.5-3 and all other pertinent performance standards in the OCMP. The revised project design shall be submitted prior to commencement of mining within Phase 3 and be consistent with the recommended slope design presented in the current application. If the redesigned project results in changes in any other mining area boundaries, additional CEQA review may be required.*	Prior to Phase 3 Mining	Applicant/ Planning	Submit revised mining plan for County approval	Require as permit condition	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Mitigation Measure 4.3-4c *Obtain an exception to Performance Standard 4.5-3 for the northeastern portions of Mining Areas III, V, and VI. Such approval shall require submittal and approval of engineering design for controlled flow inlet channels for each of the former mining areas. The design of the inlets shall be prepared by an experienced, licensed engineer. Inlet channels shall be designed and constructed to concentrate and control flow into the former mining areas. The design shall provide channel materials which will not erode during inundation events. Design shall be approved and work completed prior to commencement of mining within affected phases.* *Alternatively, the portions of the levee in these areas could be raised to provide 100-year flood protection for these areas. Prior to raising the levee, if that is the selected alternative, a hydraulic analysis prepared and signed by a licensed engineer, demonstrating that off-site flooding impacts would not be created, must be submitted to the County for review. This mitigation measure would be consistent with the proposed project and the requirements of the OCMP. Any levee work performed shall be completed prior to commencement of mining within the affected phases.*	Prior to mining in Mining Areas III, V, and VI	Applicant/ Planning	Submit engineering design for County approval	Require as permit condition	
	Mitigation Measure 4.3-4d *Implement Mitigation Measure 4.3-3a of the OCMP EIR. Specifically, the applicant shall conduct annual monitoring and maintenance of the channel banks and levees at the northern margin of the project site during the mining and reclamation period. The monitoring shall be conducted by a licensed engineer and shall minimally include visual inspection of channel banks and levees for evidence of erosion or slope instability. Evidence of erosion shall include, but not be limited to, the existence of oversteepened banks and loss of vegetation. Evidence of slope instability shall include formation tension cracks, arcuate scarps, or unexcavated benches.* *The annual report of channel bank and levee conditions shall be submitted to the Yolo County Community Development Agency with the Annual Mining and Reclamation Report. The report shall include the identification of the location (on scaled maps and photographs), estimated area and volume of eroded materials or slope failure, a determine of the cause(s) of erosion or slope failure, and recommendations for remedial action. Recommended remedial actions shall be implemented prior to November 1.*	During Mining	Applicant/ Planning	Submit annual report for County approval	Require as permit condition	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Mitigation Measure 4.3-4e *Following reclamation, the YCCDA shall determine, on the basis of inspection of the performance of the channel banks and levees during the mining and reclamation period, the need for continued channel bank and levee monitoring and reporting. The landowner shall be responsible for continuing monitoring and maintenance. A restriction shall be placed on the deed for the underlying property requiring continued inspection and maintenance of channel banks and levees, and allowing access by the County for same.*	Post reclamation	Planning Applicant	Determine maintenance needs for channel banks and levees Submit copy of deed restriction to County	Require as permit condition	
	Mitigation Measure 4.3-4f *The proposed project design shall be revised to provide a biotechnical bank protection design to replace the proposed placement of rip rap on that section of the south bank of Cache Creek extending 1,500 feet downstream from the I-505 bridge unless engineering evaluations demonstrate that riprap must be used to control erosion. The proposed bank protection shall be submitted to the Yolo County Community Development Agency and Caltrans for approval prior to the commencement of mining in Mining Area VII.*	Prior to mining in Mining Area VII	Applicant/ Planning	Submit bank protection design to County and Caltrans for approval	Require as permit condition	
	Mitigation Measure 4.3-4g *Mining within Mining Area VII shall not be conducted within 700 feet of the existing stream bank until stream bank stabilization is provided for that portion of the south bank of Cache Creek upstream from the I-505 bridge. The bank protection shall be performed in accordance with the guidelines presented in the Cache Creek Resource Management Plan and Cache Creek Improvements Program. The proposed bank protection design shall be submitted to the Yolo County Community Development Agency for approval prior to the commencement of mining in Mining Area VII.*	Prior to mining in Mining Area VII	Applicant/ Planning	Submit bank stabilization plan to County and Caltrans for approval	Require as permit condition	
	Mitigation Measure 4.3-4h *Recommendations of the geotechnical report for stabilization of the south bank of Cache Creek shall be implemented within one year after the commencement of mining. Prior to the construction of the improvements, detailed plans identifying the type of stream bank protection shall be submitted to the Technical Advisory Committee (TAC) for review and approval. The bank protection plans shall incorporate biotechnical methods of bank stabilization when appropriate for erosion control.*	Within one year of mining	Applicant/ Planning	Submit bank stabilization plan to TAC for approval	Require as permit condition	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Mitigation Measure 4.3-4i *The applicant shall enter into a legally-binding agreement with the County that commits the applicant to participate in implementation of the Cache Creek Improvements Program. Participation shall include, but not be limited to, contribution of equipment and labor for channel widening projects and channel maintenance mining recommended by the County.*	Prior to mining	Applicant/ Planning	Sign agreement with County	Require as permit condition	
	Mitigation Measure 4.3-4j *Prior to the commencement of mining below the groundwater level, the applicant shall contact the California Division of Safety of Dams (DSD) for a determination on whether the alluvial separators that would be created by the project fall under DSD jurisdiction.*	Prior to mining below groundwater	Applicant/ Planning	Submit DSD determination to County	Require as permit condition	
Hydrology and Water Quality						
Impact 4.4-1: Flooding at the site could cause property damage and injury to on-site workers.	*Mitigation Measure 4.4-1a* *The applicant must apply for, and receive, a floodplain development permit from Yolo County prior to mining activities within U.S. Department of Housing and Urban Development designated 100-year floodplains, as required by the County General Plan and Flood Ordinance.*	Prior to mining	Applicant/ Planning	Submittal of copy of permit	Require as permit condition	
Impact 4.4-2: Evaporation from a wet pit water surface would represent a loss of water from groundwater storage.	*Mitigation Measure 4.4-2a* *None required.*	--	--	--	--	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.4-3: Creation of wet pit lakes exposes surface and groundwater to potential degradation of water quality during the mining and reclamation period.	*Mitigation Measure 4.4-3a* *Implement Mitigation Measure 4.4-2a of the OCMP Program EIR.*	Prior to mining Prior to and during mining	Applicant/ Planning Applicant/ Planning	Submit grading and drainage plans for County approval Perform water monitoring in compliance with Off-Channel Surface Mining Ordinance (Section 10-4.417) and submit reports for County approval	Require as permit condition	
Impact 4.4-4: Creation of wet pit lakes exposes surface and groundwater to potential degradation of water quality during the post-reclamation period.	*Mitigation Measure 4.4-4a* *Implement Mitigation Measures 4.4-2a and 4.4-3a of the OCMP Program EIR.*	During reclamation During mining and reclamation	Applicant/ Planning Applicant/ Planning	Test agricultural soils for use in reclamation, if required Conduct analysis of water quality and fish in compliance with Surface Mining Reclamation Ordinance	Require as permit condition	
Impact 4.4-5: Creation of wet pit lakes and the subsequent backfilling with fine-grained sediments (processing fines and overburden) could cause impacts to groundwater levels, rate of flow and direction of flow.	*Mitigation Measure 4.4-5a* *None required.*	--	--	--	--	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.4-6: Mining of aggregate and subsequent reclamation of the mined areas would result in alteration of the topography and drainage patterns at the site.	*Mitigation Measure 4.4-6a* *None required.*	--	--	--	--	
Impact 4.4-7: Reclaimed lowered agricultural surfaces could be inundated during parts of the year by high groundwater conditions, adversely impacting productivity.	*Mitigation Measure 4.4-7a* *All reclaimed lowered agricultural surfaces shall be, at minimum, five feet above average high groundwater. The reclamation plan for the Solano West mining area shall be modified to meet this requirement.*	Prior to mining	Planning	Submit revised reclamation plan	Require as permit condition	
Impact 4.4-8: Increased pumping of groundwater at the processing plant to support the proposed increase in aggregate extraction and processing could adversely affect water supply wells in the vicinity.	*Mitigation Measure 4.4-8a* *None required.*	--	--	--	--	
Agriculture						
Impact 4.5-1: The proposed project would result in the temporary loss of agricultural production during mining and reclamation.	*Mitigation Measure 4.5-1a* *None required.*	--	--	--	--	
Impact 4.5-2: The proposed project would result in permanent conversion of 252 acres of prime farmland to nonagricultural uses.	*Mitigation Measure 4.5-2a* *Compliance of the project with Mitigation Measure 4.5-2a of the OCMP Program EIR would reduce the impact of the permanent loss of agricultural land. Compliance with the mitigation may be phased to track with the phasing of the mining. Compliance shall be verified by phase.*	Prior to mining	Planning	Document and offset loss of "prime farmland"	Require as permit condition	
Impact 4.5-3: Water or wind erosion of stockpiles of agricultural soils at the project site could result in permanent loss of an important agricultural resource.	*Mitigation Measure 4.5-3a* *None required.*	--	--	--	--	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.5-4: Proposed post-reclamation uses could result in impacts to agricultural lands and operations on- and off-site.	*Mitigation Measure 4.5-4a* *None required.*	--	--	--	--	
Impact 4.5-5: Lowering of reclaimed agricultural fields could result in adverse conditions for agricultural production.	*Mitigation Measure 4.5-5a* *Compliance with Mitigation Measure 4.4-8a of the OCMP Program EIR would mitigate the potential impacts of high seasonal groundwater on crop productivity. The mitigation requires that all reclaimed agricultural surface are a minimum of five feet above the average seasonal high groundwater level. To meet this standard, the elevation of the reclaimed agricultural fields within Mining Area VII shall be raised two or more feet above the proposed reclaimed surface elevation.*	Prior to mining and during reclamation	Applicant/ Planning	Submit revised grading plan for County approval	Require as permit condition	
Impact 4.5-6: The nonrenewal of current Williamson Act contracts for land affected by mining could result in a reduction of land under conservation for agriculture or open space uses.	*Mitigation Measure 4.5-6a* *None required. However, permanent conservation of the project site for agricultural and open space use would be better assured if all parcels within the site were re-enrolled in Williamson contracts upon completion of mining.*	--	--	--	--	
Impact 4.5-7: Proposed reclamation of portions of mined areas to tree crop agriculture could potentially conflict with adjacent agricultural uses.	*Mitigation Measure 4.5-7* *None required.*	--	--	--	--	
Impact 4.5-8: Implementation of the proposed project would contribute to the cumulative loss of agricultural land.	*Mitigation Measure 4.5-8a* *Implementation of Mitigation Measure 4.5-2a would reduce the impact of the cumulative loss of agricultural land in Yolo County.*	See Mitigation Measure 4.5-2a				
Biological Resources						
Impact 4.6-1: Project implementation would result in approximately 598 acres of primarily agricultural cover, revegetation of disturbed areas, and enhancement of native habitat.	*Mitigation Measure 4.6-1a* *None required.*	--	--	--	--	

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Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.6-2: Grading in the proposed mining area would result in the loss of mature oaks and could result in inadvertent disturbance to remnant sensitive natural communities along the Cache Creek corridor.	*Mitigation Measure 4.6-2a* *Figure 8 of the HRP shall be revised to indicate the location of hedgerow plantings, proposed by the applicant, around the Hutson parcel or as specified as part of habitat enhancement in a Section 2081 permit if required by the CDFG or to mitigate at a 1:1 ratio the actual loss of fence row habitat.*	Prior to mining	Planning	Submit revised HRP for County approval	Require as permit condition	
	Mitigation Measure 4.6-2b *Mature oak trees at the fringe of proposed mining areas shall be preserved. These shall include: the two oaks at the southwestern corner of the mining area on the Solano West parcel; the two oaks at the southwest corner of the mining area along the boundary between the Farnham West and Hutson parcels; and the single oak at the southeastern edge of the mining area on the Snyder West parcel. Stockpiling of topsoil and overburden proposed in the vicinity of these five trees shall be restricted to beyond the tree driplines. As required by Performance Standard 6.5-1 of the OCMP, temporary fencing shall be provided around the dripline of these trees to prevent possible construction-related damage. Fencing shall remain in place until stockpiles are removed and the surrounding lands are returned to agricultural production.*	Prior to mining	Planning	Annual County inspections	Require as permit condition	
	Mitigation Measure 4.6-2c *As required by Performance Standard 6.5-1 of the OCMP, temporary fencing shall be installed at the boundary of the habitat restoration area along the Cache Creek corridor, prior to initiation of any mining activity for each phase of the project. The fencing shall remain in place throughout the duration of active mining until reclamation has been completed for each project phase.*	Prior to mining	Planning	Annual County inspections	Require as permit condition	
	Mitigation Measure 4.6-2d *Proposed levee and channel stabilization improvements shall be designed to avoid impacts to riparian habitat on the site. Levee improvements on the Snyder East and West parcels shall be set back from the edge of the upper terrace to eliminate fill slopes which would extend into the riparian habitat. The proposed project design shall be revised to provide a biotechnical bank protection design to replace the proposed placement of rip rap on that section of the south bank of Cache Creek extending 1,500 feet downstream from the I-505 bridge unless engineering evaluations demonstrate that riprap must be used at certain locations to control severe erosion.*	Prior to mining	Applicant/ Planning	Submit revised mining and reclamation plans for County approval	Require as permit condition	

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	Mitigation Measure 4.6-2e *The proposed HRP shall be revised to include provisions to remove tamarisk and giant reed from the site as part of the creek restoration effort and to modify restoration plans for the depression on the Snyder East parcel to enhance the existing riparian woodland rather than establishing seasonal marsh at this location.*	Prior to mining	Applicant/ Planning	Submit revised HRP for County approval	Require as permit condition	
Impact 4.6-3: Mining and reclamation activities would disturb existing wildlife habitat and components of the proposed HRP would be of limited habitat value.	*Mitigation Measure 4.6-3a* *At least one permanent island shall be created on one of the proposed lakes to improve their wildlife habitat value. The artificial islands and submerged peninsulas proposed in the HRP should be retained on all lakes. Characteristics of the permanent island shall include the following:* • *The elevation of the island shall extend a minimum of five feet above the average high groundwater level (approximately 125-foot elevation) to prevent complete inundation during the winter months. Slopes of the island shall not exceed 3:1 above the average low groundwater level.* • *The channel of water separating the island from the mainland shall have a minimum distance of 20 feet and a depth reaching at least 5 feet during the average summer low groundwater level to prevent predators from wading to the island during the summer months. A temporary levee to permit vehicle access and maintenance of restoration plantings on the island shall be included in the design, but the levee shall be removed following completion of the minimum five-year monitoring program for the restoration effort.* • *The island shall be revegetated according to the HRP, with perennial marsh at the lowest elevations and low terrace riparian species up to the average high groundwater level, with a cover of grassland and scattered shrubs provided over the top of the island.* • *Each island shall be revegetated according to the HRP, with perennial marsh at the lowest elevations and low terrace riparian species up to the average high groundwater level, with a cover of grassland and scattered shrubs provided over the top of the island.* *Mitigation Measure 4.6-3b* *The unique bluff habitat between the upper terrace and the existing haul road on the Snyder East parcel shall be preserved. Mitigation Measure 4.3-4a in the Geology section provides appropriate mitigation for this impact.*	Prior to mining See Mitigation Measure 4.3-4a	Applicant/ Planning	Submit revised reclamation plan for County approval	Require as permit condition	

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Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.6-4: Mining activities and aspects of the proposed reclamation would result in the loss of suitable foraging habitat for Swainson's hawk.	*Mitigation Measure 4.6-4a* *A CDFG Code Section 2081 authorization, or the posting of a reclamation bond or letter of credit naming CDFG as the beneficiary or other alternative mechanism acceptable to CDFG, shall be executed prior to commencement of mining.*	Prior to mining	Planning and CDFG	Submit copy of CDFG approval letter to Planning	Require as permit condition	
Impact 4.6-5: Mining activities would affect suitable habitat for special-status species, such as valley elderberry longhorn beetle, bank swallow, and other species of concern.	*Mitigation Measure 4.6-5a* *The proposed HRP shall be revised to include specific provisions to ensure compliance with the USFWS "General Compensation Guidelines for the Valley Elderberry Longhorn Beetle". This shall include measures to: protect all elderberry shrubs to be retained; transplanting shrubs that cannot be avoided; planting replacement elderberry seedlings and associated riparian vegetation at appropriate ratios; and defining short and long-term maintenance, monitoring, and protection methods for the designated mitigation areas. A preconstruction survey for elderberry shrubs shall be performed by a qualified biologist prior to each phase of mining. The survey shall serve to confirm previous mapping of elderberry locations and determine whether any new shrubs have become established within the new mining area for which protection or replacement should be provided. The results of the survey shall be submitted to the USFWS as a report summarizing the purpose, findings, and recommendations consistent with the provisions of the revised HRP. All elderberry shrubs to be retained shall be flagged and fencing provided where necessary to preclude possible damage or loss of shrubs.*	Prior to mining in individual mining phases	Applicant/ Planning/ USFWS	Submit revised HRP for County approval Conduct preconstruction survey Submit preconstruction survey to USFWS and copy of approval letter to Planning	Require as permit condition	
	Mitigation Measure 4.6-5b *Implement Mitigation Measure 4.6-4a of the OCMP Program EIR to prevent inadvertent take of bank swallows.*	During mining and reclamation	Applicant/ Planning	Manage soil piles in compliance with Off-Channel Surface Mining Ordinance (Sec. 10-4.433)	Require as permit condition	
	Mitigation Measure 4.6-5c *The proposed HRP shall be revised to include specific provisions to replace the artificial bank swallow nesting habitat created by past mining activities on the Hutson parcel. These provisions shall include design, construction, and maintenance activities necessary to implement one or more of the following options: establishing suitable nesting habitat on designated side slopes of the permanent lakes, replicating the conditions on the Hutson parcel at a new location; restoring the vertical bluffs above the mining-related riparian habitat in the northern portion of the Snyder East parcel; and/or creating and perpetuating a vertical bank along a designated segment of the active channel of Cache Creek.*	Prior to mining	Applicant/ Planning	Submit revised HRP for County approval	Require as permit condition	

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Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	Mitigation Measure 4.6-5d *A pre-construction raptor survey shall be conducted by a qualified wildlife biologist prior to initiation of each phase of mining to determine the presence or absence of active raptor nests which could be disturbed or lost within the new mining area. The results of the survey shall be submitted to the CDFG as a report summarizing the purpose, findings, recommendations, and status of any nests encountered. Elements of the required pre-construction nesting survey and construction restrictions shall include the following:* • *Conduct the survey 30 days prior to any grading or other habitat modifications if proposed during the breeding season for tree nesting raptors (from March 1 through August 15). Confirmation surveys on presence or absence of burrowing owl ground nesting colonies shall be required prior to initiation of a particular phase of mining at any time of the year to ensure absence of any resident owls.* • *If an active raptor nest is encountered, establish an appropriate buffer around the nest location, as determined in consultation with representatives of CDFG. The perimeter of the buffer zone shall be flagged in the field at 50-foot intervals, and all construction activities, including grading, tree removal, equipment storage, and stockpiling of soils, shall be prohibited within this buffer zone.* • *Prohibit construction activities within the designated buffer zone until the consulting wildlife biologist has determined that breeding was unsuccessful, that the young have fledged from the nest, or that a CDFG-approved relocation plan has been successfully implemented.* • *Prohibit construction activities, including removal of any nest tree or burrow, within the designated buffer zone unless written confirmation from the wildlife biologist on the status of nesting activity has been submitted in writing to CDFG.*	Prior to mining in individual phases	Applicant/ Planning and CDFG	Conduct preconstruction survey and submit survey to CDFG and copy of approval letter to Planning	Require as permit condition	
Impact 4.6-6: Proposed mining and reclamation activities would affect jurisdictional wetlands or other waters of the United States.	*Mitigation Measure 4.6-6a* *Proposed channel bank modifications shall be coordinated with the Corps and California Department of Fish and Game. If required by jurisdictional agencies, appropriate authorization to modify jurisdictional habitat shall be obtained prior to grading or other modifications. Use of biotechnical bank protection design methods shall be encouraged where bank stabilization is required, such as the segment of active erosion on the Kaupke parcel.*	Prior to construction	Applicant/ Planning, COE, and CDFG	Submit authorization from COE and CDFG to County	Require as permit condition	

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Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Air Quality						
Impact 4.7-1: The proposed project would result in increases in PM_{10} emissions.	*Mitigation Measure 4.7-1a* *Implement Mitigation Measure 4.7-1a of the OCMP Program EIR.*	During mining	Applicant/ Planning	Install conveyors when feasible	Require as permit condition	
Impact 4.7-2: The project would result in an increase in emissions of ozone precursors.	*Mitigation Measure 4.7-2a* *Implement Mitigation Measure 4.7-2a of the OCMP Program EIR.*	During mining	Applicant	Compliance with manufacturers' specifications and proper maintenance of equipment	Require as permit condition	
Impact 4.7-3: The project would affect the attainment of local or regional air quality goals.	*Mitigation Measure 4.7-3a* *See Mitigation Measures 4.7-1a and 4.7-2a. No additional measures are available to reduce the impact to a less-than-significant level.*	See Mitigation Measures 4.7-1a and 4.7-2a				
Impact 4.7-4: The project could generate vehicle trips that cause a CO hot spot.	*Mitigation Measure 4.7-4a* *None required.*	--	--	--	--	
Impact 4.7-5: Emissions from the proposed project could affect sensitive air quality receptors.	*Mitigation Measure 4.7-5a* *None required.*	--	--	--	--	
Impact 4.7-6: The project could create or subject sensitive air quality receptors to an objectionable odor.	Mitigation Measure 4.7-6a *None required.*	--	--	--	--	

SOLANO PROJECT EIR MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Traffic and Circulation						
Impact 4.8-1: The proposed project would result in additional truck traffic on the nonstandard segment of SR 16 between I-505 and the entrance to the Solano Concrete Plant.	*Mitigation Measure 4.8-1a* *The applicant shall construct a left-turn lane for eastbound movements into the Solano Concrete Plant.*	Within one year of approval	Applicant/ Planning/ Caltrans	Construct left-turn lane	Require as permit condition	
Impact 4.8-2: The proposed project would exacerbate unacceptable operations at the SR 16/County Road 98/Main Street intersection in the city of Woodland.	*Mitigation Measure 4.8-2a* *The applicant shall pay its fair share toward the construction of left-turn lanes on each approach, and the installation of a traffic signal, at the SR 16/County Road 98/Main Street intersection to maintain acceptable levels of service.*	Prior to mining	Applicant/ Planning/ City of Woodland	Participation in funding program	Require as permit condition	
Noise						
Impact 4.9-1: The proposed project may result in an increase in ambient noise levels. This is considered to be a significant impact.	*Mitigation Measure 4.9-1a* *Daytime noise levels at the property boundary shall not exceed 80 dBA L_{eq} during mining and reclamation of the site. If earth moving operations are conducted at grade within less than 58 feet from the property boundary, the applicant shall ensure that no more than one scraper is used at any one time.*	During mining and reclamation	Planning	Annual County inspection or in response to complaints	Require as permit condition	
	Mitigation Measure 4.9-1b *Implement Mitigation Measures 4.9-1b and 4.9-1c of the OCMP Program EIR.*	During mining and reclamation	Planning	Annual County inspection or in response to complaints	Require as permit condition	
Impact 4.9-2: Project activities may result in exposure of sensitive receptors to increased noise levels.	*Mitigation Measure 4.9-2a* *Implement OCMP policies as modified in Mitigation Measure 4.9-1c of the OCMP Program EIR.*	During mining and reclamation	Planning	Annual County inspection or in response to complaints	Require as permit condition	
Impact 4.9-3: Proposed project may create vibration or nuisance noise on adjoining properties.	*Mitigation Measure 4.9-3a* *Implement OCMP Program EIR Mitigation Measure 4.9-4a.*	During mining and reclamation	Planning	Annual County inspection or in response to complaints	Require as permit condition	

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Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Aesthetics						
Impact 4.10-1: Mining and reclamation activities could adversely impact public views and vistas.	*Mitigation Measure 4.10-1a* *Implement Mitigation Measure 4.10-1b of the OCMP Program EIR.*	Prior to mining	Applicant/ Planning	Submit mine phasing plan for County approval	Require as permit condition	
Impact 4.10-2: Changes to the site's original character and topography following reclamation activities may result in long-term changes to public views and vistas.	*Mitigation Measure 4.10-2a* *None required.*	--	--	--	--	
Impact 4.10-3 Mining, reclamation, and post-reclamation activities may result in visual incompatibility with surrounding land uses.	*Mitigation Measure 4.10-3a* *None required.*	--	--	--	--	
Impact 4.10-4: Light and glare may be created from nighttime mining operations.	*Mitigation Measure 4.10-4a* *None required.*	--	--	--	--	
Cultural Resources						
Impact 4.11-1: Proposed mining activities could disturb paleontological resources.	*Mitigation Measure 4.11-1a* *Implement Mitigation Measure 4.11-1a of the OCMP Program EIR.*	Prior to mining During Mining	Applicant/ Planning Applicant/ Planning/ Native American Heritage Commission/ County Coroner	Implement Mitigation Measure 4.11-2a Notify coroner and NHC in event of discovery of skeletal remains	Require as permit condition	

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	Mitigation Measure 4.11-1b *The applicant shall implement a training program that alerts project employees involved with earth-moving as to the nature of paleontological and archaeological resources in the region, the laws that protect the resources, and responsibilities for reporting potential findings to appropriate authorities. This program shall be developed by a qualified cultural resource professional.*	Prior to mining	Applicant/ Planning	Submit training program and employee attendance roster to County	Require as permit condition	
Impact 4.11-2: Proposed mining activities would disturb archaeological resources.	*Mitigation Measure 4.11-2a* *No mining within the Snyder west parcel (phases IV and VI) shall be conducted until an accurate mapping of Yol-69 is completed, and the site is evaluated by an archaeologist to determine its significance and uniqueness. The following tasks shall be performed:* • *Contract a surveyor to accurately map the cultural resource site on a topographic map, based on information, preliminary map, and recommendations contained in the Yol-69 mechanical subsurface testing report (Holman & Associates, 1996). Upon completion of mechanical testing, the borders of the deposits shall be staked by the archaeologist.* • *Mapping of the resource shall be completed prior to commencement of mining in mining areas that include the resources.* • *Register the information obtained, including a map of the Yol-69 site, on State of California Archaeological Site Survey forms for filing at the State Historical Preservation Regional Office located at Sonoma State University. Prepare a professional report with all cultural resources information obtained and submit it for approval to the Northwest Information Center. A copy shall also be sent to Yolo County.* • *Before mining begins on Yol-69, an archaeologist shall be contracted to evaluate the Yol-69 site and determine its significance and uniqueness as defined in Appendix K of CEQA. A program of in-field evaluation testing shall be undertaken inside the newly recorded borders of Yol-69 to determine its significance. The evaluation of this site shall be extensive enough to guide the development of a mitigation program if the site is found to be significant. If the site is not found to be significant or unique, no archaeological mitigation program, such as in-field data retrieval through hand excavation and recording of findings, will be required. However, an archaeologist must be present during the excavation of this site to monitor for indications of human skeletal remains.*	Prior to mining	Applicant/ Planning and Sonoma State University	Submit archeological survey report and mitigation program, if applicable, to County and Sonoma State University	Require as permit condition	

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Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	• *If it is determined that the site contains significant cultural resources, an appropriate mitigation program shall be developed, before mining begins on Yol-69, based on the information obtained during the site evaluation. This mitigation program shall include an extensive in-field data retrieval through hand excavation. This program of data retrieval must be conducted by an archaeologist and could include but not be limited to professional in-field excavation of a percent of the area to be destroyed by the project to record the artifacts encountered and other data that might contribute to the scientific understanding of the culture and the way of life of the prehistoric people who lived in the region. In addition, an archaeologist must be present during the mining of the portion of the site that was not hand excavated to monitor for any indication of human skeletal remains.*					
	Mitigation Measure 4.11-2b *Implement Mitigation Measure 4.11-1b.*	See Mitigation Measure 4.11-1b				
	Mitigation Measure 4.11-2c *Implement Mitigation Measure 4.11-1a of the OCMP Program EIR.*	See Mitigation Measure 4.11-1a				
Impact 4.11-3: Proposed mining activities could disturb or destroy historical resources.	*Mitigation Measure 4.11-3a* *None required.*	--	--	--	--	
Hazards						
Impact 4.12-1: Accidental releases of fuels and related compounds could affect public health and the environment.	*Mitigation Measure 4.12-1a* *Implement OCMP Program EIR Mitigation Measure 4.12-1a.*	During mining and reclamation	Applicant/ Planning/ Public Health	Submit Hazardous Materials Business Plan, SWPPP, and Groundwater Monitoring Plan for County approval	Require as permit condition	
Impact 4.12-2: Workers may be exposed to agricultural chemicals during mining and reclamation activities.	*Mitigation Measure 4.12-2a* *None required.*	--	--	--	--	

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Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirements**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Impact 4.12-3: Open pits have the potential to be attractive nuisance hazards.	*Mitigation Measure 4.12-3a* *Implement OCMP Program EIR Mitigation Measure 4.12-3a.*	During mining and reclamation	Applicant/ Planning	Implement Mitigation Measures 4.3-2a, 4.4-3a, and 4.12-1a	Require as permit condition	
Impact 4.12-4: Mosquito populations may increase due to expanded open bodies of water.	*Mitigation Measure 4.12-4a* *None required.*	--	--	--	--	