APPENDIX B MITIGATION MONITORING PLAN

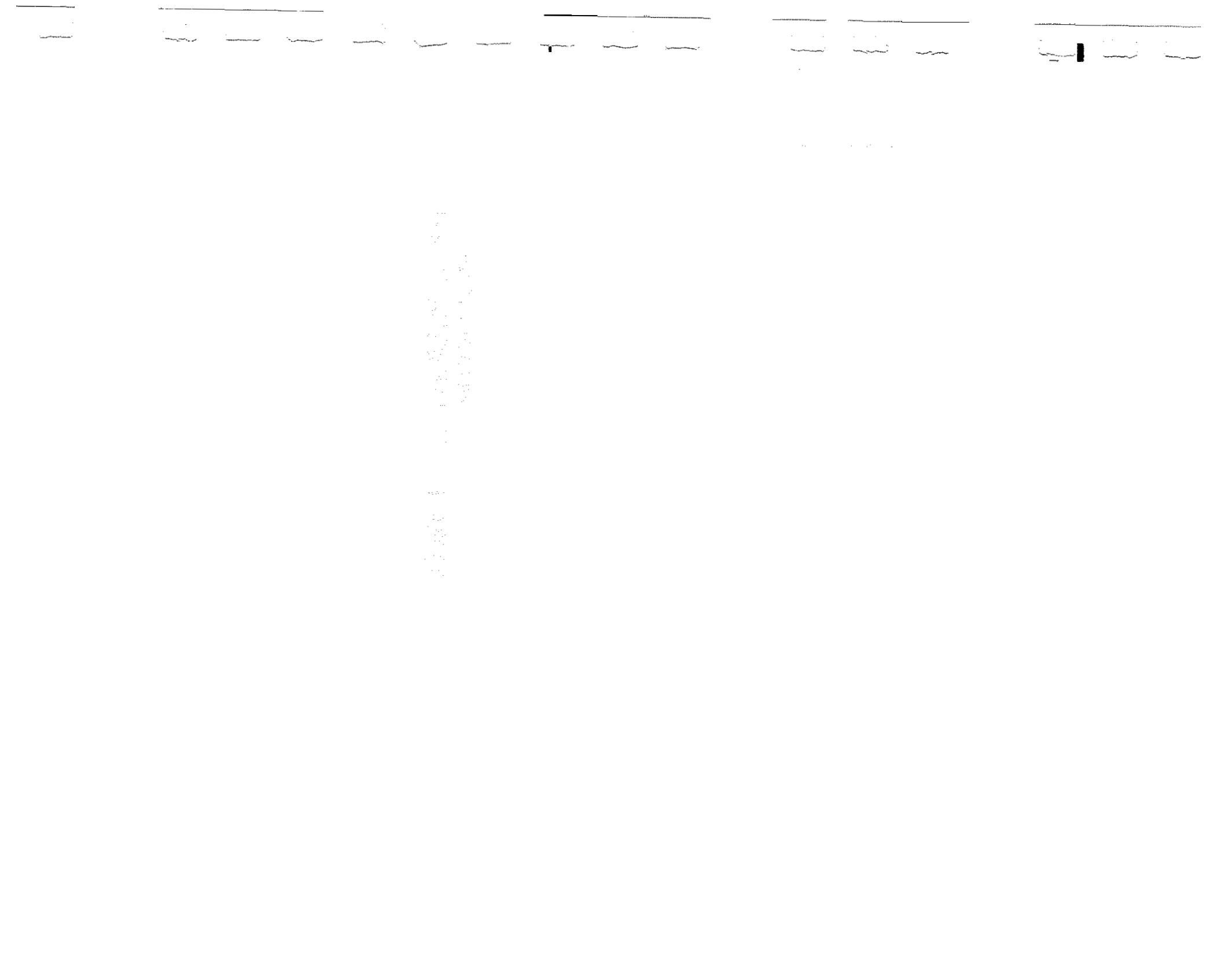
MITIGATION MONITORING PLAN

ENVIRONMENTAL IMPACT REPORT for
OFF-CHANNEL MINING PLAN
for LOWER CACHE CREEK

SCH #95113034

Yolo County

June 14,1996



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 the Off-Channel Mining Plan 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 measures noted in this MMP, the County has ultimate responsibility for implementation of mitigation measures. 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 adopt the OCMP 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 Off-Channel Mining Plan EIR mitigation measures, the Plan has been formatted as a table with the following information:

- Impact - listed verbatim in order of the EIR;
- OCMP 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.

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 pmvided that the *excavations are made* in *compliance* with the requirements *of the* state Mine *Safety Orders* (California Code of Reguletions, *Title 8, Subchapter* 17). The vertical height end slope of benches constructed *for permanent reclaimed* slopes *shall* not exceed maximum standards for the specific soil types presented in *California* Code of Reguletions, Title *8,* Article 6 *In* general, *vertical cutslopes between* benches *shall* not exceed four *(4)* feet in height in topsoil end overburden sediments. Benching shall be ellowed in cohesive soil (clay, *sandy* or silty clay, *clayey* silt) only. Slopes above the elevation of gmundweter *(determined* at the time of excavation by the level of exposed water in the excavation) *that* exceed the *maximum* vertical height shall be excavated end maintained et slopes not greater then *2:1.* Slopes loceted five (5) feet or less below the average summer low gmundweter *level* shall not be steeper then *2:1.* Slopes *located more* then five (5) feet below the average summer low gmundweter level *shall not* be steeper then *1:1* (horizontal to vertical). Vertical *cutslopes* in excess *of four* feet in height may be eppmved for development of *special* habitat *(e.g. bank* swallows) if *a* site *specific* slope stability analysis, performed by e licensed engineer, *indicates* that the slope does not exceed *critical* height for the on-site soil *conditions. Projects* pmposing such slopes *will* be required to submit *a long-term maintenance plan* to *ensure* that the function of the slopes as *habitat* is met. Performance Standard 2.516: Except *where* benches era used, ell banks above gmundweter level shall be sloped no steeper then *2:1 (horizontal:vertical).* Proposed steeper slopes shall be evaluated by *a* slope *stability study, prepared* by *a* qualified engineer. Slopes below the gmundwater level shall be no steeper than *1:1 (horizontal:vertical).* Slopes located five feet or less below the summer low gmundwater level *shall not* be steeper then *2:1.*	During Mining Post-Reclamation	Planning Planning	Submittal of Slope Stability Study Submittal of Slope **Stability** Study	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 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 emes shell be conveyed to lowered emes (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) shell be designed to ensure positive drainage end minimize erosion. The drainege conveyance system end storm water detention areas shell be designed end meinteined in accordance with Best Management Practices for the reduction of pollutants associated with runoff from mined emes. The design and maintenance procedures shell be documented in the Storm Water Pollution Pmvention Plan required for mining operations. The drainage system shall be inspected annually by a Registered Civil Engineer, Registered Geologist, or Certified Erosion end Sediment Control Specialist to ensure that the drainage system is functioning effectively and that adverse erosion end sedimentation em not occurring. The annual inspection shall be documented in the Annual Mining end Reclamation Repoit.*	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 shell have a minimum safety factor equal to or greeter than the critical gradient as determined by en engineering analysis of the slope stability. Final slopes lass then five (5) feet below the evamge summer low groundwater level shell be designed in accordance with the recleimed use end shell not be steeper then 2:1. Reclaimed wet pit slopes located five (5) feet or more below the average summer low gmundwater level shell not be steeper then 1:1 (horizontal:vertical), in order to minimize the effects of sedimentation end biological clogging on groundwater flow, to prevent stagnation end 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* mtational 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* emsion contml measures shell take place prior to November *1 in* areas *where* mining has been completed. To *minimize* emsion, the finish grading of mining pit slopes above the *average* seasonal high *groundwater* level, *with* the *exception* of the *location* of designated haul mads, 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* emsion contml (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.* 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.*	**During Mining** Prior to Mining	**Planning** Planning and California Division of Safety of Dames	**Submittal of Mining and Permit Application** Submittal of Application for Construction	**Require as Permit Condition** Require as Permit Condlion	

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 pert 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 overiap 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.***	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	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 impmvement ***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.***	Prior to Mining	Planning	Adoption of OCMP	incorporate into OCMP	
	Action ***4.4-6*** shall ***be*** amended as follows: Action ***4.4-6: Allow*** for the design of spillways or other engineered features that pmvida controlled flooding of ***off-channel*** mining pits during flood ***events*** which ***exceed*** the ***100-year*** flood event.	Prior to Mining	Planning	Submittal of Mining and Reclamation Application	Require as **Permit** Condition	
	Performance Standard 4.51 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*** (including a minimum of three feat of ***freeboard*** above ***the 100-year*** flood elevation). ***Off-channel*** excavations ***shall*** be designed to minimize the ***possibility*** of levee breaching ***and/or pit capture.***	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 4.5-2 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 wade 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	

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 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 Cecha Cmek 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 mclarnetion shall be the responsibility of the property owners under the Cacha Creek Resource Management Plan.	During Mining and Reclamation	Property Owners	Application of Contingency Costs	Financial Assurances	
	The condition of flood protection structures end the integrity of the lend within the approved setback zone separating the mining areas and the stream channel shall be inspected annually by a licensed engineer end reported to the Yolo County Community Development Agency.	Annually During Mining and Every Five Years Foliowing Reclamation	Property Owners and Planning	Inspection and Report	Incorporate into OCMP and Require as Permit Condition	
	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 end 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 shell perform the required repairs.					
Impact 4.34: 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:					
	Performence 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 3.517: A well survey shall be conducted and ell 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 shell 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 end 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 end implementing ordinances shall be modified as described below.					
	Pollution Prevention					
	Performance Standard 3.56 of the OCMP end 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 gmundwater, then six months prior to the commencement of excavation below average high groundwater level the applicant shall identify end locate all off-site municipal wells within 1,000 feet and ell domestic wells within 500 feet of the proposed wet pit mining boundary If active wells ere identified, well characteristics (pumping rate, depth, end locations of screens) shell be determined. If wells era 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 shellbe conducted using the *U.S.* Envimnmental *Protection* Agency model *WHPA* (or *a* similar model of equal *capability* endpmven reliability, *as approved* by the *Yolo* County Community Development Director). The simulation shell 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 end the pit do not coincide. *Alternatively,* the applicant *shall* submit *a written agreement* that the well owner has egraed to *relocate* or redesign the well (at no expense to the *County).* The analysis shellbe *prepared and signed by* a Registered *Professional* Engineer or *Certified Hydrogeologist* end submitted to the County for *review* and *shall* be submitted to, end eppmved 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* shellbe subject to review by the *Yolo* County Envimnmental Health *Department.* The County *shall determine, based* on site-specific hydmgeology 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. Performance Standard *3.53* of the OCMP end 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 end grading. *Appropriate erosion* contml measures *shall* be *incorporated into* all *surface drainage* systems. Drainage end detention facilities within the *proposed* mining *areas* end vicinity shell be designed to prevent discharges to the wet pits end *surface* water conveyances *(i.e. creeks* end sloughs) fmm the *20* yearn-hour storm or less. For events greater than the 20 *year/1* hour storm, *runoff* fmm *around* the perimeter of the mining areas shouldbe directed to surface water conveyances. Runoff *from* within the *lowered* mining *area* shall be directed away fmm 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. Gradingplens shellbe reviewedby the County to evaluate compliance *with* drainage plan objectives prior to pmject *approval.*	Prior to Mining	Planning	Submittal of Grading and Drainage Plans	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**
	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	
	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 ə *part, the mining site, or both. In addition, signs shall* bə *installed at the project site boundaries* and *access* ʍəd *indicating that the excavation* əʍə *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* bə *recorded on the* dɐɐd *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 bə *modified* əs *follows:*					
	At least one toilet shall bə *provided for each off-channel mining operation. Chemical toilets shall* bə *properly maintained* and *serviced regularly. Permanent toilets shall be properly engineered and the design* əppʍɯəd *by both the Yolo County Building Official and the Environmental Health Department prior to installation. All on-site water storage facilities shall* bə *labeled "potable" or "non-potable."*	Prior to Mining	Building and Environmental Health	County Approval	Require əs 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	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	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	
	Monitoring *Performance Standard 3.54 of the OCMP end the associated ordinance shall be modified as follows:*					
	A# surface mining operations that propose off-channel excavations extending below Ute 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 gmundweter level monitoring program shall consist of three monitoring wells, with at least one well upgradient of the wet pit end one well downgradient of the wet pit. Monitoring programs for proposed mining areas excaeding 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, pmposed 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 gmundweter 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 shad be surveyed with horizontal and vertical contml to allow calculation of gmundwater elevetions and development of gmundwater contour maps. Gmundwater 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	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	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. *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).*	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**
	• *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.* *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.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation** Measures	***Reporting/* Monitoring Requirement**	***Responsibility* for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	The County may retain *appropriate* staff or a contract consultant to pmvide *third party critical* review of ell *hydrogeologic* reports *related* to *monitoring.* *Data Evaluation/Corrective* Action The *following performance standard shall* be added to Me Water Resources Element of the OCMP end implementing ordinance. *PS.* 3.516: Monitoring during the mining end reclamation period shall be a condition *of the permit.* A performance bond shell be *acquired* to ensure Mat monitoring continues for ten years *after* the completion of redamation. Action 3.44 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,* end *Federal* agencies *that* may wish to receive copies of *data* generated *from* Ma *off-*channel mining operations, including the towns of *Capay, Esparto, Yolo,* end Madison, the *city* of Woodland, end 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 shell be expended to include other relevant sources of information, so that it can be *used as* reference materiel for regional water planning efforts. 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 backgmund levels, e 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 shell 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 thet the source of weter quality *degradation* is off- site, and County and RWQCB ere in agreement with this conclusion, the *applicant* shell not be *responsible* for *corrective* action.	Prior to Mining Ongoing on an As-Needed Basis **During** Mining	Planning Planning Planning and CVRWQ **CB**	Pmof of Performance Bond Submittal of Groundwater Database Submittal of Testing **Results**	Financial Assurances 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
	If corrective action is ineffective or infeasible, the responsible party must pmvide reparetion to affected well owners, either by treatment of water at the wellhead or by procurement of alternate water supply. Analysis of envimnmental impact for projects in the vicinity of the wet pits shall include consideration of potential weter quality impacts on the open water bodies.					
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:					
	ɜ ıtial 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 ! li	lanning	Adoption of OCMP	Incorporate into OCMP	
	The potential for illegal discharges to occur would be adequately mitigated by Mitigetion Measure 4.4-2a.	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	
	Performance Standard 3.510 of the OCMP shell be modified as follows: 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 (Pen ormance Standard 2.5-8). The poter tia impacts associated with groundwater qua ity deg t da ti 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 edded to the OCMP and implementing ordinance:	Prior to Mining	Planning	Adoption of OCMP	Incorporate into OCMP	

Environmental Impact	Mitigation Measures	Reporting/ Monitoring Requirement	Responsibility for Compliance	Method for Compliance	Enforcement	Checkoff Date/Initials
	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. *The following performance standards shall be added to the Water Resources Element of the OCMP:*	During Reclamation	Planning and Environmental Health	Submittal of Soil Samples	Require as Permit Condition	
	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 within six months after approval of the OCMP and paid for by the mining permit applicants on a fair-share basis. After ten years, 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 landowner for five years after creation of the lake for conditions that could result in significant methylmercury production. The annual evaluations shall be conducted by a qualified aquatic biologist or limnologist 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.* • 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. 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					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
	• 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. • *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	
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).*	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**
	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.*	Every 10 Years	Planning and FEMA	Submittal of Letter of Map Revision	Incorporate into OCMP	
Impact 4.4-7: Potential Impacts from Flooding Related to Dam Failure	*None required.*					
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						

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
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.* *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 Agricultural Preserve easements on lands meeting Williamson Act definition of "prime farmland".* • *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 Prior to Mining	Planning Planning	Submittal of Mining and Reclamation Application Submittal of Mining and Reclamation Application	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 4.5-3: 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	
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				

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Biological Resources						
Impact 4.6-1: Impact on Existing Vegetative Cover	*None required.*					
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.* *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.* *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.*	Prior to Mining Ongoing Ongoing	Planning Planning Planning	Submittal of Mining and Reclamation Application Submittal of Habitat Restoration Plan Submittal of Habitat Restoration Plan	Require as Permit Condition Require as Permit Condition 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 2.57 and proposed Off-Channel Surface Mining Ordinance Section 10.4.11 shall be amended as follows:* *All infernal 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 4.8-3e 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 Maasure 4.8-10a Implamentation 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 lass-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*** Implamantation 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*** Implamantation 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*** Implamantation of Mitigation Measure 4.8-3e would reduce this impact to a lass-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	
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	

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
Aesthetics						
Impact 4.10-1: Effects on *Existing Views or Vistas* **During Mining**	*Mitigation Measure 4.10-1a* *In conjunction with the envimnmental raview of individual projects permitted under the OCMP, means of minimizing the visibility of mining operations, facilities and landform alterations fmm public viewpoints shall be assessed based on site-specific visual characteristics and viewing conditions. The use of berms, vegetative screens, seeding, specialplant 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 Measura 4.10-lb* *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. Were adequate screening exists in the form of mature vegetation and/or constructed berms that effectively block public view, the erae of active disturbance within 1.000 feet of the right-of-way shell 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 implementationof 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**	
Impact 4.10-2: Effectson 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 pmjects permitted under the OCMP, furthermeans of impmving the appearance of the landscape after raclamation 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 appmpriate.*	*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.*					

OCMP MITIGATION MONITORING PLAN						
Environmental Impact	**Mitigation Measures**	**Reporting/ Monitoring Requirement**	**Responsibility for Compliance**	**Method for Compliance**	**Enforcement**	**Checkoff Date/Initials**
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.*					
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 effected parties.	Prior to Mining	Planning	Preparation of Fair-Share Cost Program	Incorporate into OCMP	