CHAPTER 7.0 APPENDICES

7.1 NOTICE OF PREPARATION (NOP), WRITTEN COMMENTS AND SUMMARY OF SCOPING MEETING

County of Yolo

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

ROY PEDERSON
County Administrative Officer

NOTICE OF PREPARATION
NOTICE OF SCOPING MEETING

TO:

FROM: Yolo County Community Development Agency
292 West Beamer Street
Woodland, CA 95695

SUBJECT: **NOTICE OF PREPARATION and NOTICE OF SCOPING MEETING FOR THE OFF-CHANNEL MINING PLAN PROGRAM-LEVEL (OCMP) ENVIRONMENTAL IMPACT REPORT (EIR)**

LEAD AGENCY: County of Yolo
Community Development Agency
Woodland, CA 95695

CONTACT: David Morrison, Resource Management Coordinator

The County of Yolo has determined that a project-level Environmental Impact Report will be prepared for the **OFF-CHANNEL MINING PLAN (OCMP)**. The County of Yolo will be the lead agency and will need to know the views of your agency as to the scope and content of the EIR based on your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use this EIR when considering relevant permits or other approvals for the project. The County is also seeking input from residents, property owners, and concerned citizens as to the issues that should be addressed in the EIR. The project description is summarized below. A meeting to discuss the appropriate scope of the EIR has been scheduled, as indicated below.

PROJECT DESCRIPTION: The OCMP represents one of two key plans the County staff will be preparing to manage the resources of the mining reach of Cache Creek. The OCMP addresses a variety of issues relevant to mining outside of the creek channel. The other key plan is the Cache Creek Resource management Plan (CCRMP) which will focus on resources within the creek channel. The draft CCRMP is expected to be released no later than December 1, 1995. Though they will be stand-alone plans, it is proposed that the final OCMP and CCRMP be joined together after adoption, as one printed document entitled the Cache Creek Area Plan.

The draft OCMP identifies 300 million tons of aggregate on 3,100 acres of the 17,200 acre study area, as feasible to mine over the next fifty years. Control of this mining would occur through the OCMP and implementing ordinances, and project-specific conditional use permits for which consistency with the OCMP and CCRMP would be required. It is important to note that the draft CCRMP will recommend that all commercial mining within the creek be concluded upon commencement of long-term mining off-channel.

The draft OCMP is organized into an Introduction and six "elements including an Aggregate Resources Element, a Water Resources Element, a Floodway and Channel Stability Element, an Agricultural Resources Element, a Biological Resources Element, and an Open Space and Recreation Element.

Each element has an introduction, a list of goal statements, identified objectives and actions, and performance standards. Key recommendations of the plan include:

- Establishment of 30-year mining permits with ten-year reviews to account for unanticipated changes in environmental or regulatory circumstances. Permits would be eligible for 20-year extensions, based on performance.
- Ten-year updating of the OCMP to account for the results of an annual monitoring program, reclamation efforts, implementation of Creek Improvement Projects, and changing responses of the creek.
- Creation of an ad-hoc, voluntary Technical Advisory Committee to review annual monitoring data and provide recommendations and feedback to the County regarding the conditions of the creek and streamway influence zone.
- Encouragement of off-channel, deep-pit (below the groundwater level) mining under carefully controlled and monitored circumstances, as an alternative to continued in-channel mining.
- Redefinition of the in-channel/off-channel boundary based on the present (1994) channel bank line or Army Corps Westside Tributary Study 100-year flood elevation, whichever is wider.
- Acceptance of multiple reclamation uses and goals including agriculture, groundwater recharge, water storage, habitat restoration, flood control, and recreation.
- Pursuit of partnerships with various private (for-profit and non-profit), local, state, and federal agencies to implement priority Creek Improvement Projects.
- Coordination with the Yolo County Flood Control and Water Conservation District to provide a regular source of surface water within the gaining reaches of the creek, when there is sufficient rainfall.
- Acquisition of Irrevocable Offers of Dedication, conservation easements, and fee ownership of attainable properties along the creek in order to carry out priority Creek Improvement Projects.
- Future development of a Parkway Plan to provide a range of public activities and uses along the creek.

DESCRIPTION OF ALTERNATIVES: The project alternatives that will be examined in the EIR will include the following:

Alternative #1a: No Project (Existing Conditions)

Under this alternative the County would not prepare the OCMP. Mining would continue based on 1995 actual production for each producer. Continuation of all regulations in place as of December 31, 1995 would be assumed, including the 1979 regulatory channel boundary and existing "interim" regulations. Assumptions for individual operators would be determined based on 1995 production.

Alternative #1b: No Project (Existing Permits and Regulatory Condition)

Under this alternative the County would not prepare the OCMP. Currently approved maximum annual allocations would establish the maximum intensity of mining that would be allowed. It would be assumed that all regulations in place as of December 31, 1995 would remain in place, including the 1979 regulatory channel boundary and existing "interim" regulations. Assumptions for individual producers would be as follows:

Cache Creek Aggregates	748,650 tons per year in-channel
Granite Construction	422,352 tons in-channel (less than one year of remaining reserves)
Solano Concrete Company	772,417 tons per year in- or off-channel
Teichert (Esparto)	750,000 tons per year off-channel,
Teichert (Woodland)	1,064,224 tons per year off-channel
Schwarzgruber and Son	114,000 tons per year in-channel
Syar Industries	960,871 tons per year in-channel

Alternative #2: No Mining (Alternative Site)

Under this alternative the County would not prepare the OCMP. It would be assumed that existing permits to mine and/or operate plants, for all producers would be voided as of December 31, 1995. Mining would occur elsewhere and be trucked into the production consumption region in response to market demand. Market demand for future years would be assumed at 271 million tons over the next fifty years, or approximately 5.4 tons per year based on interpolations of the State Geologist's estimates. This alternative would examine the potential for satisfying regional demand from reserves of PCC-grade aggregate material known to occur in dredger tailings east of Yuba City and Marysville, alluvium deposits underlying Mather Air Force Base in the Rancho Cordova area of Sacramento, sand and gravel deposits from other Sacramento operations, and alluvial deposits and tailings from Folsom.

Alternative #3: Plant Operation Only (Importation)

Under this alternative the County would not prepare the OCMP. This alternative assumes that existing permits to mine would be voided as of December 31, 1995, but that existing plants continue to operate to the extent and capacity that they are individually permitted (based on County approvals or air permit limits). Raw material for processing would be assumed to come from the same alternative sources identified in Alternative #2 (No Mining -- Alternative Site) based on the same market demand.

Alternative #4: Shallow Mining (Alternative Method/Reclamation)

Under this alternative, the OCMP would limit all new mining to depths no greater than 10 feet above the historic average high groundwater elevation. Resulting gravel extraction would have to be calculated, but would likely be substantially less than the 300 million proposed over fifty years. Granite and Schwarzgruber would continue as presently approved because they are not requesting any new or modified entitlements. The proposed revised channel boundary would be assumed which would place the Granite and Schwarzgruber operations off-channel. Reclamation would be assumed as primarily (80 percent) to agricultural uses, with some recharge (15 percent) and habitat restoration (5 percent).

Alternative #5a: Decreased Mining (Restricted Allocation)

Under this alternative, the OCMP would limit gravel extraction to no more than 2.48 million annually over fifty years (124 million total). This alternative assumes that mining proposals would be restricted to one-half of the current annual allocation. Granite and Schwarzgruber would continue at their approved allocation because they are not requesting any new or modified entitlements. The proposed revised channel boundary would be assumed which, would place the Granite and Schwarzgruber operations off-channel. All new mining would occur off-channel as proposed, and in-channel commercial operations would cease.

Alternative #5b: Decreased Mining (Shorter Mining Period)

Under this alternative, the OCMP would limit the period of gravel extraction for an individual permit to 15-years, with a potential 10-year renewal based on performance. Permits would be reviewed every five years to account for unanticipated changes in environmental or regulatory circumstances. Requested allocations would be assumed. Granite and Schwarzgruber would continue at their approved allocation because they are not requesting any new or modified entitlements. The proposed revised channel boundary would be assumed which would place the Granite and Schwarzgruber operations off-channel. All new mining would occur off-channel as proposed, and in-channel commercial operation would cease. Assumptions for individual producers would be as follows:

Cache Creek Aggregates	1.0 million tons
Granite Construction	422,352 tons
Solano Concrete Company	1.2 million tons
Teichert (Esparto)	850,000 tons
Teichert (Woodland)	1.2 million tons
Schwarzgruber and Son	114,000 tons
Syar Industries	1.95 million tons

Alternative #6: Agricultural Reclamation (with mining operations as proposed)

Under this, the OCMP would not allow for alternative forms of reclamation. A minimum performance standard of 80 percent agricultural reclamation would be established. This alternative would assume extensive earth-borrow activities on other lands not

proposed for mining, in-order to generate pit fill material. Total disturbed acreage would have to be calculated, but would likely be substantially greater than the 3,100 acres anticipated to be disturbed under the proposed OCMP.

AREAS OF POTENTIAL IMPACT: This will be a program-level environmental analysis, from which later project-level EIRs for individual mining permits will tier. It is anticipated, that this CEQA analysis will be focused on the following issue areas:

Land Use and Planning

Identification of relevant regulatory setting. Comparison and discussion of SMARA and related mining regulations, the County General Plan, and other existing County plans, policies, and ordinances in force within the County which govern mineral resource extraction within the project and surrounding areas. Examination of compatibility with existing and planned land uses in the area, as the OCMP and CCRMP are implemented over time. Discussion of cumulative land use issues associated with implementation of the OCMP and CCRMP. Examination of the potential for impacts associated with the proposed changes in the in-channel and off-channel boundaries.

Geology and Soils

Identification of regional and study area geological and seismic setting information. Identification of creek morphology including stream capture and channel stability). Identification of soils and aggregate resources. Identification of relevant regulatory setting for geology and soils issues. Discussion of the potential for impacts associated with geological problems, erosion, changes in topography during mining and after reclamation (particularly finish elevations post-reclamation), improvements to soils proposed by reclamation, loss of soils, use of non-renewable mineral resources, and impacts to future mineral resource availability. Discussion of cumulative geological and soils issues associated with implementation of the Plans. Analysis of the impacts associated with the initial proposed channel reshaping and subsequent periodic controlled maintenance, versus the current situation. Determination of specific interim "corrective" mining projects (to accomplish channel shaping and smoothing) as mitigation measures that would further implement the goals and performance standards of the OCMP and CCRMP, beyond those identified in the Plans themselves. The Program EIRs will need to examine the potential for impacts associated with the proposed changes in the in-channel and off-channel boundary, and the impacts associated with the initial channel reshaping and subsequent periodic controlled maintenance, versus the current situation.

Hydrology and Water Quality

Identification of regional and study area hydrologic setting information including climate surface water, runoff and drainage, flooding, infiltration, groundwater, evaporation and evapotranspiration, and water quality (various data sources including earlier certified EIRs, the EIRs on the short-term permits, and the Technical Studies). Identification of relevant regulatory setting for hydrology and water quality issues. Discussion of the potential for impacts associated with changes in absorption, drainage patterns, surface water runoff, flooding, groundwater recharge, degradation of water quality, contamination of water supply, channel capacity, direction or rate of flow of groundwater, hydraulic structure, or watershed. Discussion of cumulative hydrology and water quality issues associated with implementation of the Plans. Determination of specific hydrology and water quality mitigation projects that could further implement the goals and performance standards of the OCMP and CCRMP, beyond those identified in the Plans themselves. Examination of consistency with efforts of the Regional Water Quality Control Board, and applicable "basin" plans.

Agriculture

Identification of regional agricultural resources, crop history, productivity, designated farmland, soil types, and land subject to Williamson Act contracts (data sources include previous studies and EIRs, UCD and Agricultural Commissioner reports). Identification of relevant regulatory setting for agricultural issues. Economic or other issues associated with non-renewal of Williamson Act contracts under the County's current zoning requirements may be relevant as contrasted with the recommendation to allow mining within the A-P zone. Discussion of the potential for impacts associated with changes in productivity and crop value, permanent conversion of agricultural lands (prime and non-prime) to other uses, temporary conversion (prime and non-prime), risk of cold injury, and stockpiling of soils for reclamation. Discussion of cumulative agriculture issues associated with implementation of the OCMP and CCRMP. Constraints to agriculture reclamation associated with soils, land use compatibility, post-reclamation compatibility and other related issues should be addressed. Examination of relationship to Resource Conservation District agricultural policies.

Biological Resources

Discussion of regional and study area biological setting. Identification of biological resources including vegetation, wetlands, fish and wildlife, and special-status species. Identification of relevant regulatory setting for biological resources, including 2081 mitigation requirements. Discussion of potential for impacts associated with loss of habitat, change in species population or diversity, special status species, loss of oak trees, and creation of barriers to migration, movement, or normal replenishment. Discussion of cumulative biological issues associated with implementation of the OCMP and CCRMP. Determination of specific habitat restoration mitigation projects that could further implement the goals and performance standards of the OCMP and CCRMP, beyond those identified in the Plans themselves. Examination of consistency with the County Memorandum of Understanding and Habitat Management Plan efforts, and any other applicable "recovery" plans for listed species.

Air Quality

Discussion of regional and study area air quality setting including climate and topography, ambient air quality, and relevant regulatory requirements (regional standards and planning efforts). Discussion of the potential for impacts associated with changes in air quality, exposure of sensitive receptors to air and dust, cumulative emissions from mining and hauling, combined air quality impacts from various proposed mining methods based on proposed annual operations and phasing, cumulative emissions from aggregate processing, cumulative emissions from asphalt processing, increases to existing cumulative air quality concerns, potentially hazardous emissions, localized versus regional effects, emissions associated with reclamation, and emissions associated with post-reclamation operations. Discussion of cumulative air quality issues associated with implementation of the Plans. Examine the extent to which adoption of the OCMP would affect attainment of local, state, regional, or federal air plans.

Traffic and Circulation

Identification of regional and study area transportation network and existing traffic conditions (counts for certain study area roadways will be available from the County and Caltrans), including existing safety hazards/conflicts, accident data, level of service, haul routes, and potential truck traffic under existing approvals and permits. Identification of relevant regulatory setting for traffic and circulation issues. Discussion of the potential for impacts associated with increases in volume and location of mining, changes in haul routes, cumulative hauling, changes in the nature of traffic impacts based on the period and phasing of mining proposed, the period and phasing of reclamation proposed, and post-reclamation traffic and circulation. Discussion of cumulative traffic and circulation issues associated with implementation of the Plans. Discussion of potential employer and vendor traffic generation.

Noise

Identification of regional and study area noise setting information. Identification of relevant regulatory setting for noise issues. Identification of impacts associated with noise from operations and hauling, changes in ambient noise characteristics, and effects on sensitive receptors. Discussion of cumulative noise issues associated with implementation of the OCMP and CCRMP.

Aesthetics

Identification of regional and study area aesthetic and visual setting (including typical farming and agricultural practices, and the phasing of these practices and activities over the course of a year). Identification of existing community aesthetic issues associated with reclamation of previous mining areas under earlier SMARA requirements. Identification of cumulative aesthetic issues associated with implementation of the OCMP and CCRMP, proposed mining, intensity, methods (e.g. nighttime operations), and phasing of mining, proposed reclamation activities, and post-reclamation activities. Discuss the potential for impacts in all of these areas. Discuss aesthetic impacts associated with implementation of the OCMP and CCRMP over the short- and long-term. Determination of specific mitigation projects at sites reclaimed under earlier SMARA requirements that could further implement the goals and performance standards of the OCMP and CCRMP, beyond those identified in the Plans themselves.

Cultural Resources

Identification of regional and study area cultural resources setting information including paleontological, archeological, historical, and cultural resources. Identification of relevant regulatory setting information for cultural resource issues. Discussion of the potential for disruption or modification of cultural resources from implementation of the OCMP or CCRMP, or from the cumulative effects of proposed mining. Consultation with the Office of Historic Preservation and any other related necessary consultation.

Hazards

Identification of existing regulatory requirements related to risk of upset and hazardous materials. Identification of potential for release of hazardous substances and/or increased exposure of people to existing sources of potential health hazards. Discussion of relevant cumulative issues.

Public Services and Utilities

Identification of relevant setting information and potential for impacts associated with recreation, groundwater supply (recharge), surface water distribution (canal/recharge system), maintenance of public roads, and other governmental services. Mitigation should examine the feasibility of a mitigation fee for long-term monitoring of mining operations and reclamation, and a mitigation fee for long-term road maintenance.

Other

Thresholds for significance will be identified for each issue area, and used to reach conclusions regarding impact. For all areas of impact identified in the program EIR, relevant mitigation measures must be identified to fully or partially mitigate the impact, to the degree feasible. These measures shall be written so that appropriate participation by individual operators can be clearly identified in the project-level EIRs. Previous EIRs and technical studies shall be used as an initial source of data and potential mitigation measures. Where the most appropriate program-level mitigation is a modification in the OCMP or CCRMP, or the addition or modification of goals, performance standards, or other requirements, this shall be so identified.

INITIAL STUDY: The County has determined that an EIR is clearly required for this project, and has therefore opted to conduct no further initial review pursuant to Section 15060(c) of the CEQA Guidelines. Instead the County will begin work directly on the EIR process as described in Article 7 of the Guidelines, commencing with Section 15080. As required, the EIR will focus on the significant effects on the project, however, the report will document reasons for determining that other effects would not be significant or potentially significant.

SCOPING MEETING: A public scoping meeting has been scheduled for Monday, November 27, 1995 at 6:30pm at the Planning Commission Chambers at 292 West Beamer Street in Woodland, CA 95695. The purpose of this meeting is to receive comments regarding the appropriate scope of the EIR and also to solicit public suggestions regarding scope of the analysis of alternatives to the project. If you have questions or need additional information please contact David Morrison at 916-666-8020 or Heidi Tschudin at 916-447-1809.

RESPONSES: Due to the time limits mandated by State law, your response to this notice must be sent at the earliest possible date but not later than 30 days after receipt. Based on our mailing, this 30 day period will run from **November 17, 1995 through December 18, 1995.**

PLEASE SEND YOUR RESPONSES TO: David Morrison, Resource Management Coordinator at the address shown above. Please remember to include in your comments the name of the contact person in your agency. We will be pleased to answer your questions. Please contact David directly at (916) 666-8020 or Heidi Tschudin, Contract Planner at (916) 447-1809 should you need more information.

Date November 15, 1995
Signature [signature]
Telephone 916 447 1809

Name Heidi K. Tschudin
Title Contract Planner

Reference: CEQA Guidelines Sections 15082 (a), 15103, 15375.

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION NINE
CALIFORNIA DIVISION
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

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October 24, 1995

IN REPLY REFER TO

HB-CA
File #: 450.1
Document #: 3585

Mr. James W. van Loben Sels, Director
CALTRANS, 1120 N Street
Sacramento, California 95814

Attention: Federal Resources Branch, Room 3500
for Mr. Bob Everitt

Dear Mr. van Loben Sels:

SUBJECT: AGGREGATE MINING IN RIVERS

We have become very concerned with the affects of aggregate mining in rivers and streams, and the consequent affect to bridge structures on Federal-aid highway facilities. There were 17 bridge failures in the 1995 storms, and of these, several structure failures could be attributed partially to aggregate mining. It is estimated Statewide that of bridges that are susceptible to mining-related failures, repairs for substructure damage could run $31 Million, and for replacement approximately $100 Million.

It is our understanding, the local agencies are responsible for granting permits to the miners, and there is no minimum criteria Statewide for adequately issuing permits. Only 3 out of 113 lead agencies have established redline elevations, and only on selected creeks, that control the depth to which operators can mine.

One notable example where we believe mining contributed significantly to the structure failure is the Capay Bridge over Cache Creek, located in Yolo County, which we proceeded to repair after the storm with Federal Emergency Relief (ER) funds. What is more disturbing is that it is our understanding that Yolo County just awarded two new permits to miners adjacent to Cache Creek, fully aware of the potential for further structural damage. Other recent examples include the Union Cienega Bridge (43C-0002) over the San Benito River which degraded 10 feet during the 1995 storm, exposing 8 feet of pile, consequently closing the bridge and necessitating temporary repairs totaling $500,000. The bridge will need replacement.

We are very concerned and would like to bring this to your attention Statewide. We also recommend that the local agencies granting mining permits in streams are fully aware that per Title 23 CFR, Section 668.105(f), "Prompt and diligent efforts shall be made by the State to recover repair costs from the legally responsible parties to reduce the project costs particularly where catastrophic damages are caused by ships, barge tows, highway vehicles or vehicles with illegal loads or where damage is increased by improperly controlled objects or events". We recommend that every effort be made by Caltrans to make local agencies aware of the growing concern for aggregate mining in streambeds and its affect on bridges, as well as public safety and liability for damages caused. Also, Title 23 CFR, Section 668.109 states: "(c) E.R. funds may not participate in:...(6) Repair or reconstruction of facilities affected by long-term, pre-existing conditions or predictable developing situations such as flooding in basin areas or slow moving slides;". Mining without the consideration of controls would be considered in this category as well if the local agency is aware of severe degradation due to mining and does nothing to mitigate loss of material that endangers bridge foundations. We have not strongly enforced this in the past, but in light of recent information gained during the 1995 storms, we will carefully evaluate structural failures in future storms for contributing external factors.

If you should have any questions, please contact Martha Nevai at 498-5859

Sincerely,

For
Fred J. Hempel
Division Administrator

LUHDORFF & SCALMANINI
CONSULTING ENGINEERS

GROUND-WATER RESOURCES
HYDROLOGY • DEVELOPMENT • MANAGEMENT

November 10, 1995
File Nos. 95-1-114 & 95-1-119

Ms. Lillie O'Keeffe Noble
Teichert Aggregates
P.O. Box 15002
Sacramento, CA 95851

SUBJECT: COMMENTS ON FIRST DRAFT OFF-CHANNEL MINING PLAN LOWER CACHE CREEK

Dear Ms. Noble:

In response to your request, we have reviewed the first draft of the Off-Channel Mining Plan for Lower Cache Creek dated October 30, 1995. Our focus in reviewing the document was primarily on the water resources element (Chapter 3.0). Based on that review, we would offer the following comments.

Probably our most significant comment has to do with the statement in the OCMP Vision that off-channel mining applications processed under the OCMP would be coordinated with the Yolo County Flood Control and Water Conservation District (YCFCWCD). As you are aware, there is already a published, aggressive schedule for completion of the Cache Creek Resources Management Plan, the Off-Channel Mining Plan, and for submitting and processing off-channel mining applications. When the short-term application process started, there were meetings with the YCFCWCD regarding the status of its ground-water storage and recovery project, which was then in planning but not specifically defined. While the short-term process is now complete and the long-term process has commenced, the District's project remains undefined. It seems that processing of off-channel applications in coordination with the YCFCWCD, "to ensure that future excavations are compatible with the designs of the District", could lead to difficulties with the schedule since there is no known definition of a District project and therefore no "designs of the District". From the viewpoint of preparing technical analyses and reports on which to base mining and reclamation plans for your off-channel applications, we are unaware of any goals or

limits (i.e. maximum and minimum ground-water levels) which the District may wish to achieve; and those would seem to be critical for design and subsequent coordinated review of off-channel mining applications. "Coordination" is a fine concept as long as the lack of a completely planned and defined District project does not impede the process of mining application review and permitting.

One of the Objectives (3.3-2) is stated to be improving the recharge capability along Cache Creek "to raise local groundwater levels"; that objective begs the question "how high?". Since ground-water levels are mostly near the creek thalweg throughout most of the prime recharge area now, an objective of raising ground-water levels seems questionable. Perhaps the objective could be reconsidered "to increase the rate of recharge and storage of water now lost in high flows of the Creek" rather than merely attempting to raise ground-water levels.

Recommendation 44 in the Technical Studies is to consider dedication to artificial recharge of areas in and beyond the Cache Creek Channel that are permeable, situated above the high water table, relatively flat, and accessible by equipment. Action 3.4-6 is much more specific with regard to locations that are not specified in the Technical Studies. At a minimum, there are locations in Management Zone 1 that fit the provisions of Recommendation 44 better than any in Zone 4. Purposeful recharge in Zone 1, for example, could provide direct benefits to ground-water supplies beneath Woodland. There are few, if any, locations in Zone 4 which meet all the provisions of the Technical Studies, most notably the provision which requires ten feet of unsaturated zone above the highest historical water table.

In Action 3.4.8, we would question the basis for the specification that dry-pit floors be situated at least ten feet above the ground-water level. Is there some technical analysis of ground-water mound height or water quality consideration that requires ten feet of unsaturated zone above the water table? Since the same specification is repeated in Performance Standard 3.5-7, what maintenance opportunities are provided by ten feet of unsaturated zone above the water table? Finally, since historical ground-water levels have fluctuated notably throughout the prime recharge areas, what ground-water level is to be used as a basis for compliance with the specified unsaturated zone?

The minimum ground-water analyses specified in Performance Standard 3.5-4 begs the question what would be the significance of turbidity and/or coliform content in small diameter monitoring wells. Detection of such constituents could merely be indicators of a need for additional well development or disinfection. Monitoring wells are rarely, if at all, used for bacteriological (coliform) or physical (turbidity) water quality parameters.

Comments of a more minor nature include the following:

- In the discussion of Present Conditions in Section 3.1, the fact that ground water is hard to very hard is unrelated to its sodium content; sodium should be deleted from the list of constituents which contribute to hardness. Strictly speaking, total dissolved solids concentrations also do not contribute to hardness, per se; and TDS should be deleted from the list of constituents which contribute to hardness in water.

- Also in the Present Conditions discussion, it is questionable whether diversions from Cache Creek have contributed to decreased concentrations of total dissolved solids, or whether they have caused increased concentrations.

- In the OCMP Vision of Section 3.1, it would be appropriate and complete to add recovery to the list of components of the YCFCWCD project: "water recharge, storage, **recovery**, and conveyance facilities". The recovery portion of the District's project will affect ground-water levels, as will the recharge portion, thus affecting both mining and reclamation plans.

- There are several references to "evapotranspiration" from open water surfaces throughout the document; strictly speaking, open water surfaces evaporate but do not transpirate.

- In the OCMP Vision of Section 3.1, the statement that evaporation from open water surfaces "is more than offset by the recharge capacity of wet pits" presumes that some recharge water is added to such wet pits; it seems that some statement to that effect should be added so that the impression is not left that wet pits recharge somehow by themselves.

- Section 3.5-5 would appear to have nothing to do with Performance Standards, and seems to be out of place.

- Section 3.5-8 ultimately specifies that agricultural tailwater **shall** be released to the Creek, after detention in catchment basins. We recognize that there has been and continues to be discharge of agricultural tailwater into the Cache Creek channel, where it percolates into the aquifer system. However, in the overall context of controlling non-point sources of contamination, and in light of the ground-water quality protection aspects of the OCMP, specifying the discharge of tailwater to the Creek seems incorrect.

- Adding a phrase to Section 3.5-15 would seem to clarify the intent of that Performance Standard: "that the recharged water will not be discharged into a gaining reach of Cache Creek **in the immediate vicinity of the recharge facilities**".

We appreciate the opportunity to provide the above comments and hope that they will be useful in completing an Off-Channel Mining Plan for Lower Cache Creek. If we can provide further details or answer questions regarding any of the above, we would be pleased to respond.

Sincerely,

LUHDORFF AND SCALMANINI
CONSULTING ENGINEERS

Joseph C. Scalmanini

JCS:pn

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TEICHERT AGGREGATES

November 10, 1995

Heidi Tschudin, Contract Planner
County Administrative Office
and
David Morrison, Resource Management Coordinator
County Community Development Agency
625 Court Street, Room 202
Woodland, CA 95695

RE: First Draft (10/30/95) Off-Channel Mining Plan for the Lower Cache Creek

Dear Heidi and David:

Teichert appreciates the opportunity to provide observations regarding the recently released draft Off-Channel Mining Plan (OCMP). The document's cover page explains that the OCMP is subject to modification reflecting the review process prior to the final draft being heard by the Planning Commission for action in July of 1996. As a participant in the process please find below Teichert's initial comments.

General comment:

Throughout the OCMP reference is made to its fluidity and plans for periodic updating or new environmental analyses. We have concerns relative to the open-ended nature which this language brings into the OCMP. The Technical Studies underscore the complex dynamics impacting Cache Creek, which include not only mining, but also grazing, agricultural endeavors and constrictions associated with undersized bridges. Is this industry being held to a unique (and possibly onerous) standard and asked to pay for community benefits which should be financed more equitably?

Specific comments:

Page 5, Estimated Cache Creek Aggregate Resources

> The areas and estimated volume of aggregate resources are introduced. Please note that not all of the aggregate outlined in the geographical boundary is economical to extract and process.

Page 8, please add the term "hard" in discussing alternative rock to be processed instead of sand and gravel for PCC-grade material.

As an alternative to sand and gravel, it is possible to take hard rock and crush it to PCC-grade specifications.

Page 9, The Cache Creek Resources Management Plan

In the final sentence it is noted that OCMP encompasses approximately 15,000 acres. It would be helpful if possible for this area to be reduced to reflect the practical and economical area in which gravel extraction will occur.

Page 9 and 25, ...limiting the permit to a maximum of thirty years

We believe that it makes sense to permit the proposed aggregate operations for thirty years, with the right to a one-time request for an extension of twenty years. Over the course of the past twenty years and again recently, aggregate mining and its relationship to Cache Creek have been subject to extensive evaluations by independent professionals. The recent short-term EIR's coupled with the Technical Studies represent the most current and thorough historical and scientific evaluation. In the immediate future adding to this evaluation effort will be the environmental reviews associated with the OCMP, CCRMP and the individual applications of the Producers.

Annual SMARA inspections and yearly permit compliance audits/reports are reviewed before the Planning Commission (and the community) to assess mining operations. A system of checks and balances is in place. The additional performance standards and monitoring requirements outlined in the OCMP further strengthen the evaluation process. It should also be noted that unlike many entitlements, mining fosters sequential land usage, and the acreage is not permanently removed. If a mining or reclamation plan is amended, this triggers a return to the community and its governance process.

Given these multiple safeguards, a permit for thirty years with the right to a one-time request for an extension of twenty years is requested. This would provide the reasonable baseline of certainty required to justify large capital expenditures, allowing companies to invest in conveyor systems and other beneficial technologies.

Pages 15 and 30, Resource Advisory Council (RAC)

Is the Resource Advisory Council a redundancy of the technical advisory council associated with the Cache Creek Conservancy? Please further define the proposed role/duties of the RAC. Is

the intent of this body to be advisory only? Please define the funding source.

Page 18, Adoption of the Off-Channel Mining Plan

The text discusses the need to be responsive to change in "new" creek dynamics, and that both the OCMP and CCRMP should be updated every five years. Reevaluations at such short intervals will not give the baseline of certainty necessary to justify major capital expenditures. The document does not indicate what groups would underwrite the update process and what environmental documentation would be necessary. Please list other County Ordinances that receive a similar review and updating, and the frequency of the reviews.

Many public sector regulations/mandates are revised at 20 year intervals. We suggest a fifteen year update frequency for the OCMP instead of five or ten. Text discussing the S-G (Sand and Gravel) overlay delineates a time line of 50 years. This 50 year zoning horizon protects reserves forecast to supply regional demand. If the aggregate requirements of the region are indeed being protected for the benefit of the citizenry, then the timelines should be complementary.

Page 19, Amendment of Zoning Code

Regarding Section 51238.1 this statutory scheme is permissive, not mandatory. Two approaches are viable. Per staff input, rather than require acreage to be taken out of the agricultural preserve, the A-P Zone should be amended to allow off-channel mining, consistent with the Williamson Act. This zoning revision permits mining property to retain the contract. As an alternative, the ordinance could be amended to grant conditional zoning of AP to A-1, effective upon the expiration of the Williamson Contract and constituting a statement of intent which allows the non-renewal period to expire. Both approaches are subject to CEQA analysis.

Page 25, OCMP Vision

Regarding the application of the S-G overlay, the OCMP addresses a variety of issues relevant to mining outside of the creek channel. It is our understanding that agricultural remains the primary (and preferred) land use, but via reclamation permitted uses may also reflect habitat, lakes, recreational sites, and groundwater recharge/storage opportunities. The landscape becomes a mosaic of habitat types and complementary water amenities with the dominant countenance remaining agricultural.

Page 27, Zone 4 and 5

The zone adjacent to Teichert's Muller and Storz properties affords both opportunity and location for groundwater recharge. The area of benefit would be the City of Woodland and adjacent communities. Regarding selective elimination of tamarisk, is this realistic given the nearly ubiquitous seed dispersal of this opportunistic plant?

Page 27, Goal 2.2-5

The goal mentions alternative land uses. Would these include non-agricultural uses, such as groundwater recovery, habitat, flood control and recreation?

Page 28, Objective 2.3-~~6~~ 5

The objective discusses the creation of regular opportunities to incorporate new information into the OCMP. Teichert appreciates a dynamic process, but there must also be degrees of certainty; otherwise economic and technological investments cannot occur.

Page 30, Actions 2.4-3, 2.4-7 and 2.4-~~9~~ 8

Regarding the sunset of a permit at the conclusion of 30 years and the recommended five year OCMP updates, please see comments above. (The need to balance goals so as to retain sufficient certainty for making investment decisions is again underscored.) Regarding the concept of "net gain", is this a duplication of the Producers' commitments to the Cache Creek Conservancy?

Page 31, Typographic error in slopes

The slope ratio is reversed; it should read 2:1 (horizontal to vertical) not 1:2.

Page 32, Performance Standard 2.5-~~6~~ 5

Teichert supports and would agree to haul routes engineered to a standard of ten (traffic index 10). Acknowledgement of and credit for Short-Term mining application route improvements and costs are necessary.

Haul distance differs for each Producer. Construction of improvements within a one year time period could be an unfair burden. Improvement costs will be substantial, and it would be more equitable to allow mining revenue to accumulate so

that funds are available for the road improvements. To this end, please consider a timeline of five years secured by a surety bond.

Page 32, Performance Standard 2.5-8

The standard requires signage indicating a danger zone. Is this an invitation to a curious onlooker to explore, thereby creating potential for greater liability? Perhaps a "no trespassing" sign would be adequate.

Page 33, Performance Standard 2.5-11

Please explain the rationale for suggesting a modification to the current noise standard to a residential Leq of 60 decibels between 6:00 a.m. and 6:00 p.m. Teichert considers the current standard appropriate "From 6:00 p. m. to 6:00 a. m., the noise level shall not exceed an average noise level equivalent (Leq) of 65 db(A) measured at the outermost boundary of the permitted area."

As stated in our applications, during most of the year mining activities at the proposed mining site will not be in operation during the 6:00 p.m. to 6:00 a.m. period and, therefore, will not generate noise. However, during the months of August, September and October, it is possible that the hours of operation for mining activities at the site will be extended. On these occasions, Teichert proposes that mining activities will be coordinated with a qualified noise consultant, and appropriate setbacks will be adhered to so that noise levels do not exceed the noise level equivalent (Leq) of 65 db(A) measured at the outermost boundaries of the permit area. The Short-Term EIR process used this as the bench mark.

Page 33, Performance Standard 2.5-14

Please see comments above regarding the "continuous" examination of mining. A system of checks and balances is in place. Given the multiple safeguards, a permit for thirty years with the right to a one-time request for an extension of twenty years is requested.

Mining is only one variable along the Cache Creek corridor. The governance burden is not representational, since the draft ordinance places a disproportionate regulatory burden on one industry (albeit a very visible industry). Standard 2.5-14, in addition to the thirty-year environmental review and discretionary approval by the County, advises that all surface mining permits be reviewed every ten years, to account for changing regulatory and environmental conditions. The OCMP

recommends five-year updates for the OCMP and now further suggests that the permit be subjected to environmental review every ten years. Again, such frequent reviews do not provide the long-term stability necessary for investment in a major project.

Page 34, Performance Standard 2.5-18

"Reclaimed wet pit slopes located five (5) feet or more below groundwater level shall not exceed 1:1, in order to minimize the effects of sedimentation and biological clogging on groundwater flow and to prevent stagnation." Further explanation is requested.

Page 34, Performance Standard 2.5-21

The current and historical date for implementation of erosion control measures is November 15. What is the rationale for moving the date forward to November 1? If a Fall is exceptionally dry, could erosion measures be implemented as late as November 30? Such flexibility would allow the Industry to continue to serve regional needs.

Page 36 Water Resource Element

Please see attached comments from Luhdorff and Scalmanini. Teichert agrees with Luhdorff and Scalmanini that the YCFCWCD (coordination for an integrated groundwater recharge plan) has yet to articulate clearly its plan/vision/intentions, and that coordination is not attainable at this time. It is an exaggeration that management of the basin's water supply will require extensive information and monitoring. We do not agree with the Technical Studies comment that groundwater data is poorly developed and unorganized. Was the firm of Luhdorff and Scalmanini consulted? This overstated deficiency results in requirements for additional monitoring wells. Please remember that currently agricultural tailwater is being directly discharged into Cache Creek, thus impacting water.

Page 39, 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." Regarding erosion, how will one determine the correlation?

Page 39, Objective 3.4-6

Other zones besides Zone 4 have groundwater recharge basin capabilities.

Page 39, Objective 3.4-7

Regarding the encouragement of the transfer of sediment fines from one zone area to another further down the creek. Is this realistic given the high cost of transport?

Pages 39 and 41, Objective 3.4-8 and Performance Standard 3.5-7

Please provide peer reviewed technical data and explanation regarding the need for a ten-foot distance between a recharge basin and groundwater level. Based on the technical data supplied by Luhdorff and Scalmanini, this requirement is not necessary.

Page 3.5-10, Performance Standard 3.5-10

"The use of motorized watercraft on any pond, lake, or other body created as a part of the approved reclamation plan is prohibited." Please note Teichert anticipates mining with a suction dredge. During mining operations, employees will be transported to the moving dredge via motorized watercraft.

Page 42, Performance Standard 3.5-14

"Reclamation plans including proposed ponds, lakes, or other bodies of water shall be referred to the Yolo County Flood Control and Water Conservation District and the Mosquito Abatement District for review and comment prior to approval." Why are these two agencies singled out? Why not also COE, DFG, and USFWS? It might be more realistic to handle this matter through the typical CEQA process.

Page 45, Floodway and Channel Stability Element

Teichert and Murray Burns and Kienlen find no explanation, rationale or justification in the Technical Studies or the draft OCMP which warrants the proposed setback minimum of 700 feet initially and 200 feet after engineering analysis. The verbal explanation that erosion was observed at one location during recent rain events is insufficient to justify a setback governing a reach over 14 miles. Site specific analysis should govern, and as you are aware, Teichert's consultant indicates that a 50-foot setback is appropriate. Velocity and bank composition and distances are not uniform. The proposed

language is too stringent, "..in no event may an excavation be established within 200 feet of the existing channel bank." (Is this going to become a standard applied to all adjoining land use along the creek?) We strongly disagree with the setback language as proposed. Please reconsider this rigid setback requirement.

Page 45, OCMP Vision

"The County strongly supports the creation of an inter-agency task force to resolve flooding and other regional issues related to Cache Creek. The OCMP can be amended to accommodate the changes necessary to implement any such solutions." This is truly becoming an open-ended process. Again, there needs to be enough certainty in the plan on which to base capital expenditures.

Page 48, Action 4.4-7

"Enter into a Memorandum of Understanding with the Yolo County Flood Control and Water Conservation District to provide a regular source of surface water flow in Cache Creek throughout the year, when annual precipitation is sufficient." Has the Yolo County Flood Control and Water Conservation District agreed to this idea? Also, who would pay?

Page 49 Performance standards 4.5-2 and 4.5-3

Setbacks should be site specific. (The County is aware that Teichert's current setback is 50 feet (Storz and Coors) on properties in close proximity to the creek. This distance will not adversely affect the channel stability based on computer modelling.) The proposed performance standard states that under no circumstances shall the setback be less than 200 feet. This is not justifiable or adequately explained, nor does it reflect the intentions of the Technical Study author (for this portion) based on recent conversations.

Page 53, Action 5.4-2

"Revise the A-P Zone to allow for the operation of surface mining on contracted land, in accordance with the provisions of the Williamson Act. The primary purpose of the Williamson Act is to preserve open space, including agriculture, scenic areas wildlife habitat, and recreational uses. Where surface mining operations propose to reclaim sites to one of the above uses, the land may remain in contract." We concur, but the off-channel ordinance should include text which grants/acknowledges conditional zoning of AP to A-1 which becomes effective upon the expiration of the Williamson

Contract. Thus, all are aware that mining and the A-1 zone commence at the conclusion of the non-renewal period.

Page 53, Action 5.4-5

"Assess property taxes on permitted mineral reserves within contracted land, in order to account for the increased value of the property and ensure that the tax incentives associated with agricultural preserves are not misapplied." It is not clear what the intent is of this form of taxation. Is a double tax base being proposed, and is this legal? Please note that as mining areas are opened, that portion of the land's tax base <u>is</u> adjusted to reflect this usage. Property will remain in agricultural production as long as possible prior to mining, and will be reclaimed as soon as possible thereafter.

Page 53, action 2.4-8

Encourage the transfer of sediment fines...is not economically feasible. Please see previous comment above.

Page 54, Performance standards 5.5-3 and 5.5-4

It is Teichert's understanding from the Short-Term hearing and discussion with the farming community that it is standard practice for the farmer to correct field settling. Please refer to Teichert's comments and those of Dellavalle submitted and incorporated into the Response to Comments on the DEIR.

Please explain the proposed requirement that all A and B horizon soil be ripped to a depth of three feet after every one foot layer of soil is laid down, if compaction is not an issue. These aggregate-laden soils have physical and chemical limitations. Throughout a project site, such as Haller, topsoil will be <u>blended</u> with other topsoil, and soils within the B horizon will be blended with other subsoils. Blending of soils within their own horizons will assist in alleviating or reducing existing concerns such as high levels of boron <u>or firm or compacted strata</u>. A tractor-dozer with a ripper will then rip the layers of soil on reclaimed slope areas, and where necessary (as determined by a certified soil scientist), will further blend the materials to ensure that they do not become compacted. As drafted, the above standards might not be required and would create an unwarranted expense. Please reconsider.

Page 57, Biological Resource Element

The second and third paragraphs discuss percolation and habitat sites; please identify the locations and cost mechanism. It is our understanding that the County Habitat Management Plan's focus is urban mitigation.

Page 58, Action 6.4-4

No mention is made of long term loss and the usage of 2081 agreements.

Page 58, Action 6.4-6

"Adopt guidelines for the development of habitat restoration projects." Who will develop the guidelines--the Cache Creek Conservancy?

Page 59, Action 6.4-9

Regarding the concept of "net gain", participation in and funding of the Cache Creek Conservancy should qualify for this action statement.

Page 59, Performance Standard 6.5-3

Please insert the wording "non-temporary operational". "If any <u>non-temporary operational</u> vertical slopes are inadvertently created..."

Page 60, Performance Standard 6.5-7

Via the CEQA, comments regarding proposed restoration or mitigation plans would be sent to the Corps and to Fish and Game. Is this a redundancy of normal clearinghouse and circulation for comments procedures?

Page 62, Open Space and Recreation Element

Although we recognize the significance of a Cache Creek parkway, the community must realize that this "element" is visionary, and its completion could be thirty to fifty years in the future. Until a Cache Creek Parkway plan is developed, it is extremely premature to discuss dedications as suggested in action statement 7.4-1. Financial compensation and nexus are concerns.

Page 65, Action 7.4-7

"Ensure that active surface mining operations are located away from public areas, such as County roads, residences, and sites reclaimed to recreational use." This action statement negates any good will or disposition to support recreation. Why would the Industry support a goal that would preclude mining adjoining sites? As you are aware, mining operation are visible to the community now and represent a viable economic use. Teichert requests that Action 7.4-7 be edited/removed.

Page 66, Performance Standards 7.2 and 7.5-3

Both are unnecessary and seriously hamper reclamation to recreational pursuits.

Page 66, Performance Standard 7.5-4

Please add, "unless the private dwelling is deemed to be an integral component of the recreational facility".

Concluding Comments:

Teichert appreciates that this is the first of many opportunities to comment on the Off-Channel Mining Plan. Our thoughts are offered in the hope that the plan will reflect balance for all parties involved in this process. Many of the actions, goals, and performance standards require further consideration. We are hopeful that our initial impressions contained herein will be beneficial. If you have any comments or questions, please call (916/484-3319).

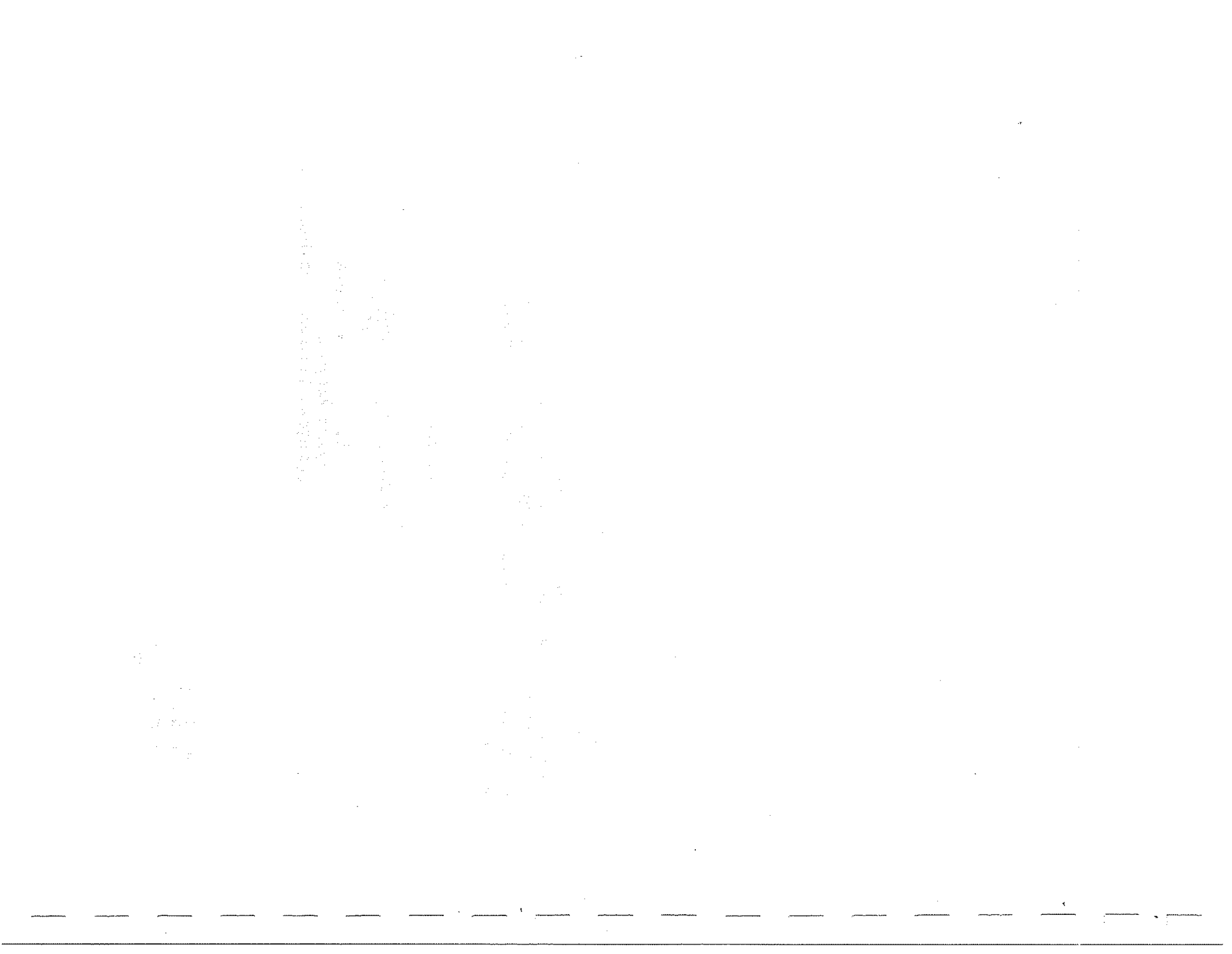
Sincerely,

Lillie O'Keeffe Noble

Lillie O'Keeffe Noble
Project Manager
Aggregate Resource Development

Enclosure

cc: Randy Sater
Dan Reiff
Demar Hooper
John Taylor



Yolo Audubon Society

Post Office Box 886 • Davis, CA 95617

December 2, 1995

David Morrison, Resource Management Coordinator
Yolo County Community Development Agency
292 West Beamer Street
Woodland, CA 95695

Dear Mr. Morrison:

During my reading of the First Draft, Off-Channel Mining Plan for Lower Cache Creek I noticed something which I believe should be brought to your attention immediately. It has to do with the safety of any wet pits which might be constructed. Assurances have been given that the pits will all have sloped walls, and will not have vertical walls leading to a water surface. This seems comforting, until one reads the following paragraph:

> 2.5-16 ' Except where benches are used, all banks above groundwater level shall be sloped no steeper than 2:1 (horizontal:vertical). Proposed steep slopes shall be evaluated by a slope stability study; prepared by a qualified engineer. Slopes below the groundwater level shall be no steeper than 1:1 (horizontal:vertical).

There are several things wrong with this. First, we must be aware that pits with water are dangerous, and constitute attractive nuisances. Fences will not keep out inquisitive children. Some years ago I lived in the San Fernando Valley, which contained several wet pits surrounded by high board fences. In spite of the protection, several tragic drownings of children occurred. Secondly, 2:1 seems like a gentle slope, but it is not. It is in fact quite steep, and people can fall on them and roll into the water. I believe (but I think this needs to be confirmed in the EIR by a qualified safety engineer) that a person who falls into the water adjacent to a slope of 2:1 could manage to get back out. But the paragraph quoted above would permit even steeper slopes than this, based only upon an analysis of slope stability. I believe this should not be permitted. I repeat, even the anticipated slope of 2:1 needs confirmation from a safety standpoint.

But there is a worse problem. A slope of 1:1 would be permitted below the groundwater level, and we know that the groundwater level is subject to significant fluctuations. In a drought year, it is possible that the groundwater level would drop to the point where the water surface is directly adjacent to a slope of 1:1. A person would not be able to climb out of the water when faced by such a steep slope. Please note that a slope of 1:1, i.e., 45 degrees, is generally perceived by a person who is actually on such a slope as being almost vertical. Even though this perception might be dismissed as only psychological, I know from personal experience that even

a slope of 40 degrees is marginal. The back side of Half Dome, in Yosemite National Park, where cables have been placed for security, is at 40 degrees. It is true that skilled mountain climbers have climbed this slope by friction alone, and without assistance from the cables, but most people find this slope to be frighteningly steep, and require cable assistance. If 40 degrees is marginal, then 45 degrees is unacceptable. I believe this paragraph should be modified so that slopes of 1:1 should only occur at a safe margin below the lowest water table that has ever occurred, or is likely to occur. Even with this proviso, I believe the adequacy of even as modest a slope as 2:1 needs to be confirmed by a qualified safety engineer.

Please be sure that these matters are addressed in the EIR.

Sincerely,

John D. Kemper
President

Correspondence should be directed to my home address:

John D. Kemper
1742 Midway Drive
Woodland, CA 95695

(916) 666-6840

December 6, 1995

GENERAL COMMENTS
First draft - Off-Channel Mining Plan
For Lower Cache Creek. October 30, 1995

Encouragement of deep wet pit mining to obtain more aggregate from a small area is a short sighted and unresearched recommendation. The draft has lost sight of the proximity of the MRZ-2 zone layer to the communities of Capay, Esparto, Madison, Woodland and Yolo and has totally failed to consider the potential for serious adverse effects on the groundwater and on the residents of these areas.

Deep wet-pit mining will not yield sufficient removed topsoil to backfill the abandoned wet pit above the seasonal high water table. This will leave the exposed potable aquifer vulnerable to contamination from present and future hazards for generations to come. This presents a serious and unacceptable risk to the drinking water supply for the above mentioned communities. No conclusive evidence has been offered to indicate that this is not a legitimate concern.

Any portion of the mined land that is successfully restored to agriculture would be a viable food producer for centuries to come. Such benefits would not apply to the portion of the mined land converted to wetlands. How can water-intensive use such as wetlands or open water be compared to agriculture which can be profitably conducted with far less water? Since this area is already in overdraft, it requires some pretty obtuse reasoning to arrive at any "net gain" for an enterprise that converts farmland into ponds and wetlands..

Staff has not taken the water demands of wetlands into consideration. The following data is taken from Bulletin #50, Use of Water by Native Vegetation, State of California, Division of Water Resources (Note research was performed at Clarksburg, Yolo County). Tules and cattails are extravagant users of water and grow profusely in the damp areas bordering streams and ponds. They will expand their band of growth as the seasonal water level declines and are capable of growing in water up to depths exceeding three feet. The annual amount of water consumed by these plants, over a trial period of several years, varied from 183 inches per year to 314 inches. August is the highest consumption month for tules and ranged from 23 inches to 52 inches. This should be compared with the average of about 36 inches per year for local row crops. This means that the lowest annual

consumption recorded was five times the amount utilized by agricultural row crops and the highest consumptive level was 8.7 times that of local row crops.

This study demonstrates that water requirements for wetlands far exceeds that required for the same acreage of agricultural production. Since our groundwater supply has long been in overdraft we would be rendering the condition demonstrably worse by converting farmland to wetland.

The discussion on this matter presented in the "Draft" is unduly brief and fails utterly to demonstrate any "net gain", especially when one considers that the displaced agriculture could have produced food for centuries to come with much less water use.

The report relies heavily on plans that may or may not occur in the future such as using abandoned pits for recharge when no officially adopted engineering plans exist. All activity in this direction has been purely speculative, tentative and still in the discussion stage. No in-depth studies have been made on cost-benefit ratios, detailed estimates of construction and operation or methods of financing. The reader is led to believe that this is being presented because "it sounds good" and not because there is sufficient evidence to make it a legitimate proposal.

It is also important to note that since no pilot studies have been conducted the potential for recharge is still unknown for any specific site or location. The "draft" at this stage is placing its trust on what can only be described as "fantasy".

No consideration has been given to the potential for pollution by sewage effluent originating in Lake County. Although the recently approved "Geysers Project" has eliminated most of the concern regarding this potential hazard, the possibility still exists that during periods of heavy rain such as we experienced this past winter, untreated or incompletely treated sewage could still overflow into Clear Lake and thence into Cache Creek. There are 5 wastewater treatment plants around Clear Lake and most of them are currently operating under "cease and desist" orders from the Regional Water Quality Control board because of discharges of raw or partially treated sewage into the lake. Since Cache Creek drains Clear Lake, much of this discharge and the breakdown products will pass downstream into Yolo County. The dissolved constituents such as nitrates and phosphorus can percolate into the underlying aquifer. In areas where the surface soils have been disrupted, little or no filtration will occur. In addition removal of the unsaturated zone

(Vadose zone) removes the chief region for degradation of pollutants. Viruses and bacteria can also penetrate into the aquifer in areas subjected to aggregate removal.

The presence of nitrates and phosphorus in the lake and river waters also provides the nutrients for prolific algae growth in the proposed recharge basins, providing scum, odors and a disagreeable taste to the water in the pits which can then be passed into the adjoining potable aquifer. Recharge pits should not be taken for granted until a thorough engineered study has been conducted to appraise their benefits and risks.

The "draft" is seriously remiss in not at least discussing the public health risks that accompany this proposed project. Intelligent planning demands that public health must be an overriding consideration.

Bob & Mitzi Speirs

Environmental Issue Committee
Western Yolo Grange #423

Lois Linford

Natural Resources Committee
League of Women Voters

Janet Levers

Cache Creek Basin Resource Coalition

December 6, 1995

SPECIFIC COMMENTS

First Draft Off- Channel Mining Plan for Lower Cache Creek. October 30,1995

Pages

4-9 **Discussion on present and future needs for PCC aggregate is skewed to give the impression that the overriding need for Cache Creek aggregate is for concrete whereas it is generally accepted that at least 60% of the Cache Creek aggregate is used in asphalt roads and not Portland Cement Concrete.**

It is not pointed out that a specified percentage of CC aggregate must be crushed to meet State and Local specifications for streets and highway base as well as for the asphalt concrete (Blacktop). The aggregate required for such use could be supplied as easily from the rock outcroppings referred to on page 8, next to last paragraph which must be crushed. Crushed aggregate is superior to washed gravel for road and street construction and is the preferred raw material.

The use of CC aggregate for any and all construction including fill material is a gross squandering of a scarce natural resource, especially when the greatest proportion is being diverted to non-Portland Cement Concrete uses. High quality streets and highways are constructed on a daily basis using aggregate inferior and cheaper in cost to CC aggregate.

The "Draft" is dishonest in attempting to imply that CC aggregate is being used entirely for PCC. The DMG made its inventory of the CC reserves for the identification of high quality PCC aggregate and not for a source of road building material. Road building can satisfactory utilize more abundant lesser quality aggregate.

9 **The Draft assumes that it is the duty of Yolo County to supply CC aggregate to the entire Sacramento-Fairfield market at a fixed percentage rate and makes no provision for Yolo County's specific needs. The day will surely come when Yolo County will have to import its PCC grade aggregate simply because we have shipped the material recklessly out of the county with no consideration for our own future needs. This will impact our local air quality in the future.**

9 & 11 IT IS ASSUMED THAT ALL LANDS WITH RESERVES CAN BE MINED

The Draft makes the unlikely assumption that all lands with aggregate reserves can be mined. It is just as likely that many landowners would not permit their land to be mined. The Planning Department has recently polled all of the landowners within the "Study Area" on whether they wished to make their land available for mining. It would seem that the results of the poll are not reflected in the Draft's projections of the amount of aggregate that might realistically be available. The Draft seems to be removed from reality in this respect.

All landowners within the "Study Area" were required to furnish a map of their property and required to state if they were interested in future mining. If they were interested they would be required to help pay for future EIR's. This requirement should be documented in the draft since it would be a significant issue for private property owners.

11 WAS CACHE CREEK DECLARED TO BE A SIGNIFICANT MINERAL RESOURCE BY SMARA?

The Draft states that CC is a significant regional resource. This should be checked - memory recalls that the DMG made no official declaration (Special Report 156) but merely identified suspected deposits.

Special Report 156 is a document of Mineral land Classification and does not indicate that Cache Creek deposits have officially been declared as "regionally significant". See Foreword section.

16, p1 100 YEAR FLOOD PLAIN NOT YET DETERMINED.

Do documents presently exist that delineate the 100 year flood plain on Cache Creek? Earlier EIRs state that the SDR and the COE have not established 100 year flood plains. The CCRMP consultants have made no such findings (McArthur).

16, last p WHY WILL A PROGRAM EIR FOR OFF-CHANNEL MINING DEAL WITH CHANNEL STABILITY.

By definition off-channel mining will be removed from the Cache Creek Channel - how will channel stability be affected?

18, last p <u>50 YEAR AGGREGATE NEEDS NO LONGER REFERS TO PCC GRADE</u>

Special Report 156 deals with the identification and conservation of source PCC aggregate. This paragraph has dropped the PCC classification and merely states "aggregate needs". This means that a scarce resource may be used for any aggregate need when a lesser quality aggregate would suffice. This is not conservation of a scarce resource!

25, p1 Here again the term PCC aggregate has been dropped and "aggregate" substituted.

This first paragraph states that 4,500 acres must be rezoned to meet the aggregate needs for the next 50 years. This makes the unrealistic assumption that all landowners will surrender their land on the command of the mining industry. Such rash assumptions at least need to be explained using a degree of reason.

The pervasive thrust of the whole presentation, thus far is that aggregate needs shall be met regardless of the feelings of the landowners.

25, zone 1 Zone 1 upstream of the leveed section already has sufficient channel capacity - see recent reports and EIR's.

27, zone 3 Zone 3 does not address the severe bank erosion in this reach - see recent reports.

27, zone 4 Zone 4 - What evidence has been developed that this reach is best for groundwater recharge? As of November 1, 1995 this reach had a low flow thus indicating little or no recharge!

27, Goals Does not differentiate between wet pit and dry pit mining. Does not specifically address the preservation of water quality. see 3.1-1

30, 2.4-5 Rezoning of land necessary to meet aggregate demands for the next 50 years for the county is in conflict with the Drafts avowed intent to furnish aggregate for "regional needs"! Which is it- County needs or regional needs? The Draft is sloppy in not being consistent!

30, 2.4-8 Poorly written - does not balance "net gain" against losses. Net gain in one area may not offset other losses on the same project.

31, 2.4-12 Wet pit mining should not be encouraged unless it can be shown conclusively that there is no threat to the potable aquifer and that the depth of excavation does not exceed the backfill requirements provided by the topsoil removed in order to place the reclaimed land high enough above groundwater so that crops can be grown.

32, 2.5-5 Haul roads (County) should be improved before hauling begins not within one year as stated. The hazard begins with the first truckload of gravel!. The County would be named in any lawsuit in which it was alleged that the roadway was substandard.

32, 2.5-7 Heavy equipment needs to be defined- stationary equipment, trucks, ?

33, 2.5-10 Why is it not appropriate to have lighting where the private road meets the County Road - this would be a safety measure!

34, 2.5-17 Department of Fish and Game and RWQCB have control of this matter.

34, 2.5-18 Does not take into account the fact that the groundwater fluctuates through the year - specify highest seasonal groundwater level.

34, 2.5-20 Abandoned haul roads should have gravel or pavement removed before ripping.

34, 2.5-22 Why should there be permanent piles of waste or overburden? All such items should be removed after mining.

36, 3.1 The Draft is in error Boron comes from Bear Creek Watershed. The Rumsey Hills saline Springs generally flow less that 2 gpm and most never reach Cache creek.

The diversion of surface waters has increased (not reduced as the Draft states) the level of dissolved salts in the aquifer. Surface waters are spread over a great area which in turn recharges the aquifer.

36, last p "The Technical Studies" did an unacceptable job in researching water quality data - much available data was not reviewed!

38, p2 How does wet pit recharge more than offset evaporation losses when the annual evaporation averages 67 inches per year and the rainfall is about 18 inches per year?

The Draft is remiss in not explaining that the evapotranspiration of shallow water and wetlands is several times that used by agriculture. Wet pits and wetlands contribute to the overdraft of the aquifer more than agriculture on a per acre basis.

40, 3.4-8 Does not consider the seasonal fluctuation of the groundwater table - should specify distance above the highest groundwater (Seasonal).

40, 3.5-1 What happens if the reclaimed pit does not function as planned in regards to movement of the underground water? How will it be remediated? How long is the warranty?

Comment: The grand objectives of 3.5-1 are beyond the technical capabilities of monitoring as now practiced in this area. It would take several seasons of measurements to establish design criteria. This is too technical for Yolo County to administer.

Where has this been done before?

41, 3.5-4, p2 The constituents to be tested for water quality fall far below that required by the "Mandatory Health Standards by the State of California, Dept. of Health Services". The "Draft" lists only 6 constituents to be tested for while the DHS requires over 50. The Draft lists no tests for organics or pesticides or taste. Evidently the authors of the Draft have not consulted with the Yolo County Department of Environmental Health!

Monitoring once a year for groundwater quality is of little value; it should be done on a monthly basis in order to pinpoint an event that may have adversely affected the water quality.

41, 3.5-5 Toilets and septic tanks must be approved by Yolo County Environmental Health Department.

41, 3.5-7 How will the mining operator know in advance what pits may be used for groundwater recharge? The YCFC&WCD does not presently have any officially approved plans for any pits not yet in existence.

This removes the choice from the operator of wet pit or dry pit if the YCFC&WCD elects to designate the operator's site as a future recharge pit. The economics of the deposit may require wet pit mining to be viable. This is not an equitable concept.

41, 3.5-8 This is already governed by the State RWQCB and a discharge permit must be obtained.

42, 3.5-9 No sediment standards of removal are specified. This is a meaningless requirement if no performance standards are specified (at least by reference).

42, 3.5-11 The State has pre-empted this field and has complete jurisdiction. The county can not prohibit what the State might allow.

42, 3.5-15 Any recharge water entering Cache Creek in the gaining reach will travel downstream into the losing reach and then will recharge. No water will be lost!

47, p2 The improvement of the channel for smooth transition through bridge locations increases the flood hazard downstream of Yolo by removing the instream storage that is caused by backwater damming effect upstream of the bridges. This in turn allows a higher crest to pass Yolo and into the narrowed leveed section that the COE now finds to be seriously threatened.

Streamway improvement in the "Study Area" may well adversely impact the channel capacity downstream! Has the COE blessed this dubious concept?

47, 4.2-2 & 4.3-3 The Goals cited may not be compatible with the reach downstream of Yolo as explained immediately above.

47, 4.3-2 & 4.3-2 These objectives must also be applied from Yolo to Cache Creek Settling Basin as described in the discussion above.

The Streamway and Channel consultant has stressed that Cache Creek must be managed as a system since what happens upstream is generally reflected downstream. Arbitrarily removing the reach from Yolo to the Settling Basin is a very serious matter considering that the original concept of this whole study was to extend from Capay Dam to the Settling basin, so that the Sacramento Valley portion of Cache Creek could be viewed as a unit in a separate geomorphic province.

48, 4.4-6 Does not speak to sediment removal which is the greatest during high flood events and which will quickly seal off the pit from percolation to recharge.

48, 4.4-7 Does not consider that a permanent flow down Cache Creek during the summer would give an adjacent farmers the chance to pump this water out of the creek for irrigation and hence starve the low-flow channel. Riparian rights may be involved.

49, 4.5-1 Does not recognize that the aggregate deposits south of Cache Creek as depicted by DMG Study 156 near Yolo are in an unleveed section whereas the north bank has a COE levee. This is an area where Cache Creek habitually overtops its channel (Most recently in 1995). To place a 100 year flood protection would require extensive COE approved levees and would amount to a substantial project at considerable expense. A short term 100 year levee around a mining site may force flood water onto adjacent lands.

49 4.5-1 and 4.5-3 appear to be in conflict - language needs to be clarified.

49, 4.5-5 This is controlled by DFG & RWQCB.

52, 5.4-1 Why is Capay and the planned subdivision near the Fliers Club not included in the community spheres of influence?

53, 2.4-6 and 2.4-8 misnumbered and 5.4-7 is missing! This is confusing.

53, 2.4-6 Does not account for the increased threat of contamination to the potable aquifer by exposing it to an unprotected status. It is possible to mine to a depth where the removed topsoil is not sufficient to backfill above the water table.

53, 5.5-2 Does not speak to location of topsoil stockpiles such as relationship to neighboring properties, roads, etc.

54, 5.5-3 Where will the borrow topsoil that is necessary to bring settled areas back to the original specified reclamation plan be acquired?

57, 6.2-2 This Goal extends to the Cache Creek Settling Basin while other Goals recited earlier end at Yolo - why does this goal extend further downstream?

58, 6.4-2 Wetlands have a yearly water consumption several times that used by agricultural production. How do you justify this extravagant use of water in an area where recharge is not sufficient to offset overdraft of the aquifer? The overdraft of the aquifer requires additional use of non-renewable energy resources and a lowering of the water quality. Where is the net gain?

58, 6.4-7 "Tall banks" really means near vertical banks for swallow nesting - this is counter to engineered sloping that is required elsewhere in this "Draft" to establish stability of embankment. Loamy and sandy soils are not stable "tall banks".

59, 6.4-9 This action assumes that all off-channel mining will be on property adjacent to the creek. It is quite possible that another parcel under a different ownership may be between the land to be mined and the creek. Miners cannot be expected to perform restoration on land over which they have no control.

59, 6.5-3 See comment covering 6.4-7 above

59, 6.5-4 25 feet is too narrow - haul roads are apt to be used in this setback

59, 6.5-5 Must be approved by Sacramento-Yolo Mosquito District. Shallow protected inlets protect the mosquito egg rafts from being broken up by wave action of the wind as occurs in open water.

December 15, 1995

GENERAL COMMENTS

First Draft Off-channel Mining Ordinance for Lower Cache Creek. October 30, 1995

1) Special Report 156 shows the MRZ-2 zone to be less than one mile of Woodland and the MRZ-1 zone to be less than 1/2 mile. The MRZ-2 zone touches Esparto and includes Capay. This means that future wet pit mining could well be in the cone of depression created by the drinking water supply wells of these communities. The City of Woodland has a documented instance of where a domestic well at a service station was contaminated with sodium chloride beyond State Standards by an animal hide processing plant approximately 1/4 mile distant. This contaminated plume flowed upgrade to the underground water contours and arrived at the service station in a short time interval. This situation was verified by the Yolo County Environmental Health Services.
2) This incident conclusively demonstrates that the impairment of the quality of the potable aquifer can happen with catastrophic suddenness and the yearly sampling schedule required by the Ordinance is useless.
3) Should the communities of Yolo, Madison, Esparto and Capay suddenly be required to treat their water supply, funds and equipment would certainly not be available on short notice.
4) It is indeed unfortunate that the whole process thus far has never had the expertise of an expert on public water supply.
5) Where is the agreement to hold the County harmless in any damages claimed against the operator and to pay the County's legal costs incurred in case of litigation?
6) The entire ordinance needs to be reviewed to bring the numbers (distances) into agreement on buffer distances for various items. Some appear to overlap or be in conflict and some vary for no apparent reason. All should be reconciled to the missing maps.
7) The apparently unresearched recommendations to encourage wet pit mining over dry pit mining to obtain more aggregate from a smaller area is a dangerous recommendation which rests on no prior experience along Cache Creek. • Can permits be transferred?
8) How long are reclaimed sites maintained?

9) **If reclaimed sites are sold, who is responsible for claims for damages to adjacent lands? How can the County isolate itself from such claims?**

10) **Can the operator change his method of excavation (scraper to hydraulic dredging) without going to the Planning Commission?**

11) **Is there a depth limitation to wet pit mining?**

12) **How close to the sewage ponds of Esparto and Madison can a wet pit be excavated? There could be a potentially great threat to the water supply of these communities.**

13) **Can wet pit mining be conducted within the sphere of influence of a community?**

14) **If a parcel is taxed for having a gravel deposit which later is proven incorrect, is a refund due? The County has identified the gravel bearing sites by its zoning and maps but has done no subsurface exploration for confirmation. Lands will be speculated in because of the County's indications that viable gravel deposits exist.**

Bob & Mitzi Speirs

Environmental Issue Committee
Western Yolo Grange #423

Lois Linford

Natural Resources Committee
League of Women Voters

Janet Levers

Cache Creek Basin Resource Coalition

December 15, 1995

SPECIFIC COMMENTS

CHAPTER 4. OFF-CHANNEL SURFACE MINING ORDINANCE

First Draft October 30, 1995

Pg	Sec.	Comments
2	10-4.301	This section would not prevent a dry pit mine completed prior to Jan. 1/1/1976 from being re-opened as a wet pit mine without obtaining a permit.
2	10-4.304	Does not specify the time limit for the Director to notify the applicant of exemption status after the applicant has supplied missing information from the first inadequate application
3	10-4.401	This section is to ensure that the public health and safety are protected. The protection of the aquifer, which is a natural resource, is not mentioned.
4	10.4.407	Any Co. Road improvement shall be completed before the first load of aggregate is hauled. This is when the County's liability begins and it will certainly be named in any lawsuit alleging a deficient roadway.
4	10-4.409	Cannot drain into Cache Creek without a permit from the DF&G & RWQCB
4	10-4,410a	Should read "shall be vegetated or enclosed or covered"
5	10-4.414	Groundwater tests shall include the primary Standards, Secondary Standards and Additional constituents as required by the "Health Standards established by the State of California Department of Health Services." These are the requirements for "Safe Drinking Water" as established by EPA for California. Water quality shall be monitored on a monthly basis in order to identify any adverse change during a specific time period. This is needed to isolate and identify any incident that may affect the potable aquifer.
5	10-4.415	The DF&G must approve habitat plans.

5	10-4.417	The public right-of-way shall be illuminated where the mine access road enters the County maintained road. This is an accepted safety measure.
5	10-4.422	Shall specify "proposed to extend below the seasonal high water table"
6	10-4.423	The Yolo County Office of Environmental Health must approve all septic tank locations.
6	10-4.426	Should specify "Seasonal High Groundwater Level".
8	10-4.431	This is already regulated by the RWQCB and the DF&G and permits must be obtained. This field has been pre-empted by the State.
10	10-4.502b(2)	see comment on pg. 5, 10-4.414
13	10-4.504	Does not specify what action the Director must take in the event a corrected application has been re-submitted and found to be deficient.
13	10--4.506	Why is there no public access to the Draft EIR and opportunity to comment?
13	10-4.507	Only property owners within 300' are to be notified. This does not agree with the distance isolation requirements that are specified for the nearest dwelling which is more.
14	10-4.507	The pages of the County Assessor map books are clearly stamped that they are <u>not to be used for Legal Purposes</u> - public notices are a legal requirement.
14	10-4.508	Does not require the Director to respond directly to the person making a written comment Does not specifically state the disposition of the Director's written response. Who gets it? Does the commentor get to reply to the Director's written response? Is the Director the sole judge of the adequacy of his own response -- it would seem that the Planning Commission should judge?

		Last Par. should read "as shown in Zone A of the Flood Insurance Rate Maps (latest revision) issued by ---- Why is the Yolo County Public Works Department not notified?
15	10-4.510	Is there an appeal process? It would seem that the public is denied.
17	10-4.701 (b)	Is the "total amount of minerals produced" determined before or after processing (there is about a 25% waste loss)? Why is the term "minerals" suddenly used when all prior references are: sand and gravel, aggregate or PCC aggregate? If the sediment removed from the aggregate is later sold as topsoil, how is it accounted for?
	10-4.701(c)	The County and the Cities also claim credit for recycled asphalt materials and concrete. Is this being claimed twice? How and who does the score keeping? Is the amount reported in hundred weight or tons? Is it ever weighed and by whom?
	10-4.701(d)	How is a "qualified hydrologist" defined - most are self ordained? A hydrologist is not qualified to make determinations on the "safe drinking water" law, this must be done by the State of California, Dept. of Health Services. These matters should be cleared through Yolo Count Environmental Health Services. This reporting should be on a monthly basis with the test performed by a State Certified testing laboratory with an annual summary. The Staff has evidently not sought the advice of the DHS on this subject. Staff appears to have little knowledge or experience in this area. <u>The protection of the potable aquifer far exceeds any other concerns in the whole mining issue!</u>
17 & 18	10-4.701(e & f)	"qualified agronomist" and "qualified biologist" need to be defined. All will claim that they are qualified when they apply for the job. Perhaps the Director can prequalify applicants.

	10-4.701(g)	Geologists and geotechnical engineers should have a State license which is current.
	10-4.701(k)	This should include a list and description of any and all complaints received by the operator and the Department from the public and the disposition of same - remedial measures taken, etc. Description and copies of reports from other agencies received by the operator during the year regarding compliance with their conditions - remedial action taken, etc.
18	10-4.702	3rd line should be corrected to read "within thirty (30) days-- not "thirty (60) days" as shown
18	10-4.702	Does not specify a time limit for the corrected annual report to be re-submitted to the Director.
18	10-4.703	A two year interval for public hearings is too long! Contamination of the potable aquifer and any domestic wells deserves immediate public notification. The State DHS requires that purveyors of drinking water notify its customers immediately! The public certainly is entitled to know if their drinking water has been threatened and what remedial safeguards have been taken There should be an immediate public notice of any infraction that threatens the health, welfare and safety of adjoining properties.
19	10-4.901	The County Counsel is the only one legally qualified to rule on whether a request for confidentiality is valid.
20	10-4.1001	A person with "appropriate standing" needs to be defined, otherwise the Director has limitless discretion. COMMENT: there should be a "DEFINITIONS OF TERMS" at the beginning of this ordinance inasmuch as the use of terms seem to be interchangeable in some instances.
20	10-4.1003	"Appropriate legal standing" needs to be defined - note that this is different from section 10-4.1001 commented on above.

21	10-4.1005	How can new evidence ever be presented - by what procedure? In matters of public health, safety and welfare, new evidence might require prompt remediation!
21	10-4.1006	The following should be added at the end of the sentence: "by the appellant"
21	10-4.1007	Can an appeal be made to the State Mining and Geology Board on any basis other than that the board has failed to act within a reasonable time of application?
21	10-4.1101	Why is the County Environmental Health Services not called on to ascertain public health compliance with the permit? The Director is not licensed as a qualified Sanitarian to make such determinations.
22	10-4.1102	An annual inspection is not often enough to detect threats to the potable aquifer. Such threats require early identification and immediate remediation!
22	10-4.1103	The annual inspection should include any and all actions and correspondence from other regulating agencies involved such as RWQCB, DFG, DHS, etc.
22	10-4.1105	State and local agencies should also receive copies of notices of violation that involve their jurisdiction such as RWQCB, DFG, DHS, Cal-OSHA, CHP, YC Environmental Health Services.
22	10-4.1106	Violations such as water quality must be remedied immediately, not in 30 days. The Department should be notified of any cease and desist order issued by the RWQCB or DFG and act upon them immediately

December 18, 1995

MEMORANDUM

To: Dave Morrison & Heidi Tschudin
Yolo County Planning Department

Subject: Concerns - Pollution Potential of Wet Pit Mining over an aquifer

Permits are being considered for gravel extraction activities involving wet pits, some of which may penetrate up to 50 feet into a potable aquifer, resulting eventually in a series of small lakes situated alongside an intermittent stream with a high tendency for seasonal overflows. Some of these pits may be eventually used for groundwater recharge. The anticipated yield of gravel is about 5 million tons per year over the next 50 years, approximately 5% of California's total projected needs. This will be taken along a 15 mile reach of Cache Creek whose bed has already been drastically lowered by the removal of 100 million tons of aggregate during the past 100 years. The aquifer involved is the sole source of potable water for municipal and domestic use as well as water for agricultural and commercial uses.

Some local residents are concerned about increased risk of groundwater pollution to the from the wet pits. Such pollution could occur as a result of creek overflow or entrapment, bacteria growth in the pit water, agricultural runoff into the pit, illegal dumping, and similar hazardous activities which may occur in or around the pit when mining is completed and there is little or no surveillance.

We would like to request that information relating to groundwater monitoring in or near aggregate mining sites in similar situations be made available. Any published studies documenting the safety of this aggregate mining process should be listed so that the total risks involved in such activities can be evaluated. Also information should be provided concerning the capacity of dry pits, shallow wet pits, or deep wet pits to pollute groundwater? What characteristics could be engineered into the pit design in order to assure safety and beneficial use for long periods into the future?

What evidence is there that movement or circulation of pit water will occur instead of stagnation? How does one ensure that the wet pits have the characteristics of a beneficial wetland, rather than a swamp or sinkhole? How can one be assured that adequate filtration of pit water will occur as it becomes incorporated into the groundwater? How far can biological agents such as bacteria, viruses, and other pathogens be transported in groundwater seeping from the gravel pit? What evidence is there that chemical and biological pollutants will be eliminated or neutralized as they pass from pit water to groundwater to well water and eventually to domestic drinking water?

Bob & Mitzi Speirs
Environmental Issue Committee
Western Yolo Grange #423
Lois Linford
Natural Resources Committee
League of Women Voters
Janet Levers
Cache Creek Basin Resource Coalition

PETE WILSON
GOVERNOR

State of California

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

LEE GRISSOM
DIRECTOR

December 18, 1995

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

RE: Notice of Preparation
SCH #: 95113034

Dear Mr. Morrison:

This confirms that the State Clearinghouse received and circulated the referenced Notice of Preparation for the Cache Creek Off-channel Mining Plan. The review period closed December 15, 1995. State agencies were directed to respond directly to your agency with any comments on the NOP.

Please feel free to call me at (916) 445-0613 if you have any questions.

Sincerely,

ANTERO A. RIVASPLATA
Chief, State Clearinghouse

STATE OF CALIFORNIA - THE RESOURCES AGENCY PETE WILSON, *Governor*

DEPARTMENT OF CONSERVATION
DIVISION OF ADMINISTRATION
DIVISION OF MINES AND GEOLOGY
DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES
DIVISION OF RECYCLING

801 K Street
SACRAMENTO, CA 95814-3528
Phone (916) 445-8733
FAX (916) 324-0948

December 18, 1995

Mr. David Morrison, Resource Management Coordinator
Yolo Community Development Agency
625 Court Street, Room 202
Woodland, California 95695

Re: Notice of Preparation (NOP) for the Off-Channel Mining Plan (OCMP)

Dear Mr. Morrison:

The Department of Conservation, which monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act, has reviewed the above NOP. The NOP notes that the OCMP addresses resource extraction in off-channel areas of Cache Creek and recommends that all commercial mining within the creek be concluded upon commencement of long-term mining off-channel. The OCMP also identifies 300 million tons of aggregate on 3,100 acres of the 17,200-acre study area. The Draft Environmental Impact Report (DEIR) will address agricultural history, Williamson Act issues, agricultural conversion, and constraints to agricultural reclamation.

The compatibility of aggregate mining activities with onsite or adjacent agricultural lands under Williamson Act contract should be determined in accordance with provisions in the Act and discussed in the DEIR. Assembly Bill 2662 (Chapter 1251, Statutes of 1994) amended the Act to clarify land use compatibility. Copies of these criteria and summaries are enclosed.

The Department appreciates the opportunity to comment. If I can be of further assistance, please phone me at (916) 445-8733.

Sincerely,

Thomas A. Campbell
Environmental Analyst

Enclosures

cc: Kenneth E. Trott, Office of Land Conservation
Tom Uller and Fritz Durst, Co-Presidents, Yolo County RCD

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

DEPARTMENT OF TRANSPORTATION
DISTRICT 3
P.O. BOX 942874 MS 41
SACRAMENTO, CA 94274-0001
TDD Telephone (916) 741-4509
FAX (916) 323-7669
Telephone (916) 327-3859

December 18, 1995

GYOL068
03-YOL-505
Cache Creek Off Channel Mining Plan
NOP
SCH #95113034

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

Dear Mr. Morrison:

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

COMMENTS:

Caltrans has reviewed the First Draft "Off-Channel Mining Plan" (OCMP) for lower Cache Creek prepared by Yolo County. Caltrans commends the County for preparing the plan on the "key assumption that the creek must be viewed as an integrated system, with an emphasis on the management of all of Cache Creek's resources, rather than a singular focus on the issue of mining". Caltrans also supports the concept of adopting "new designations that will allow the County to regulate the creek in a more systematic and responsive manner", showing that the County recognizes the dynamic relationship between in-channel and off-channel mining. In addition, Caltrans has the following specific concerns:

- Will the Cache Creek Off Channel Mining Plan (OCMP) focus on the ramifications of high stage-induced failure of perimeter levees on upstream and downstream structures (bridges)?

- Action 4.4-6 allows "controlled pit capture" during catastrophic flood events. Any pit capture should evaluate potential impacts at the bridges. Enclosed for your information is a letter from the FHWA warning that damage to bridges attributable to mining activities may not be reimbursable with Emergency Relief funds in the event of damage during storms.

- Performance Standard 4.5-2 states that excavations need only maintain a 200 foot setback from the existing active channel bank while 4.5-3 mandates a 700 foot setback. This apparent discrepancy should be clarified.

- We recommend overlaying Figure 3 (Channel Boundary) with Figure 4 (Off Channel Mining) to see the relationship.

- We recommend delineating the beginning and end of each bridge to show its relationship to the streamway influence boundary.

- The impacts of mining truck haul routes on the structural integrity of local and regional roadways should be analyzed. Any significant change in the Traffic Index for a roadway may require mitigation.

Please provide our office with the draft EIR for this OCMP. If you have any questions regarding these comments, please contact Ken Champion at 916-324-6642.

Sincerely,

JEFFREY PULVERMAN, Chief
Office of Transportation
Planning - Metropolitan

cc Dana Lidster, State Clearinghouse

December 20, 1995

Heidi Tschudin
Tschudin Consulting Group
FAX 444-0227

Dear Heidi,

Please accept the following comments on the Draft OCMP from the City of Woodland.

The part of the Mineral Resource Zone of greatest concern to the City of Woodland is the area east of the Plainfield Ridge identified as Subreach 3 in *Technical Studies and Recommendations for the Lower Cache Creek Management Plan* (Tech Studies). The groundwater contour maps included in the Tech Studies (and other studies) show that groundwater flow is from Subreach 3 towards the City of Woodland. Contaminants that might enter the groundwater in Subreach 3 would also move towards Woodland Municipal wells. As you know, the City of Woodland is totally reliant on these wells to supply drinking water to Woodland residents. This water must meet exacting drinking water standards set by the U.S. EPA and the California Department of Health.

Due to the heavy reliance on groundwater in and around the City of Woodland, a cone of depression develops, especially during the summer months when water demand increases. Although lateral groundwater movement is generally slow, the cone of depression results in an increase in the hydrologic gradient and a subsequent increase in movement in groundwater from the surrounding area toward City wells.

The Woodland General Plan identifies groundwater as the source of drinking water supplies for Woodland residents through the year 2015. Surface water supplies are being looked at as an alternative future water source, but it is almost certain that even if some surface water is acquired in the future, the City would still rely on groundwater, especially during times of drought when surface supplies are not available.

Increasing competition for water supplies throughout California will make it extremely difficult and expensive to obtain additional water supplies in the future. It is estimated that even if adequate surface waters were available, treatment costs and facility development and operation would raise water rates in Woodland substantially. The cost to abandon groundwater and develop surface water supplies in the future would most likely result in an even greater cost to Woodland.

Consequently, we are concerned about activities that may have the potential to adversely impact either the quality or quantity of groundwater resources in the vicinity of Woodland and would like to submit the following concerns and recommendations for the OCMP.

Open wet pits pose a potential hazard to groundwater quality for at least two reasons. First, the overburden with its filtering capacity has been removed, any accidental or intentional spill would

result in the contaminant entering the aquifer directly. Second, since there is little or no travel time between the occurrence of a spill and the time it enters the aquifer, there is no opportunity to prevent aquifer contamination.

One of the stated goals (2.2-3) is to "Eliminate or minimize hazards to the public health and safety that are associated with surface mining operations." An adequate setback between gravel operations and municipal water wells is necessary as you indicate. We do not have a good feel for what this distance should be but we feel the 1,000 foot figure is too low. In addition to monitoring for water quality, we feel there needs to be a coordinated and financed pollution mitigation plan to deal with aquifer contamination in the event of accidental or intentional contamination near municipal water supply wells.

3.1 OCMP Vision "... the county should designate appropriate staff to assemble and analyze the data generated by mines and other sources, so that long term trends and influences can be identified and necessary responses implemented." The City of Woodland has extensive groundwater quality data and we would like to have these and future water quality data from City wells included in the recommended analysis to help determine and analyze any long term trends.

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." What are the procedures in case contamination does occur?

3.4-2 "Coordinate with Yolo County Flood Control and Water Conservation District in developing an integrated groundwater recharge plan for Cache Creek, in order to increase the available groundwater supply for municipal and agricultural uses." If municipal uses are meant to include the City of Woodland, we would like the recharge plan to be coordinated with the City of Woodland, not just the YCFCWCD.

3.4-4 "... The data base should be expanded ... so that it can be used as reference material for the Water Resources Agency ..." Are you referring to the Water Resources Association of Yolo County?

3.5-4 "The analysis of groundwater shall include ..." We would like to see organics included in the list of substances tested for. We also feel that in the near proximity of municipal drinking water wells, the testing schedule should be more often (four times a year) and should coincide with the application of agriculture related chemicals that may enter open wet pits.

Thank you for your consideration, we look forward to working with you and the County to ensure development of a OCMP and CCRMP that best suites the needs of those involved.

Sincerely,

Harrison Phipps

Harrison Phipps
Water Resource Specialist

29 December 1995

File No.: 95-YO-87E

re: OCMP EIR

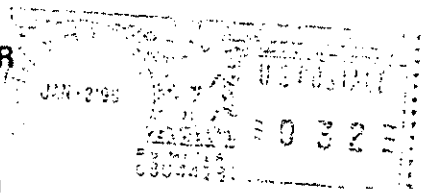
Dear Staff:

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

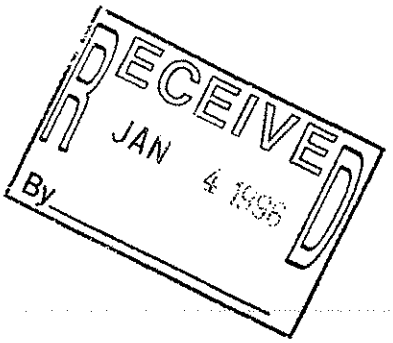
Sincerely,

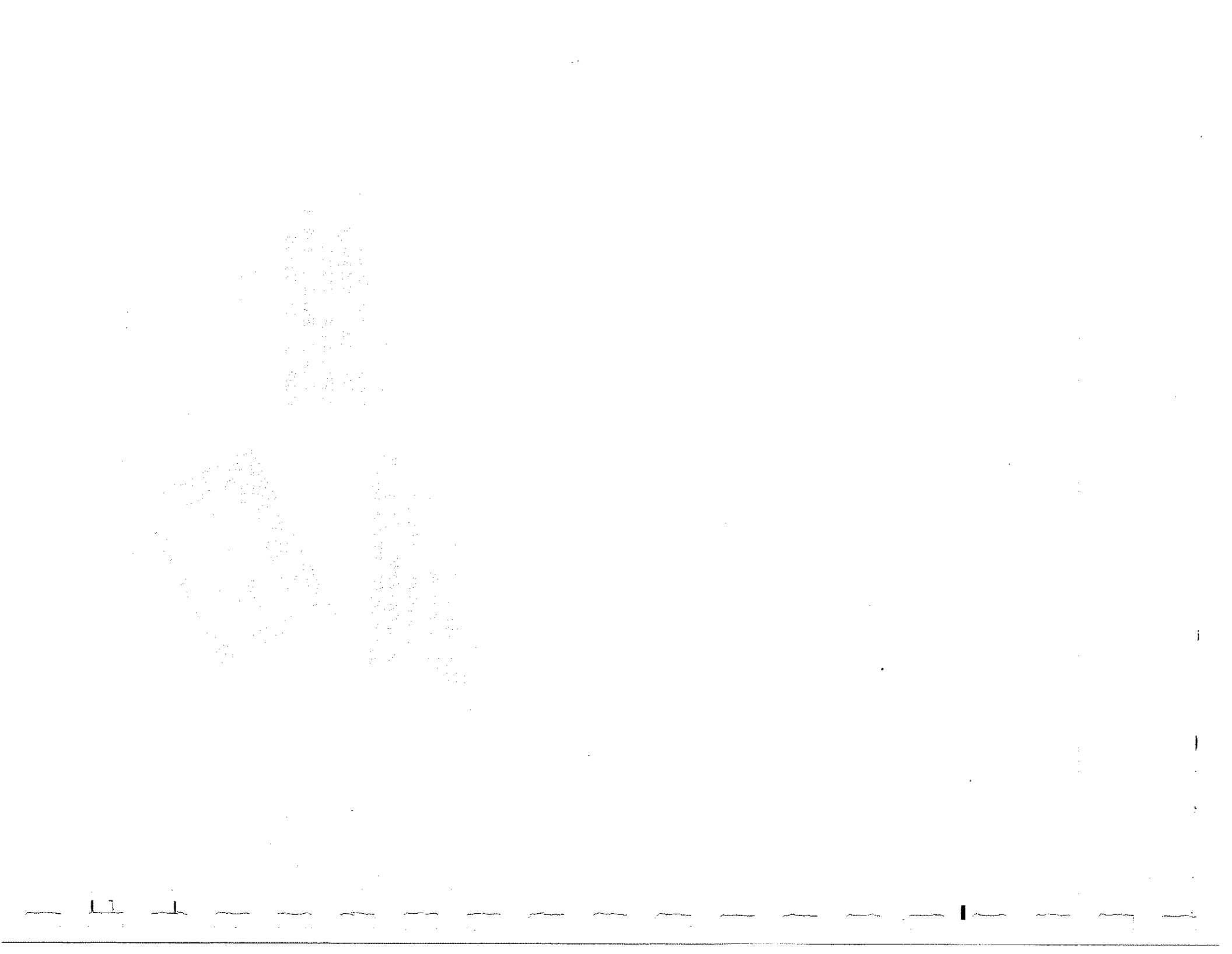
Leigh Jordan
Coordinator, NWIC

NORTHWEST INFORMATION CENTER
OF THE HISTORICAL RESOURCES
INFORMATION SYSTEM
Sonoma State University
1801 East Cotati Avenue, Bldg. 300
Rohnert Park, CA 94928-3609



DAVID MORRISION
RESOURCE MANAGEMENT COORDINATOR
YOLO COUNTY COMMUNITY
DEVELOPMENT AGENCY
292 WEST BEAMER STREET
WOODLAND CA 95695





STATE OF CALIFORNIA - THE RESOURCES AGENCY PETE WILSON, *Governor*

DEPARTMENT OF CONSERVATION
STATE MINING AND GEOLOGY BOARD
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Sacramento, California 95814-3528

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Raymond Krauss
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FACSIMILE LINE: (916) 324-0948

January 25, 1996

David Morrison
Resource Management Coordinator
Yolo County Community Development Agency
Woodland, California 95695

Dear Mr. Morrison:

The State Mining and Geology Board is in receipt of your January 16, 1996 letter requesting the Board's review of Yolo County's Off-Channel and County Surface Mining Ordinances for compliance with the Surface Mining and Reclamation Act (SMARA) requirements.

The ordinances are currently being reviewed and the Board will send a letter of its preliminary findings to you in the near future. Thank you for the opportunity to review and comment on this SMARA Ordinance.

Sincerely,

John G. Parrish, Ph.D.
Executive Officer

1-28-96

Dear Mr. Morrison,

We will be out of town during your scoping sessions but that doesn't mean we are not concerned. It looks like the latest gravel project will be right in front of our house & practically on top of us.

How will this effect our property values? Will we have to sit it out for 30-to 50 years before we can sell & get a decent price for our land? all our money is invested here. This is not addressed in your potential impacts.

How about it?

Mr. & Mrs. M. Y.
15940 Co. Rd. 87
Esparto, Calif.
95627

1-916-7873803

(17)

Feb 1, 1996
Walter Storz

Time

Why all of a sudden we are getting pushed with time? We was given the impression during passing of short term application we would have more time for the long term E.I.P. Why are we not going through the usual process by going through the Planning Commision? This project is far too important for five people that do not live in the area to make these decisions. Not only should they go through the planing board, but all people in Cache Creek basin should be notified what is going on; then go through planning board. Once these pits are mined there is no going back. They will be there for centuries to come.

Why did we not hear that this project was going through a permit ~~process~~ Process till just recently? Making plans for centuries to come is far too important to force this thing through by the Industry. People in the C.C. basin should have time to participate.

Value of property next to pits will go down. To make my point. If you were looking for land two parcels in consideration, the same soil which would you buy the one next to pit or one in the open level land?

Regard of Channel Gravel Mining

Question! What will happen if the County down the years want to put in dams to fill the upper Aquafer? Before gravel mining there where years the water table, in the winter months came up to 20 ft. level in the Tickert, Granit, and Lone Star pit area. In my area west of Rd. 94B it use to be 15 ft to water. Now they are dry (3 wells). Last year was the first year they had water in them. (A very wet year) In the Granit area, the water table came up to 35 ft when C. C. ran bank full. In 24 hrs. as C. C. drop so did the water level in the wells went down. I mention mention this to show that this upper aqua could be ~~filled~~ filled again. I mention this to show the upper aquafer ~~upper~~ can be filled again.

Back to the question, what will happen to these pits that have been mined if that upper aquafer will could be filled? Are we going to have mud holes or pits full of water, where these should be farming land?

No long term EIR is complete without answering this question. As years go by water is going to be more important. If Yolo County is not going to lay claim to what is coming down CC. someone else will!

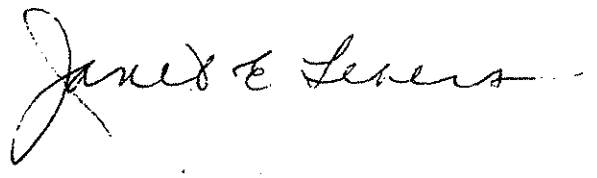
Walter Storz

Jan.15. 1996

Comments for the Cache Creek Off-Channel Management Plan

It is unfortunate that once again, the role of and opportunity for the public to participate in this process have been so diminished. It is tremendously unfortunate that the consultant for this project would choose to schedule a scoping session on a Federal holiday (Martin Luther King's birthday), at the usual early hour (6:30) that is convenient for the consultant, but not for anyone with family obligations or having to come some distance to attend. When will a similar meeting to this be held in a location accessible to more people (ie Esparto, Davis) at a more convenient time and date? It would be far more appropriate in an undertaking of this magnitude to make every effort to reach out to be inclusive, rather than hide behind a veil of exclusiveness.

The Cache Creek Basin Resource Coalition requests that within the scope for this project is an analyis of the proposed off-channel mining for different periods of time. It would be completely incorrect and inadequate for this document to give us only the 50 year assessment. We need information to compare mining impacts over 20 and 30 year timeframes, so that the relative impacts can be easily discerned.



City of Woodland

PUBLIC WORKS 300 FIRST STREET WOODLAND, CALIFORNIA 95695 (916) 661-5961
FAX (916) 661-5844

February 5, 1996

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

SUBJECT: GRAVEL MINING ORDINANCES AND PLANS

Dear Heidi:

Following our meeting and discussions with you, Joe Scalmanini and the representatives from Teichert, I would like to submit some comments on my understanding of what information was exchanged.

As we stated in our comments November 9, 1995, and December 20, 1995, regarding the Technical Studies and the OCMP, the City of Woodland is concerned about the possibility of contamination of our groundwater drinking supplies by contaminates entering the aquifer through open wet pit gravel mining operations. Ideally, a comprehensive risk assessment would be conducted to determine the likely impacts to domestic (city and farm) wells. Absent a good groundwater model, we feel a conservative setback from City wells is important, as well as a clear plan for dealing with potential remediation requirements due to groundwater contamination.

As seen in Figure 1 of the CCRMP, the eastern limits of both the Mineral Resource Zone and the Recommended In-Channel Boundary come to within less than half a mile of the Woodland City Limits. This area is in Subreach 3, an area hydrologically upgradient from Woodland wells and an area that, given time would contribute water to our wells. Consequently, we are concerned that the CCRMP, OCMP, and the County Gravel Mining Ordinances do not address the City's concerns for potential water quality degradation from gravel mining in this area.

According to Mr. Scalmanini at the January 5, 1996 meeting, there is general agreement among the gravel industry that gravel resources in most of Subreach 3 are minimal, especially near the eastern-most end of the reach near Woodland. As a consequence, he and Teichert indicated they were agreeable to moving the boundary west at least to the extension of County Road 96B. This would help assure gravel mining is kept well away from City wells and would address our concern about the setback distance from a wet pit to our water supply wells.

Although there are no current plans to mine gravel in the area close to Woodland, we would like to see this matter clearly addressed in the early plan, EIR and ordinances.

There still seems to be a lack of a plan to investigate or clean up contaminants if they are discovered in a monitoring well downgradient of a wet pit. The study says the water quality in the pits needs to be maintained "in perpetuity" but does not indicate who is responsible for this or what happens if contamination is discovered in the pit or the aquifer. In our discussion, you mentioned a 30 year bond following cessation of mining/restoration. We feel there should be a requirement for a closure plan that replaces a degree of filtering soil strata over any exposed portions of the aquifer in addition to the bonding requirements.

Water quality testing in monitoring wells should include tests for organics, particularly those associated with farming practices and preferably during times of the year after use of these chemicals. Frequency of testing should be based on a hydrologic engineering analysis of the groundwater flow characteristics.

Thank you for your consideration. We look forward to working with you and the County to ensure development of a OCMP, CCRMP, and gravel mining ordinances that best suits and protects the needs of those involved.

Sincerely,

Gary Wegener
Public Works Director

cc: Karen Johnson, Montgomery Watson
Kris Kristensen
Mike Horgan
Harrison Phipps

SUMMARY MINUTES FROM SCOPING MEETING FOR THE OFF-CHANNEL MINING PLAN PROGRAM-LEVEL (OCMP) ENVIRONMENT IMPACT REPORT (EIR) HELD NOVEMBER 27, 1995

The meeting was opened at approximately 6:40 by Heidi Tschudin, Project Manager. David Morrison, Resources Management Coordinator was introduced. The purpose of the meeting was described as three-fold: 1) to provide an understanding of the project and the process; 2) to receive comments on the scope and content of the EIR beyond what was already identified in the NOP; and 3) to solicit suggestions regarding the appropriate scope of the alternatives analysis.

The audience was informed that the meeting was being taped, and that summary minutes would be prepared. Those wanting their comments verbatim in the record were informed to submit them in writing by the comment closure date of December 18, 1995 at 5:00pm.

A brief description of the project and proposed CEQA alternatives, and a summary of the proposed scope of the EIR were provided by Tschudin. An overview of the process used to choose the EIR consultant was also given, and EDAW was identified as the firm writing the EIRs for the OCMP and the Cache Creek Resource Management Plan (CCRMP). Copies of the full Notice of Preparation and the Off-Channel Mining Plan were provided to the audience.

The audience was informed that the Draft EIR for the OCMP is expected to be released in mid-March of 1996, that a hearing on the adequacy of the DEIR is expected in mid-April, that the response to comments on the DEIR is expected in early June, and that hearings on the OCMP are expected in July.

The meeting was opened to comments from the audience.

Lois Linford, League of Women Voters of Woodland: The draft OCMP states that 40 percent of the aggregate is PCC, but the DOC special report says that 40 percent of it is used as PCC, meaning that the remainder is being used for other lesser uses. Gravel used for roads could be lesser quality. PCC should be used for its highest and best use.

The proposal for 30 year permits has gone forward with no public input. How can we burden future generations like this? The Woodland General Plan horizon year is 20 years which is much more feasible.

She would like to see Alternative 5b carefully analyzed at 15 years. Twenty years would be okay, but she is worried that the review will be cursory.

The number of wet pits verses dry pits in the applications is of concern. There is no alternative with more shallow pits. The wet pits will be hard to maintain and monitor. How is the cost going to be calculated?

It sounds good to have that much ground water recharge. Less than half of the mined acreage is expected to be reclaimed to agricultural land -- that is a concern.

The annual water quality testing, especially near Woodland should be quarterly. Why won't the haul roads have to be upgraded for one year --- the hazards begin with the first truck hauling gravel.

Are there permanent piles of waste or overburden proposed?

Figure 3, the in-channel boundary, is very large close to Woodland, why? Staff explained that the reason was that the 100-year floodplain broadened extensively at that point. How is the streamway influence boundary to be treated?

The permits should be updated every five years with the OCMP.

George Oliver, Resident: His family has lived along Cache Creek for 100 years. They farm along one mile of it. What is Figure 3 of the OCMP? The staff explained that it is the new proposed regulatory boundary developed from the present channel bank and the 100-year floodplain.

No one living along there recommends flood control.

Who is responsible if the water supply is polluted?

He is against any off-stream mining. Supports Alternative 1a.

John Kemper, Yolo Audobon Society: The EIR should deal with the depth of mining. Mining to 150 feet would be unprecedented.

Bob Speirs, Western Yolo Grange: The assumption is that wet pit mining is the way to go. This needs to be balanced. What are we gaining or losing?

Regarding security, any depth of pit is dangerous. Fences won't last as long as the pits will. The pits are very dangerous and they attract children.

The idea of three steep sides and one shallow side is not a good one. Detoxification results from vegetation and wetlands around the pits. This is a major factor over a long period of time. We are ignoring the history of wet pits elsewhere in the world. Wet pit mining should be given a great deal of emphasis in the EIR analysis.

The audience was given several opportunities thereafter to provide additional comments. The scoping meeting was closed at approximately 7:20pm when there was no one else interested in providing comments.

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7.2 LETTER FROM FEDERAL HIGHWAY ADMINISTRATION (FHWA) TO YOLO COUNTY AND COUNTY'S LETTER RESPONSE

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

PARTMENT OF TRANSPORTATION
TATE AND LOCAL PROJECT DEVELOPMENT PROGRAM
0 N STREET
BOX 942874
RAMENTO, CA 94274-0001
(916) 654-4014
654-3858
AX (916) 654-2409

November 15, 1995

	TO	INIT
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DEP DIR		
ASST DIR		
DEP SUP		
ENG		
PW SUPT		
ACCT		
FILE		

Public Works Directors and City Engineers
All California Cities and Counties

Dear Director:

Subject: Potential Withholding of Federal Funds

Enclosed is notification we have received from Region Nine, Federal Highway Administration (FHWA) that may have financial consequences for you. FHWA will evaluate structural failures which occur during future storms to determine if aggregate mining operations contributed to the failure. A loss of federal funds may result.

Caltrans will also share this information with city and county planning directors for their information and action as necessary.

Sincerely,

BOB EVERITT
Assistant Program Manager
State & Local Project Development

Enclosure

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION NINE
CALIFORNIA DIVISION
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

October 24, 1995

IN REPLY REFER TO

HB-CA
File #: 450.1
Document #: 3585

Mr. James W. van Loben Sels, Director
CALTRANS, 1120 N Street
Sacramento, California 95814

Attention: Federal Resources Branch, Room 3500
for Mr. Bob Everitt

Dear Mr. van Loben Sels:

SUBJECT: AGGREGATE MINING IN RIVERS

We have become very concerned with the affects of aggregate mining in rivers and streams, and the consequent affect to bridge structures on Federal-aid highway facilities. There were 17 bridge failures in the 1995 storms, and of these, several structure failures could be attributed partially to aggregate mining. It is estimated Statewide that of bridges that are susceptible to mining-related failures, repairs for substructure damage could run $31 Million, and for replacement approximately $100 Million.

It is our understanding, the local agencies are responsible for granting permits to the miners, and there is no minimum criteria Statewide for adequately issuing permits. Only 3 out of 113 lead agencies have established redline elevations, and only on selected creeks, that control the depth to which operators can mine.

One notable example where we believe mining contributed significantly to the structure failure is the Capay Bridge over Cache Creek, located in Yolo County, which we proceeded to repair after the storm with Federal Emergency Relief (ER) funds. What is more disturbing is that it is our understanding that Yolo County just awarded two new permits to miners adjacent to Cache Creek, fully aware of the potential for further structural damage. Other recent examples include the Union Cienega Bridge (43C-0002) over the San Benito River which degraded 10 feet during the 1995 storm, exposing 8 feet of pile, consequently closing the bridge and necessitating temporary repairs totaling $500,000. The bridge will need replacement.

We are very concerned and would like to bring this to your attention Statewide. We also recommend that the local agencies granting mining permits in streams are fully aware that per Title 23 CFR. Section 668.105(f), "Prompt and diligent efforts shall be made by the State to recover repair costs from the legally responsible parties to reduce the project costs particularly where catastrophic damages are caused by ships, barge tows, highway vehicles or vehicles with illegal loads or where damage is increased by improperly controlled objects or events" We recommend that every effort be made by Caltrans to make local agencies aware of the growing concern for aggregate mining in streambeds and its affect on bridges, as well as public safety and liability for damages caused. Also, Title 23 CFR, Section 668.109 states: "(c) E.R. funds may not participate in:...(6) Repair or reconstruction of facilities affected by long-term, pre-existing conditions or predictable developing situations such as flooding in basin areas or slow moving slides;". Mining without the consideration of controls would be considered in this category as well if the local agency is aware of severe degradation due to mining and does nothing to mitigate loss of material that endangers bridge foundations. We have not strongly enforced this in the past, but in light of recent information gained during the 1995 storms, we will carefully evaluate structural failures in future storms for contributing external factors.

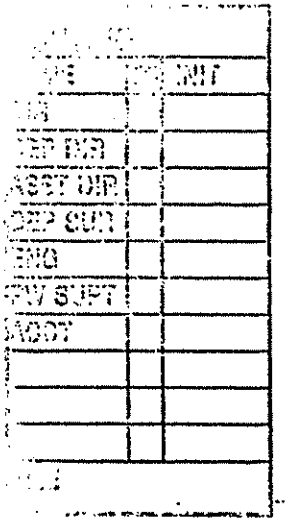
If you should have any questions, please contact Martha Nevai at 498-5859

Sincerely,

For
Fred J. Hempel
Division Administrator

County of Yolo

625 Court Street, Room 204 Woodland, Californi



BOARD OF SUPERVISORS
December 21, 1995

Fred J. Hempel, Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Region Nine, California Division
980 Ninth Street, Suite 400
Sacramento CA 95814-2724

Dear Mr. Hempel:

SUBJECT: Aggregate Mining in Rivers

On October 24, 1995, the Federal Highway Administration (FHWA) expressed concern about the effects of uncontrolled mining in streambeds near bridges. The letter used Yolo County's Capay Bridge over Cache Creek as an example where the FHWA believed mining contributed significantly to the structural failure. The letter went on to suggest that Emergency Relief (ER) funds may be withheld for repair of structures if local agencies do not control the mining.

Yolo County has no argument with this overall concept, but we vigorously disagree with the use of Yolo County as an example of inattentiveness to mining effects on Cache Creek! We are concerned that decisions affecting the eligibility of a project to receive ER funds may be made without FHWA's possession of all the facts. The letter from FHWA implied that Yolo County has not managed the mining program in a manner sufficient to protect the structures from storm damage. That is simply not accurate!

We believe Yolo County has been very diligent in managing mining permits on Cache Creek. A redline was established over fifteen years ago to control the depth to which operators can mine within the channel. Yolo County must be one of three lead agencies to have implemented such a control, as mentioned in your letter. In fact, Yolo County is an example, by your standard, of an agency doing it right. The County will be happy to review recently-issued short-term permits with FHWA and Caltrans. We understand Caltrans reviewed the environmental documents prior to issuance of these short-term permits to mine in the channel.

An analysis has been prepared each year to show the amount of mining within the Cache Creek area. This analysis has included aerial mapping of the mined area to check and monitor compliance with the issued permits. Areas that are determined to be out of compliance are restored to comply with the permit.

We know that Cache Creek has moved back and forth in the valley long before mining occurred in the creek channel. It continues to move in this manner even today. As the creek moves around, it tends to scour to significant depths, up to 10 feet in some areas. The next high flow may fill the

scoured area higher than it was before the previous event. Not only does this occur within the areas being mined, but also occurs many miles upstream where mining has never occurred.

A strong argument can be made that controlled mining should be encouraged to protect the structures. Those of us familiar with the Capay Bridge situation know that a gravel bar was formed upstream from the bridge which forced the realignment of the channel so that the direction of flow was skewed about sixty degrees from normal. Mining is prohibited upstream from the Capay Bridge.

The upstream bank erosion resulting from the channel realignment caused large trees to pile up against the bridge piers, creating tremendous turbulence and subsequent scour under the piers. It is unbelievable that the bridge withstood the tremendous pressure from the damming effect of the trees. Only the efforts by private contractors, Yolo County and property owners prevented the creek from making a new channel beyond the end of the bridge.

As we look back on the reluctance of FHWA to support our request for ER funds, we are questioning our effort to save the bridge during the storm! Had the County done nothing to stop the upstream bank erosion, Cache Creek would now be flowing in a new channel a few hundred feet north of the existing bridge. There would be no question over eligibility of funding for a new bridge to be constructed over the new channel.

Two other Cache Creek bridges, ten and sixteen miles upstream, were similarly affected by channel realignment resulting from a gravel bar buildup upstream from the bridge during last winter's storms. Again, there is no gravel mining upstream from the Capay Bridge.

We in Yolo County are very frustrated with the federal and state responses to our requests for emergency relief for storm damage repairs. There is a federal resistance to these requests--why? Your October 24 letter to Caltrans clearly chastises Yolo County for not managing mining, and leads one to believe that the mining was the cause for the Capay Bridge failure. We are concerned that loss of future funding may be made on those perceptions which are not based on truthful information, as well as with the unwarranted gratuitous criticism of the competency of Yolo County to manage and regulate aggregate mining.

Caltrans, FHWA and any other interested parties are encouraged to comment on environmental reports generated prior to the adoption of these plans or the issuance of a mining permit. FHWA needs to be a more active participant in reviewing these documents, or should conduct a thorough review of these issues so that they will have factual information on which to base a decision regarding future funding.

We would be pleased to discuss these issues with you personally and at your convenience.

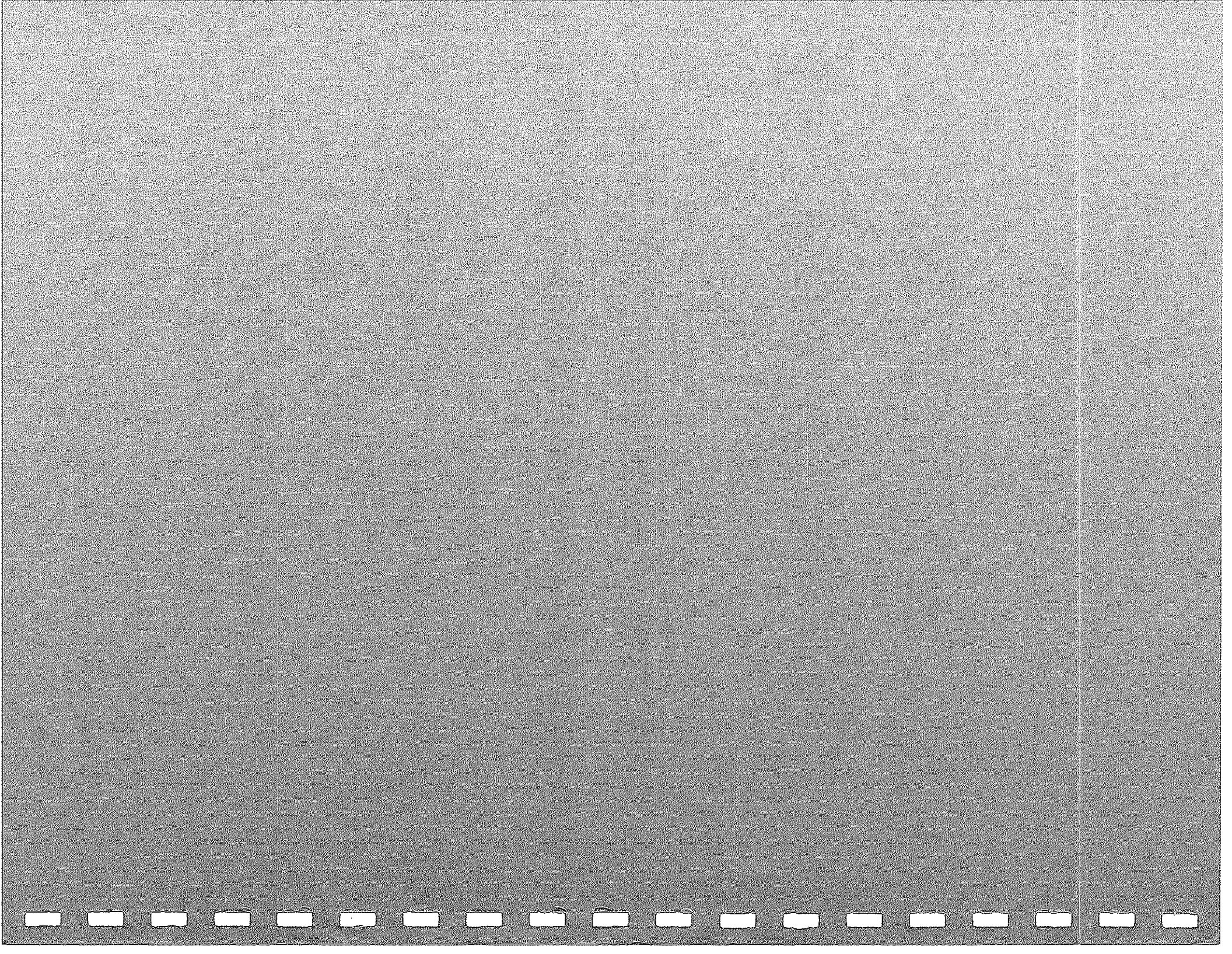
Sincerely,

Helen M. Thomson

Helen M. Thomson, Chair
Yolo County Board of Supervisors

c: Congressman Vic Fazio
Assemblymember Tom Hannigan
James van Loben Sels, Director, Caltrans

7.3 FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE



FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are:

a) The intensity or level of the sound;
b) The frequency spectrum of the sound;
c) The time-varying character of the sound.

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing.

The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or hertz (Hz). Most of the sounds which we hear in the environment do not consist of a single frequency, but of a broad band of frequencies, differing in level. The name of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Surprisingly, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively de-emphasizes the importance of frequency components below 1000 Hz and above 5000 Hz. This frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and at extreme high frequencies relative to the mid-range.

The weighting system described above is called "A"-weighting, and the level so measured is called the "A-weighted sound level" or "A-weighted noise level." The unit of A-weighted sound level is sometimes abbreviated "dBA." In practice, the sound level is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting characteristic. All U.S. and international standard sound level meters include such a filter. Typical sound levels found in the environment and in industry are shown in Figure A-1.

Although a single sound level value may adequately describe environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise is a conglomeration of distant noise sources which results in a relatively steady background noise having no identifiable source. These distant sources may include traffic, wind in trees, industrial activities, etc. and are relatively constant from moment to moment. As natural forces change or as human activity follows its daily cycle, the sound level may vary slowly from hour to hour. Superimposed on this slowly varying background is a succession of identifiable noisy events of brief duration. These may include nearby activities such as single vehicle passbys, aircraft flyovers, etc. which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, statistical noise descriptors were developed. "L_{10}" is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L_{10} is considered a good measure of the maximum sound levels caused by discrete noise events. "L_{50}" is the A-weighted sound level that is equaled or exceeded 50 percent of a stated time period; it represents the median sound level. The "L_{90}" is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period and is used to describe the background noise.

As it is often cumbersome to quantify the noise environment with a set of statistical descriptors, a single number called the average sound level or "L_{eq}" is now widely used. The term "L_{eq}" originated from the concept of a so-called equivalent sound level which contains the same acoustical energy as a varying sound level during the same time period. In simple but accurate technical language, the L_{eq} is the average A-weighted sound level in a stated time period. The L_{eq} is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the different response of people to daytime and nighttime noise. During the nighttime, exterior background noise levels are generally lower than in the daytime; however, most household noise also decreases at night, thus exterior noise intrusions again become noticeable. Further, most people trying to sleep at night are more sensitive to noise.

To account for human sensitivity to nighttime noise levels, a special descriptor was developed. The descriptor is called the CNEL (Community Noise Equivalent Level) which represents the 24-hour average sound level with a penalty for noise occurring at night.

The CNEL computation divides the 24-hour day into three periods: daytime (7:00 am to 7:00 pm); evening (7:00 pm to 10:00 pm); and nighttime (10:00 pm to 7:00 am). The evening sound levels are assigned a 5 dB penalty and the nighttime sound levels are assigned a 10 dB penalty prior to averaging with daytime hourly sound levels.

For highway noise environments, the average noise level during the peak hour traffic volume is approximately equal to the CNEL.

The effects of noise on people can be listed in three general categories:

a) Subjective effects of annoyance, nuisance, dissatisfaction;
b) Interference with activities such as speech, sleep, and learning;
c) Physiological effects such as startle, hearing loss.

The sound levels associated with environmental noise usually produce effects only in the first two categories. Unfortunately, there has never been a completely predictable measure for the subjective effects of noise nor of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over time.

Thus, an important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable the new noise will be judged.

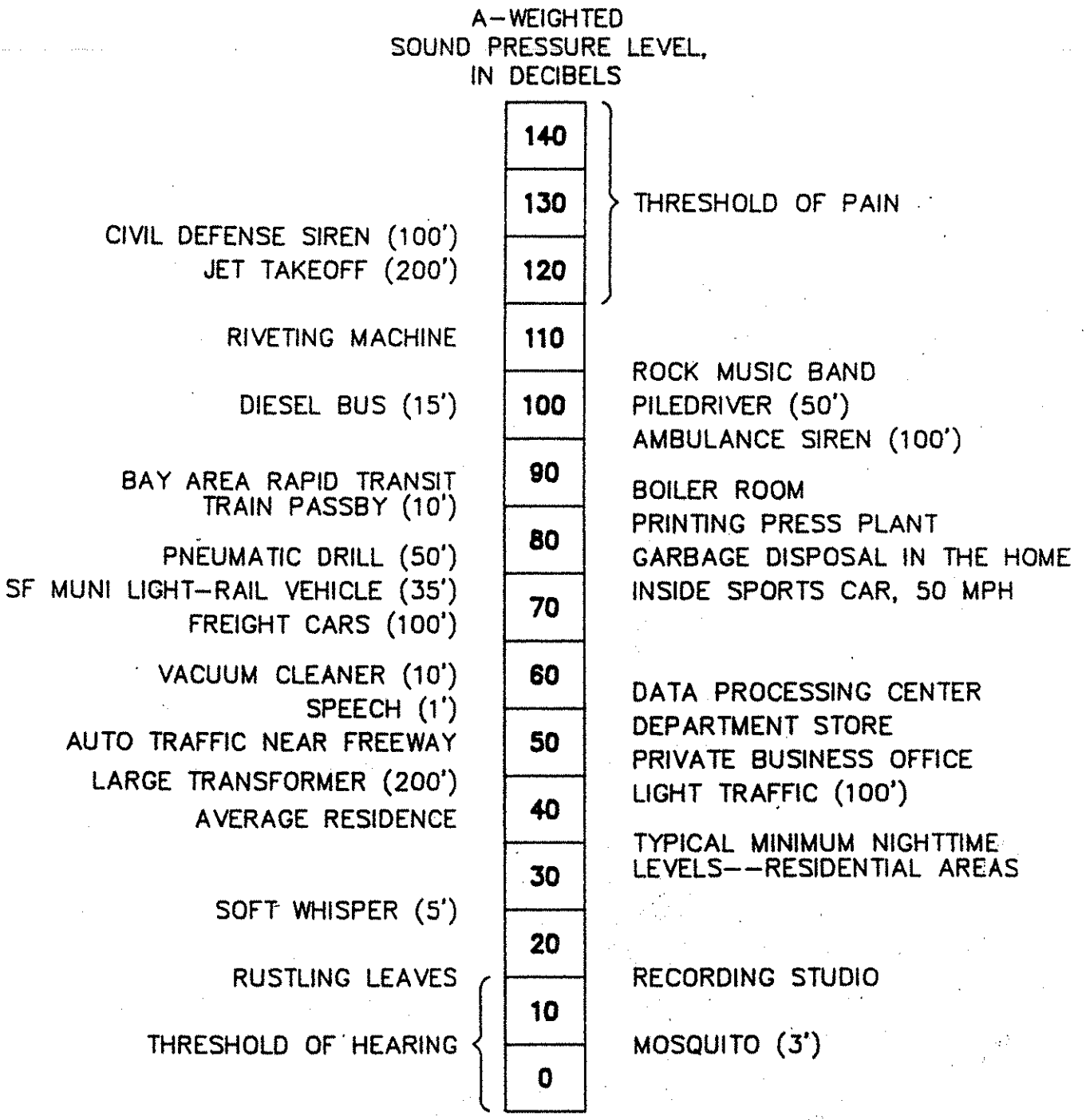
With regard to increases in noise level, knowledge of the following relationships will be helpful in understanding the quantitative sections of this report:

a) Except in carefully controlled laboratory experiments, a change of only 1 dB in sound level cannot be perceived.

b) Outside of the laboratory, a 3 dB change is considered a just-noticeable difference.

c) A change in level of at least 5 dB is required before any noticeable change in community response would be expected.

d) A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse community response.



TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

FIGURE A3

Charles M Salter Associates Inc 130 Sutter Street San Francisco California 94104 Tel: 415 397 0442 Fax: 415 397 0454