FINAL

ENVIRONMENTAL IMPACT REPORT

CRYSTAL BAY

STOCKTON, CALIFORNIA
EIR FILE NO. 6-05

SCH#2007032116

Submitted to:

City of Stockton
Community Development Department
345 N El Dorado Street
Stockton, CA 95202

Prepared by:

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LSA Project No. AGS438

LSA

March 2008

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ATTACHMENTS

1.0 INTRODUCTION

This document is a compilation of comments submitted on the Draft Environmental Impact Report (EIR) and responses to those comments. Comments have been submitted in the form of letters following the review of the Draft EIR document.

Final EIR Components

The basic Final Environmental Impact Report (Final EIR) for the Crystal Bay Project consists of the Draft EIR document, the Responses to comments, and the Mitigation Monitoring and Reporting Program. Other components (separate from the Final EIR) of the environmental review process generally include the public meeting comments, the Statements of Facts and Findings and Overriding Considerations, resolutions, staff reports, hearing minutes and official notices.

Public Review of Draft EIR

On October 31, 2007, the 45 day public review period was initiated at the State Clearinghouse. The review period ended on December 17, 2007. Responses are provided for each comment letter on the Draft EIR.

Revised Project Description

Subsequent to circulating the Draft EIR for public review, the applicant and the City agreed to modify a portion of the discretionary approvals to achieve benefits for both parties. The modification involves the elimination of the application to process a Master Development Plan, and substituting it with the Planned Development process. The Planned Development process is appropriate in light of the "all residential" land uses proposed for the project. Likewise, the Planned Development process does not require approval of a Development Agreement, and Public Facilities Financing Plan and Fiscal Impact Analysis. Other minor elements associated with the Master Development Plan that are not required by a Planned Development have also been eliminated. As a result of the similarities between the Master Development Plan process and the Planned Development process, all application requests for land use entitlement, and vesting tentative map reviews, etc. remain in place as previously submitted and unchanged. Further, the type, nature, and intensity of environmental effects remains unchanged.

Although the entitlement requests have been modified, the land use, density, yield and site plan layout remain unaffected. Consequently, the environmental review conducted by the City for the Crystal Bay project remains valid and unchanged. The overall residential lot count, park and open space allocations, and general site development intensity remain unchanged. Environmental impacts, mitigation measures and level of significance findings as described in the Draft Environmental Impact Report are equally applicable to the Planned Development request.

Section 15088.5 of the California Environmental Quality Act (CEQA) outlines criteria that potentially trigger the re-circulation of an environmental document. "A Lead Agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability for the Draft EIR under Section 15087 but before certification." "New information added to an EIR is not 'significant' unless an EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. 'Significant new information' requiring recirculation include, for example, a disclosure showing that (*italics statements reflect how the project corresponds to the points*):

(1) A significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented. *In light of retaining the land use, site plan, yield and development intensity, all impacts and mitigation measures will remain identical to those contained in the Draft EIR.*

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance. *The new information (e.g., change from Master Development Plan to Planned Development/elimination of Development Agreement) does not change the severity of any environmental impact described in the Draft EIR. Mitigation measures remain unchanged.*

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it. *No new alternatives or mitigation measures were required as the new Planned Development action does not increase environmental impact warranting re-examination of alternatives or mitigation measures.*

(4) The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. *The new Planned Development action does not cause any change to the environmental review contained in the Draft EIR. Therefore, the new information (e.g., change to Planned Development) does not change the adequacy or conclusions found in the Draft EIR. Through the preparation of this Final EIR, the City believes that the environmental document is adequate and that the conclusions are based on fact and reason.*

Based upon our review of the changed processing from a Master Development Plan to a Planned Development it is the professional opinion of the author that the facts necessary to trigger a recirculation of the environmental document are not present.

1.1 FINAL EIR PROCESS

Response to Comments

The Responses to Comments provides a record of the changes that are required in the Draft EIR, as well as responses and clarifications raised by the comment letters. Together, the Draft EIR and the Responses to Comments record the environmental review process and findings, from the issuance of the Notice of Preparation, through the document certification.

The Responses to Comments include the original comment letter submitted by the commenting party (citizen, agency, etc.) followed by the EIR response. To facilitate reader convenience, each comment has been assigned a comment code, with each response linked by the same code. Due to the similarity or duplication of some comments, the reader maybe referred to a previous (or subsequent) response provided elsewhere in the Response to Comment portion of the Final EIR.

Decision-Makers Roles

The Planning commission and City Council will need to review the Response to Comments in conjunction with their recommended decisions on the proposed Annexation, General Plan Amendment, Prezoning, Planned Development, Vesting Tentative Map, Precise Road Plan Amendment and other decisions subject to environmental review in conjunction with the Final EIR. The Planning Commission will certify the Final EIR in conjunction with an action on the Tentative Map, and make a recommendation to the City Council as to its adequacy and completeness of the Final EIR for all other actions. Both the Planning Commission and City Council and will use the information to understand the range of potential impacts due to the project in making their decision on the project.

1.2 ERRATA

The Final Environmental Impact Report is amended with these errata to address further refinements recommended by specific City departments. This coordination is relevant to the proposed project and is, therefore, included in the project record.

The following changes have been made to the DEIR:

The following figures have been revised:

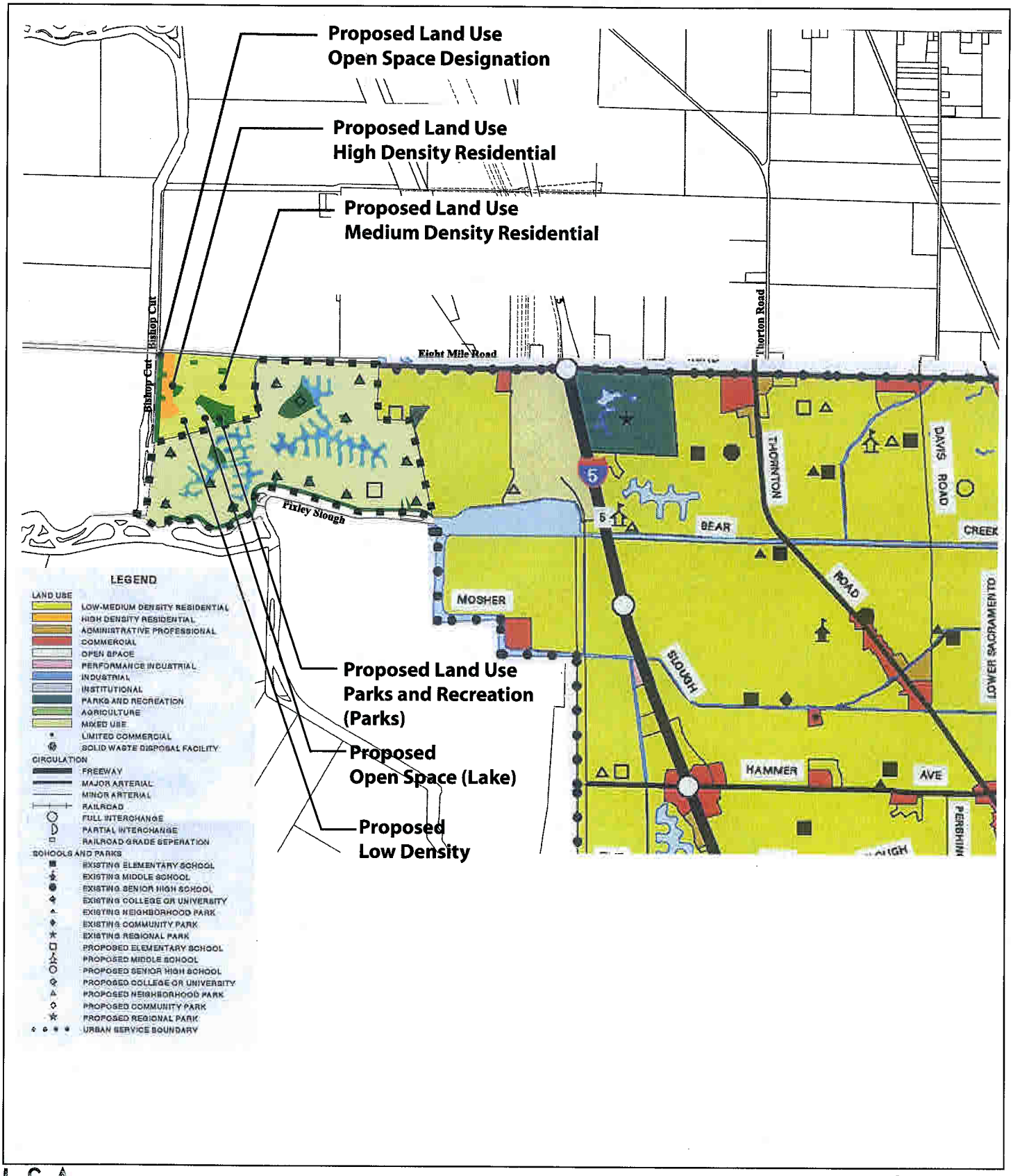
Figures 3.5.1 and 3.5.2 have been revised. See attached figures for changes.

The following changes have been made to Chapter 3:

Page 3-24, Paragraph 3 will now read:

"*General Plan Amendment.* A General Plan Amendment was previously approved by the City of Stockton in September 2004 in conjunction with amending the City's Sphere of Influence boundary. The General Plan land use designation for the site is now Low-Medium Density Residential. To accommodate the multi-family component of the proposed project, a General Plan Amendment on 20.73 acres to High Density Residential is required for a portion of the project site, a 9.98-acre site for a "Park and Recreation" designation, 97.57 acres to Medium-Density Residential and 9.2 acres to open space designations. The Planning Commission will approve and recommend the PD to the City Council. The City Council will make determination for final approval of the PD."

Page 3-24, Paragraph 4 will now read:



LSA

FIGURE 3.5.1

SOURCE: Kimley-Horn, 2007

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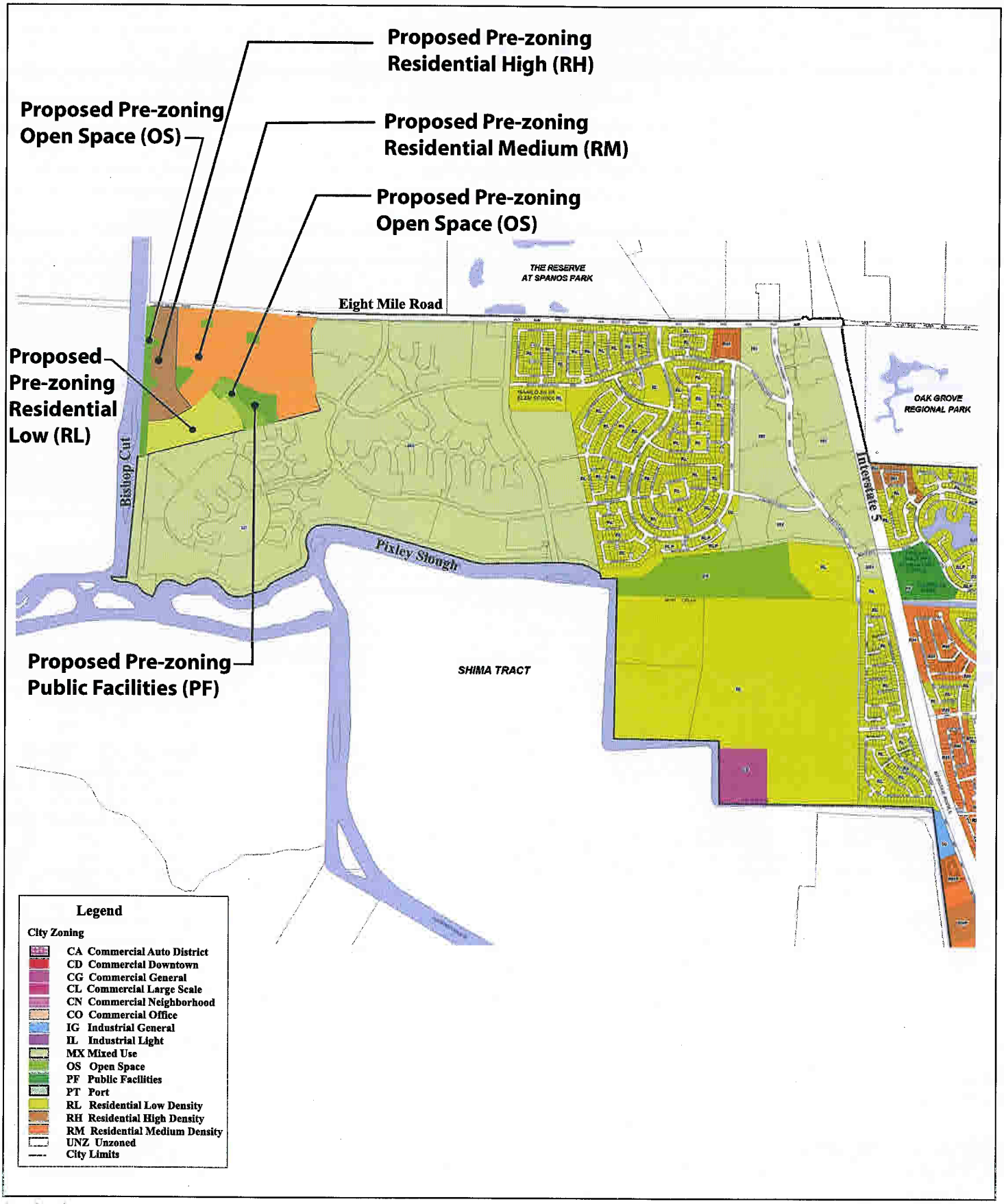
Crystal Bay
Proposed General Plan Designations



LSA

FIGURE 3.5.2

SOURCE Kimley-Horn, 2007

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Crystal Bay
Proposed Pre-Zoning

Pre-zoning. As a required element of the proposed annexation, and as needed to support the General Plan Amendment, the site must be pre-zoned into the City of Stockton's zoning districts. The applicant has requested pre-zoning for the site to R-H (High Density Residential), and R-M (Medium Density Residential), and R-L (Low Density Residential) for the courtyard units and single family detached residential, as well as a PF (Public Facilities District) and OS (Open Space), respectively. The applicant has requested pre-zoning to promote quality planning and innovative site planning consistent with the goals and policies of the General Plan.

Page 3-25, Paragraph 4 will now read:

Vesting Tentative Map. With approval of the applicant's request to pre-zone the City's zoning designation to R-L, R-M, R-H, and PF and adoption of the Planned Development Plan and approval of a tentative map (City File #TM 17-05) has been filed that is consistent with the Planned Development layout. Vesting tentative maps require City Planning Commission approval.

In Section 4.7, Traffic and Circulation, a Level Of Significance After Mitigation section will be added as follows:

Page 4-227, at the end of the section will now read:

4.7.4 Level of Significance After Mitigation

Implementation of the above mitigation measures will assist in reducing the significance of traffic-related impacts due to the project to less than significant levels. Nonetheless, even with mitigation measures, several long-term, cumulative traffic impacts that include impacts from the proposed project will remain significant and unavoidable. A variety of circumstances are cited for this conclusion, including the fact that some improvements are not yet identified, do not have funding commitments or are constrained by right-of-way availability potentially affecting mitigation feasibility or certainty.

In Section 4.13, Cultural Resources, Mitigation Measure CR-1b will be reworded as follows:

Mitigation Measure CR-1b: If deposits of prehistoric or historic archaeological materials are encountered during the project activities, all work within 50 feet of the discovery should be redirected and a qualified archaeologist contacted to evaluate the finds and make recommendations. It is recommended that such deposits be avoided by project activities. If such deposits cannot be avoided, they should be evaluated for their significance in accordance with the California Register. If the resources are not significant, further protection is not necessary. If the resources are significant, adverse effects will need to be avoided. Upon the completion of the archaeological evaluation, a report should be prepared documenting the methods, results, and recommendations. The report should be submitted to the Central California Information Center and appropriate City agencies.

The table of contents will be revised to show Chapter 4.3: Water Resources only once.

Comments generated by the City Public Library, dated January 30, 2008, suggest the following language be added to the DEIR:

The Library Facilities Master Plan to 2030 (2008) recommends different information/standards than those listed in the DEIR:

0.4 – 0.6 square feet of library space per person (400-600 ft^2 per 1,000 persons) with 2.2 – 2.5 readers' seats per 1,000 persons.

1.75 – 2.25 volumes (books, media materials) per person; 1,750 – 2,250 volumes per 1,000 persons.

The Thornton Branch Library serves the unincorporated area of northwest San Joaquin County. The annual library attendance for Stockton and San Joaquin libraries in 2002 was 1,195,285. The Library is a City/County system and Stockton customers use County branches and vice versa. Library attendance for just the Stockton libraries in 2002 was 791,912 people.

The Library Facilities Master Plan to 2030 recommends a Northwest Stockton Branch, based on current and future need.

The document references section shall now include The Library Facilities Master Plan to 2030 (2008).

Mitigation Measures BR-1 and VIS-1a will now reference "Planned Development" rather than "Master Development Plan".

2.0 RESPONSE TO COMMENTS

2.1 WRITTEN COMMENTS AND RESPONSES

The section that follows includes the comment letters submitted by various public agencies and private parties, and the responses to those comments. Commentors on the Draft EIR for the Crystal Bay project are listed as follows:

Sierra Club (December 17, 2007)

San Joaquin Valley Air Pollution Control District (December 14, 2007)

Department of California Highway Patrol (November 14, 2007)

Department of Toxic Substances Control (December 3, 2007)

Department of Transportation (December 10, 2007)

California State Lands Commission (November 26, 2007)

Department of Water Resources (November 5, 2007)

SJCOG, Inc. (November 8, 2007)

Department of Army, Corps of Engineers (January 15, 2008)

Morris Allen (December 10, 2007)

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Mike Niblock, Director
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17 December 2007

RE: Crystal Bay Draft Environmental Impact Report

Mr. Niblock:

The following are the comments from the Sierra Club regarding the Crystal Bay Draft Environmental Impact Report. We incorporate by reference our previous letters sent in response to the Stockton 2035 General Plan DEIR and FEIR; to the Mariposa Lakes DEIR; and to the Empire Ranch DEIR.

We believe the document is deficient in analyzing several issues, including air quality; greenhouse gas emissions; traffic; flood control/water quality; water supply; and cumulative impacts. In addition, because the DEIR appears to ignore cumulative impacts, any new analysis added into the responses to comments (Final EIR) would be constitute significant new information would require the DEIR to be recirculated. SC-1

As our prior comment letters on the City's recently adopted 2035 General Plan FEIR pointed out, similar flaws in the DEIR's assumptions and methodology cause the traffic analysis to substantially underestimate the project's traffic impacts. The DEIR assumes that several major transportation infrastructure projects would be implemented to meet the City's future transportation level of service (LOS) standards but failed to provide any evidentiary support that these projects would, in fact, be implemented. The DEIR's flawed assumptions extend to Eight Mile Road and I-5, which are both assumed to have 10 lanes in 2035 despite the General Plan FEIR's own acknowledgment that these roadways may not achieve this maximum width within this time frame. The flaw with this approach is that the EIR does not accurately disclose the SC-2

severity and extent of the traffic impacts that would plague the City upon implementation of the General Plan. A telephone conversation with William Ridder, Senior Regional Planner, SJCOG November 26, 2007 and telephone conversation with Don Brewer, Caltrans Office of Intermodal Planning, November 20, 2007, indicate, contrary to the assumptions in the General Plan EIR (and this DEIR) that I-5 will have ten lanes in 2035, Caltrans and SJCOG confirm that only eight lanes will be constructed on this inter-regional transportation facility. SC-2 Cont.

The DEIR analysis also falls far short in recognizing the severity and extent of the looming climate change crisis or the role that Stockton's General Plan, and individual large projects such as Crystal Bay, would play in this crisis. The DEIR estimates that the project would generate over 98,000 pounds per day of CO2 (a major greenhouse gas, GHG) and then lists approximately one dozen general measures that are to be incorporated into the project design (page 4-30). The DEIR then, with no substantial evidence, concludes that implementation of the measures will reduce GHG impacts to a less than significant level and "bring the project into substantial compliance with the various GHG emission reductions measures identified by Cal/EPA in the State Executive Order S-3-05..."

We challenge the ability of the City to adopt such a conclusion based on the lack of substantial evidence, especially since this project is one more subdivision that is proposed miles from the nearest existing transit connection, and its conventional design will generate 11,000 daily vehicle trips per day. SC-3

The EIR inadequately analyzes and mitigates the air quality impacts of the project. It appears that the analysis relies on the SJCOG model to claim air quality conformity. Is this true?

Were different models (the City's mdoel vs COG's) used for different parts of the AQ analysis? The SJCOG model which may underestimate the densities of specific projects in the 1990 or proposed 2035 General Plan. Is this true? Are the land use densities used in the two models roughly the same? Has the DEIR used the "worst case" densities and model?

The DEIR's water supply analysis is inconsistent and relies on "paper" water supplies. The DEIR analysis closely parallels the assessment for the 2035 General Plan and the Maripsoa Lakes and Empire Ranch DEIRs. Our same criticism found in letters we submitted to the City on those EIRs apply to this water supply analysis and should be addressed in the Final EIR. SC-4

The DEIR also fails to analyze potential impacts to water quality and biological resources in adjacent Delta waters due to the release of stormwaters from the proposed temporary detention basin, to be located on the site of the last-phase "I" apartments. The water quality analysis and mitigation measures fail to address impacts related to the interim operation of this basin (page 4-42). Will this basin discharge directly into the delta before the major lake is constructed? SC-5

The DEIR seems to ignore cumulative impacts for all the topical environmental issues (air, biology, water, sewer, etc.) Where is this analysis of cumulative impacts? If the DEIR has failed to include such analysis, the DEIR must be recirculated so all agencies and individuals have a chance to read this required CEQA EIR section. SC-6

If you have any questions about these comments, you may contact me at 209/462-7079 or eparfrey@sbcglobal.net.

Please send documents and all legal notices regarding this project to my home address, 1421 W. Willow St., Stockton 95203. Do NOT send copies to the Sierra Club address in Sacramento at the top of this letterhead.

Sincerely,

Eric Parfrey, Executive Committee
Sierra Club, Mother Lode Chapter

cc: Rachel Hooper, Amy Bricker, Shute, Mihaly and Weinberger

Sierra Club (December 17, 2007)

Response to Comments:

SC-1: The City disagrees that the EIR is deficient with regard to air quality, greenhouse gas emissions, traffic, flood control/water quality, water supply and cumulative impacts. These issue areas have been analyzed to the extent necessary to characterize the project's effects on the environment.

The air quality analysis utilized methodology in accordance with industry standards and as recognized by the San Joaquin Air Pollution Control District. From the analysis in the EIR (section 4.2), it was concluded that the project would have a significant and unavoidable impact on air quality. Also, refer to response APCD-2.

For greenhouse gas emissions, the EIR (section 4.2) discusses the potential effects from the project on global warming. At present, there are no standards or adopted procedures for addressing this issue. The City believes that the discussion provided in the EIR sufficiently characterizes the issue. The California Air Resources, for example, has itself acknowledged that no protocols or methodologies exist to quantify greenhouse gas emission on a project-by-project basis. Instead, the Board has identified the development of such methodologies as a suggested tool for local governments. It is still in the process of elaborating appropriated modeling tools and protocols to support emission quantifications at the local level. (California Environmental Protection Agency, Air Resources Board, Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended For Board Consideration (Oct, 2007), at C-8 to C-10.)

Traffic analyses were conducted for a broad area consistent with the City's Traffic Impact Analysis Guidelines. The analysis (section 4.7) considers the long-term traffic conditions based on both the 1990 General Plan for year 2025 conditions, as well as the recently adopted General Plan Update for year 2035 conditions.

Flood control/water quality (section 4.3) have been properly addressed by the applicant's consultant and reviewed by the City's Public Works staff. Watershed based stormwater planning was conducted to assess the upstream flood hazards, including the project's contribution to the local flooding potential. The on-site storm drain system, including project lake system and shared stormwater discharge with Westlake at Spanos Park, will adequately manage the flooding potential consistent with the City's standards. Diverting the stormwater into the lake system will improve water quality from site runoff prior to discharging into Pixley Slough/Bear Creek thus achieving the City's objectives for complying with the Storm Water Quality Control Criteria Plan requirements.

The City prepared a Water Supply Assessment (WSA) consistent with the California Water Code Sections 10910-10915. The WSA (summarized in section 4.10 of the EIR) outlines a plan to ensure that long-term water supplies are available to serve the project, in light of the regional demands for water. From the information included in the WSA, the City has determined that an adequate supply is available to serve the project, and is available from several sources without causing other adverse impacts on water resources, including long-term groundwater overdraught conditions. Also, refer to Response MA-1 through MA-21.

Cumulative impacts were considered in all applicable sections of the EIR that have the potential for having cumulative impacts. The traffic analysis (section 4.7) is based on cumulative and long-term forecasts, including approved development projects. Both noise impacts (section 4.5) and air quality impacts (section 4.2) utilize the traffic forecasts as the basis for those analyses. This approach ensures that cumulative impacts are addressed consistently for those topics. For biological resources (section 4.4), the assessment considers the potential direct impacts to species on the project site. In light of the City's participation in the San Joaquin Council of Government's Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), impacts to plant and wildlife species are also evaluated and mitigated on a regional/cumulative basis. The project will participate in the SJMSCP, and therefore, cumulative impacts have been adequately considered. Likewise, both water supply/delivery (section 4.10), and wastewater infrastructure and treatment (section 4.11) are planned in conjunction with the City's infrastructure master plans that are designed to address cumulative impacts.

In formulating responses to comments for the Final EIR document, no new information was generated that is considered of importance to warrant re-circulation of the Draft EIR document. While the project geotechnical consultant conducted additional on-site soils tests to determine if residual pesticides were present in toxic concentrations, negative results were noted (see attachment 2). Consequently, the City believes that re-circulation of the Draft EIR is not required.

SC-2: The project application was submitted under the 1990 General Plan. In December 2007, however, Stockton adopted its 2035 General Plan Update. The EIR certified for the 2035 General Plan Update has been challenged by two lawsuits in San Joaquin County Superior Court. Unless and until an injunction against the 2035 General Plan issue or a court voids the 2035 General Plan, the 2035 General Plan controls. Therefore, the project's impacts must be evaluated against the 2035 General Plan.

The traffic analysis performed for the Crystal Bay DEIR shows that the following intersections will experience significant and unavoidable impacts: Eight Mile Road/ I-5 northbound and southbound ramps, Hammer Lane/Mariners Drive, and Hammer Lane/I-5 northbound ramps. The DEIR contains an analysis of the 2035 General Plan Update proposed land use and roadway network. The General Plan Update contains proposed land use changes and the infrastructure to accommodate the projected land uses. The future widening of I-5 to ten lanes is included in the 2035 analysis, which was conducted to evaluate general plan consistency. It should be noted that even though "2035" is used to describe this future year analysis scenario, it reflects General Plan Buildout which is likely to occur beyond 2035.

The San Joaquin County 2007 Regional Transportation Plan Project List contains widening I-5 between Roth Road and Otto Drive to 10 lanes as a Tier II project (project number SJ07-1025). Plus, the Caltrans Route Concept Report for I-5 through much of Stockton shows the need for 10 lanes in order to meet the LOS D standard. These lane requirements are based on 2020 forecasts which do not include all of the new development anticipated in the 2035 Stockton General Plan update. The Caltrans Route Concept Report for SR 99 also shows a need for 10 lanes, but because of right-of-way constraints, only 8 lanes are included.

Eight Mile Road was assumed to be built-out according to the lane configurations in the Eight Mile Road Precise Plan for the intersection analysis. Ten through lanes are not proposed on this roadway; however, the cross-section at some locations may exceed 10 lanes when considering turn lanes.

SC-3: The DEIR reports the CO2 emissions for the proposed project on page 4-31. Currently, CEQA does not define a significance criterion for CO2 emissions. The DEIR identifies mitigation measures that would reduce CO2 emissions to the extent feasible for the proposed project. Given the lack of significance criteria identified under CEQA, evaluation of any potential global warming effects resulting from the project, including modeling and gauging the impacts associated with an increase of trips or generation of new trips and the effect on the greenhouse effect or global warming, would be entirely speculative since no modeling protocol or significance criteria have been established.

Consistent with the guidance of the San Joaquin Valley Air Pollution Control District, the Air Resources Board's air quality model URBEMIS was used in the analysis of regional air quality impacts for the proposed project. The County's regional traffic forecasting model administered by the SJCOG was not used specifically for this project.

SC-4: The comment is not specific regarding which portion of the water supply documented by the City of Stockton it considers to be "paper". The DEIR's analysis consistently relies upon a conjunctive use strategy, utilizing surface water supplies to the maximum extent when available, and utilizing groundwater supplies only when surface water is not available. Water supplies available from Stockton East Water District are evaluated for their availability based upon year types. The water supply available from Phase 1 of the Delta Water Supply Project is reasonably foreseeable for purposes of the DEIR because the project has been permitted, environmental review has been completed, and the construction process is beginning.

The letters submitted by the Sierra Club to the City's 2035 General Plan EIR incorporate by reference a letter submitted by Jason R. Flanders on behalf of the Morada Area Association (See letter dated January 26, 2007). The City of Stockton's responses to the comments made in that latter are hereby incorporated by reference. See City of Stockton General Plan Update Final EIR August 2007 ESA/202593.

SC-5: The proposed "temporary detention basin" is a regional drainage project for Reclamation District 2042 that has already been approved and is not a part of the Crystal Bay development project. The temporary detention basin is part of the "channel relocation project" for Reclamation District 2042 which will relocate a portion of the existing earthen channel system that interferes with other projects in the area. The runoff from the existing agricultural watershed north of Eight Mile Road, approximately 960 acres including The Reserve golf course, is collected and conveyed through a series of earthen channels. The channel delivers the flow to an existing agricultural stormwater pump station near Rio Blanco Road that is operated by Reclamation District 2042 – Bishop Tract. The RD channel and detention basin only service the remaining existing agricultural watershed areas within the Bishop Tract area and do not receive any urban runoff. All the urban runoff generated by the Crystal Bay development will discharge into the proposed manmade lake system and no urban runoff will be tributary to the RD channel system/detention basin. The RD channel relocation project and associated

temporary detention basin will not change current water quality discharged to the Delta from the existing RD pump station since this will continue to remain agricultural runoff. However, the detention basin should have beneficial effects for water quality treatment on the existing agricultural runoff with the hydraulic detention time providing deposition of sediment and other pollutants which would not have been provided to that extent previously in the existing system. In addition, the amount of agricultural runoff discharged by the existing RD stormwater pump station to the Delta will be reduced since some of the areas within the Bishop Tract watershed have been converted over to residential landuse which can no longer discharge to the RD channel.

The water quality impact from Crystal Bay development urban runoff and the effects of the proposed stormwater treatment system within the development had previously been quantified as part of the overall Stormwater Management Plan for the project. Crystal Bay utilizes a manmade lake system to completely retain smaller storm runoff events and detain/treat larger storm events. The proposed manmade lake will serve a critical function as one of the key elements as part of the stormwater infrastructure system. The major functions and objectives of the manmade lake includes: (1) stormwater conveyance from one end of the project to the connection to the Westlake lake system, (2) stormwater peak attenuation and temporary storage that reduces pumping capacity requirements as compared to installing a peak flow pump station, (3) stormwater quality treatment through application of multiple layers of natural treatment elements, and (4) reuse of residential development dry-weather and nuisance flows. Application of a large scale manmade lake system within residential development offers an innovative and effective approach to address water quality treatment rather than relying on conventional structural BMPs that have only limited pollutant removal effectiveness.

SC-6: As indicated in Response SC-1, the City believes that the various analyses in the Draft EIR consider the cumulative impacts from the Crystal Bay project. Also as presented in Response SC-1, no new information has been presented that would warrant re-circulation of the Draft EIR.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

December 14, 2007

Jenny Liaw
City of Stockton
Community Development Dept, Planning Division
345 North El Dorado Street
Stockton, CA 95202

Project: **The Crystal Bay Master Development Plan (EIR6-05), (SCH# 2007032116)**
Annexation A-05-4, GPA 7-05, Prezoning Z-07-05, MDP3-05, Tentative Map TM17-05, Precise Road Plan Amendment PR4-05

Subject: CEQA comments regarding the Draft Environmental Impact Report (DEIR)

District Reference No: 200701563

Dear Ms. Liaw:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Draft EIR for the Crystal Bay at Spanos Park West Master Development Plan that consists of approximately 173-acres bound by Eight Mile Road to the north, Bishop Cut and Rio Blanco Roads to the west, and the southern and eastern boundaries abutting Westlake at Spanos Park West. The project site is located within the sphere of influence and outside the City limits for the City of Stockton. The Draft EIR describes the project as approximately 1,363 residential units and 13-acres of parkland. The District offers the following comments:

District Comments

1. The District concurs that the project will have a significant impact on air quality. APCD-1

2. The DEIR states that compliance with Regulation VIII constitutes sufficient mitigation to reduce project related construction emissions of PM10 to less than significant. Compliance with Regulation VIII will mitigate fugitive dust related PM10 impacts from construction to a level considered less than significant. However, compliance with Regulation VIII does not mitigate the PM10 impact from equipment exhaust. The District recommends that the DEIR include a discussion quantifying construction APCD-2

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Executive Director/Air Pollution Control Officer

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equipment exhaust emissions of NOx and PM10 and a discussion of available mitigation measures.

3. The District recommends that feasible mitigation measures, i.e. use of construction equipment that is cleaner than the state fleet average, as determined by the California Air Resource Board, be incorporated into the project. APCD-3

4. As stated in the Draft EIR, compliance with District Rule 9510 will reduce operational emissions. However, compliance with Rule 9510 may not lower emissions to a less than significant level. A project's impact on air quality may be further mitigated through participating in programs that achieve emission reductions in behalf of the project by funding off-site emission reduction projects. Off-site emission reduction projects could include clean fleet vehicle replacements for cities or schools. The District recommends the DEIR consider the feasibility of incorporating off-site mitigation measures into the project. APCD-4

District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. If you have any questions or require further information, please call Georgia Stewart at (559) 230-5937 and provide the reference number at the top of this letter.

Sincerely,

David Warner
Director of Permits Services

Georgia Stewart

for Arnaud Marjollet
Permit Services Manager

DW: gs

cc: File

San Joaquin Valley Air Pollution Control District (December 14, 2007)

Response to Comments:

APCD-1: Comment Noted.

APCD-2: Currently the SJVAPCD does not have significance criteria for equipment exhaust, however very large projects have the potential to exceed the District's annual emission criteria of 10 tons for ROG or NO_x. The proposed project is expected to be constructed over approximately 5 years. To determine if the project would exceed the annual emission criteria, construction emissions have been estimated for the proposed project. Model output is included in Attachment 3.

Table 1: Construction Emissions

Year	ROG	NO_x	PM_{10}
2010	5.17	4.62	8.64
2011	5.20	4.23	9.91
2012	5.20	4.23	9.91
2013	6.03	3.88	9.20
2014	2.93	2.3	2.17

Source: LSA Associates, 2008.

As shown in Table 1, the proposed project would not have ROG or NO_x emissions that would exceed the SJVAPCD significance criteria.

The project applicant will comply with Rule 9510 and a quantification of construction emissions will be conducted in the rule application process. The project will comply with Rule 9510 and reduce 20 percent of construction equipment exhaust nitrogen oxides and 45 percent of construction equipment exhaust PM_{10}. The rule will also require the project to pay off-site fees if the reduction measures don't achieve the required emission reductions.

APCD-3: See response to APCD-2

APCD-4: See response to APCD-2.

State of California—Business, Transportation and Housing Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
3330 Ad Art Road
Stockton, CA 95208
(209) 943-8666
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)

November 14, 2007

File No.: 265.11045.11012.CRYSTAL(B)

Ms. Marie Schelling
State Clearing House
1400 Tenth Street, Room 121
Sacramento, CA 95814

Dear Ms. Schelling:

Thank you for the opportunity to review the Notice of Completion and Environmental Impact Report (EIR) for the Crystal Bay Project located in the area of Eight Mile Road west of Interstate 5 (I-5), (SCH# 2007032116). I would like to restate my concerns with this project as outlined in my April 6, 2007, letter to Mr. Mike Martin of the City of Stockton's Community Development Department, which I have enclosed.

CHP-1

As previously noted, the project will have significant impacts on surrounding roadways as well as I-5. As you know, the California Highway Patrol (CHP) has the primary responsibility for traffic enforcement on county roads as well as this interstate. These roadways will see a measurable increase in the average daily traffic volumes as a result of this project.

Although the EIR indicates several plans to mitigate the expected increased traffic volumes throughout the project and adjacent roadways, it stops short of solving several potential issues. Several of the attempts at mitigation involve funding for future improvements. Although future planning is admirable, the EIR includes the statement "However as these improvements are not yet identified nor fully funded, this mitigation would remain significant-and-unavoidable." Therefore, I would like to again recommend the City of Stockton work closely with the Department of Transportation (Caltrans) as well as the CHP in developing long range and short term plans that are beneficial to all the citizens utilizing the highway system.

CHP-2

The impacts on local traffic created by this project will be significant and felt by local commuters. This project will require the CHP to redirect staffing to effectively manage traffic,absent an increase in resources. The impacts of this project should be further addressed in the project's EIR. Should you have any questions, please feel free to call me or Lieutenant Scott Lynch of my staff at (209) 943-8666. CHP-3

Sincerely,

S. M. COUTTS, Captain
Commander
Stockton Area

Enclosure

Department of California Highway Patrol (November 14, 2007)

Response to Comments:

CHP-1: Although the City of Stockton supports Caltrans both politically and monetarily, it is the responsibility of Caltrans to plan for State highway improvements, including the California Highway Patrol (CHP). Currently, efforts are being pursued by the City of Stockton and Caltrans to provide capacity enhancing improvements to Interstate 5 and associated roadways in anticipation of proposed development projects such as Crystal Bay. At the local level, the City of Stockton Police Department will be responsible for traffic enforcement, thus relieving this burden from the CHP. Impact fees will provide funding to offset local police protection services, and to assist in funding mainline improvements on I-5.

CHP-2: The comment is correct in noting that the impacts on the Interstate system are identified as significant and unavoidable for impacts relating to traffic capacity and levels of service. The DEIR (section 4.7) identifies improvements required to mitigate some of the impacts to a less-than-significant level. It also acknowledges that a PA/ED is being prepared to identify improvements to the freeway mainline segments and freeway interchanges in the study area. However, as neither the City nor Project Applicant can control the scope, timing or implementation of improvements to state facilities the impacts are identified as significant and unavoidable. Nonetheless, the impacts to the highway system have not been ignored. Indeed, the DEIR identifies those impacts and their importance explicitly in the document.

Once the interchange configurations are determined and the PA/ED is completed, the applicant will pay the City's impact fee as its fair share contribution. Until then, it is impracticable to determine the precise mitigation. Because it cannot be concluded with certainty that the mitigation measures will be constructed, the impacts are identified as significant and unavoidable. California courts have held that the project's payment of traffic impact fees is a reasonable mitigation. While there must be a reasonable plan for mitigation (as is the case here), there is no requirement that the project set forth a time-specific schedule so early in the planning process.

CHP-3: See response to CHP-1.

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

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STATE CLEARING HOUSE

December 3, 2007

Ms. Jenny Liaw, Senior Planner
City of Stockton
345 North El Dorado Street
Stockton, California 95202

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE CRYSTAL BAY PROJECT (SCH #2007032116)

Dear Ms. Liaw:

The Department of Toxic Substances Control (DTSC) has reviewed the document described above that proposes rezoning agricultural property to residential and building residential housing on the land. DTSC recommends that additional research be conducted to determine whether pesticides were used on the proposed development site. The site should be evaluated to determine if and where storage, mixing, rinsing and disposal of pesticides may have occurred and whether contamination exists. TSC-1

In addition, although DTSC does not regulate pesticides legally applied to crops, if pesticides have historically been used on the property, we strongly recommend that these areas be tested for environmentally persistent pesticides such as organic pesticides and metals prior to development. The results of any testing should be evaluated to determine if concentrations present in soils will be protective of residents and workers.

Please contact me by email at tmiles@dtsc.ca.gov or by telephone at (916) 255-3710, if you have any questions.

Sincerely,

Tim Miles

Tim Miles
Hazardous Substances Scientist

cc: Planning & Environmental Analysis Section (PEAS)
CEQA Tracking Center
1001 I Street, 22nd Floor
P.O. Box 806
Sacramento, California 95812-0806

cc: State Clearinghouse
Office of Planning and Research
1400 10th Street, Room 121
Sacramento, California 95814-0613

Ms. Donna Heran, Director
San Joaquin County Environmental Health
304 East Weber Avenue, Third Floor
Stockton, Califomia 95202

Department of Toxic Substances Control (December 3, 2007)

Response to Comments:

TSC-1: Kleinfelder conducted soil sampling and analysis to evaluate the shallow soil at the project site for potential residual pesticides and elevated concentrations of metals (see attachment 2). No organochlorine pesticides were detected in any of the ten soil samples collected from throughout the site. Based on those results, previous application of pesticide chemicals appear to have dissipated in the soil. It does not appear that shallow soils at the site have been impacted by the normal application of pesticides and that additional sampling for OCPs is not warranted at this time.

DEPARTMENT OF TRANSPORTATION
P.O. BOX 2048 STOCKTON, CA 95201
(1976 E. CHARTER WAY/1976 E. DR. MARTIN
LUTHER KING JR. BLVD. 95205)
PHONE (209) 941-1921
FAX (209) 948-7194
TTY: 711

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December 10, 2007

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10-SJ-5-PM 35.3
SCH2007032116 (DEIR)
Spanos Business
Park West (Revised)

Jenny Liaw
City of Stockton
Community Development Department
Planning Division
425 North El Dorado Street
Stockton, CA 95202-1997

Dear Ms. Liaw:

The California Department of Transportation (Department) appreciates the opportunity to have reviewed the Draft Environmental Impact Report (DEIR) for the proposed Spanos Park West Crystal Bay Master Development Plan to be located south of Eight Mile Road, north and west of Westlake Village, and east of Bishop Cut and Rio Blanco Road in the City of Stockton. The Department has the following comments:

TIS STUDY AREA

In our September 19, 2005 letter, the Department recommended that the Lead Agency encourage the developer to submit a scope of work for conducting the TIS prior to circulating the local development application for comment in order to expedite the Department's review. This would help to insure that the TIS submitted follows the *Caltrans Guide for the Preparation of Traffic Impact Studies*, dated December 2002 (TIS guide). The letter also stated "All State owned signalized intersections affected by this project should be analyzed using the intersecting lane vehicle (ILV) procedure from the Department's Highway Design Manual, Topic 406, page 400-21."

CT-1

The Spanos Park West Crystal Bay Master Development Plan DEIR/TIS analyzes only a limited boundary area, much like that experienced with the nearby Sanctuary development. The TIS does not analyze the freeway facilities in which the project's trip generation significantly exceeds the generation threshold values suggested. The project boundary should be re-evaluated to include the I-5 interchanges and freeway segments that will potentially be affected by the development's traffic. A project of this size with a traffic generation of 885 AM peak hour trips and 1,062 PM peak hour trips will have potential significant impacts over a much larger area than analyzed in the TIS.

Reviewing the TIS analysis, the I-5 interchanges and freeway segments at the perimeters of the current study area show significant impacts. This would support the contention that the TIS boundary area was too limited. For example, the TIS does not evaluate any freeway segments or interchanges south of Hammer Lane even though from Figure 4.7.5, the project's traffic generation at 2025 has a distribution of 55 percent south of Hammer Lane. Additionally, Figure 4.7.6 for the 2035 scenario shows 35 percent of the projects trip distribution south of Hammer Lane. Additionally the Crystal Bay project traffic volumes distributed to the I-5/Hammer Lane interchange southbound off-ramp and northbound on-ramp are unrealistic. Figure 4.7.9.B (Intersections No. 24 & No. 25) show that there is no traffic volumes assigned to the southbound off-ramp, or the northbound on-ramp, due to this development. This is unrealistic since some of the projects traffic coming to and from origins/destinations on the east side of I-5 at Hammer Lane would reasonably be expected to use I-5. CT-2

TRAFFIC FORECAST VOLUMES

The DEIR for Spanos Park West Crystal Bay shows forecasted traffic volumes which are exactly the same as the previous routed Sanctuary DEIR. However, these forecast traffic volumes significantly exceed those which are being used to design the I-5 Widening and Interchange PA/ED project. In the meeting held on December 5, 2007 between the City of Stockton, Fehr & Peers, Rajappan & Meyer, SJCOG, and Caltrans, the developer's traffic consultant, Fehr & Peers, explained that the reason was the DEIR's used the City of Stockton's traffic model which has a significantly greater level of development at build-out than the SJCOG's traffic model which was used for the I-5 PA/ED project forecast. CT-3

This fact would invalidate any statements which imply that the I-5 PA/ED would provide the mitigation for the Spanos Park West Crystal Bay Development. The traffic volumes being used to design the interchanges and freeway facilities were based on the constrained SJCOG model which results in a lower traffic generation from these developments. This same situation also applies to other previously routed DEIR's, such as the Sanctuary DEIR. As such, it was proposed in the meeting by the City of Stockton that Fehr & Peers will provide analysis of the additional traffic impacts due to the increased traffic-specific EIR's within the current schedules.

TIS ANALYSIS METHOD

The 95th percentile queuing analysis shown in the Synchro 6 printouts in Appendix G shown in the 2025 and 2035 scenarios at the I-5 interchanges the queue lengths exceed the available turn pocket storage lengths. Since the resultant 95th percentile queues exceed the available turn pocket storage lengths there will be queue blocking and interaction between intersections at off-ramps, on-ramps, and adjacent city street intersections. Attempting to use a Synchro 6 analysis, which calculates vehicle delay and LOS based on HCM methodology is not applicable in these conditions due to queue blocking, and congestion at these ramp intersections. However, the TIS has not taken this into account, the methodology and subsequent analysis are not applicable with this situation and result in lower LOS values being reported. Using the HCM methodology to analyze the LOS and traffic impacts, results in better LOS being reported, because it assumes an isolated intersection condition and ignores the aforementioned conditions. The Department believes that this is not an appropriate method for the analysis for the CT-4

intersections and suggests using the Synchro 6 analysis to reevaluate the operations and LOS.

MITIGATION MEASURES

As stated in the Departments letter of September 19, 2005, "the Department requires level of service (LOS) "C" or better at State owned facilities, including intersections (see Appendix "C-3" of the TIS guide). If an intersection is currently below LOS "C," any increase in delay from project-generated traffic must be analyzed and mitigated. The LOS for operating State highway facilities is based upon measures of effectiveness (MOE) (see Appendix "C-2" of the Guide). If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained". CT-5

The DEIR/TIS states on Page 4-124 that....."Note - The General Plan is currently being updated with new LOS policies. With the adoption of the General Plan Update, the City may accept LOS E at the Eight Mile Road interchange. Therefore, the project impact may be less-than-significant." Additionally in the discussion for the mitigation measure for TRAF-7d (pg 4-212) it is also stated that, "The General Plan Updated may allow for LOS E at this location". It would not be appropriate to lower the minimum acceptable LOS standards on this interstate facility based on the information provided in this TIS. CT-6

The DEIR in the various scenarios analyzed consistently shows significant impacts to the Interstate 5 interchanges and freeway segments, however resultant impacts are subsequently categorized as "Significant and unavoidable" due to reasons such as, "Improvements are not yet identified", and "Improvements are not fully funded" CT-7

The Crystal Bay Specific Plan Development DEIR depends primarily on fair share contributions to the I-5 Interchange & Widening project to mitigate the limited traffic impacts which were disclosed in the TIS. The I-5 project is currently in the Project Approval/Environmental Document phase (PA/ED). The DEIR's frequently states that, "However as these improvements are not yet neither identified nor fully funded, this mitigation would remain significant-and-unavoidable." Since the full-funding and phasing of the mitigating project are undetermined, the DEIR has concluded that the majority of the traffic impacts to the highway system are "significant and unavoidable". CT-8

SUMMARY

In summary, the DEIR/TIS should expand its boundary area and reevaluate the analysis methodology, to more accurately disclose and address the potential project impacts. The affected areas and the severity of the impacts to traffic would be greater than that shown in this DEIR. CT-9

We suggest that the City continue to coordinate and consult with the Department to identify and address potential cumulative transportation impacts that may occur from this project and other developments near this geographical location. This will assist us in ensuring that traffic safety and quality standards are maintained for the traveling public on existing and future state CT-10

transportation facilities. If you have any questions or would like to discuss our comments in more detail, please contact Kathy Selsor at (209) 948-7190 (e-mail: kathy_selsor@dot.ca.gov) or me at (209) 941-1921.

Sincerely,

Kathy Selsor for

TOM DUMAS, CHIEF
OFFICE OF METROPOLITAN PLANNING

c: SMorgan CA Office of Planning and Research

Department of Transportation (December 10, 2007)

Response to Comments:

CT-1: The EIR and traffic study evaluated freeway segments and intersections by employing methods and guidelines for conducting such studies that are generally accepted by practitioners and traffic experts. CEQA does not compel the agency to adopt one method over another, particularly where, as here, the method clearly and accurately identifies project impacts. Here, the DEIR employed the LOS method from the Highway Capacity Manual (HCM), a method consistent with Caltrans guidelines. The traffic study involved a comprehensive and complete geographic study area. The project's impacts were evaluated for a total of 27 intersections (including six freeway ramp intersections), 3 roadway segments, and eight freeway segments. Some of the study intersections are more than five miles from the project site. These study locations were selected in conjunction with City staff based on project traffic assignments using the City's model. The traffic study included an evaluation of all intersections and freeway segments that might be impacted significantly by the project.

For example, the study included an evaluation of those intersections and segments that were likely to experience an increase in traffic volumes of 5 percent or more, and thus exceed one of the significance thresholds identified in the EIR. Intersections and freeway segments beyond the study-area boundary were not included because those intersections and segments were not anticipated to exceed the thresholds of significance specified in the DEIR; namely, those intersections and segments are not anticipated to see an increase in total traffic volumes of 5% or more as a result of the project, nor are they anticipated to experience a deterioration in the level of service (e.g., from LOS D to LOS E, or LOS E to LOS F).

CT-2: The analysis evaluated impacts to freeway segments, including I-5 south of Hammer Lane. The DEIR identified significant project impacts on I-5 south of Hammer Lane under near-term and 2025 analysis scenarios. While the southern limits of this segment were not specified in the DEIR, the impacts identified in the DEIR extend south on I-5 to the Monte Diablo undercrossing. The mitigation identified in the DEIR similarly extends to Monte Diablo on I-5. Furthermore, the identified mitigation measures and fees levied on the project by the City as part of its impact fee program will similarly contribute to improvements on the I-5 freeway segments extending even further south, and includes the interchanges at Ben Holt and March Lane.

Traffic was not assigned to the northbound on-ramp or southbound off-ramp at Hammer Lane as there are alternative routes between the project site and Hammer Lane east of I-5 that are shorter. However, to ensure that the project would not result in an unidentified impact at the Hammer Lane/I-5 ramps, additional analysis was conducted considering project traffic assigned to the I-5 southbound off-ramp/ northbound on-ramp at Hammer Lane.

Based on the new additional analysis performed, the northbound and southbound ramp intersections are projected to operate at LOS D or better during both peak hours with the addition of project traffic in the EPAP conditions. Reassigning project traffic to the southbound off-ramp/northbound on-ramp would not degrade operations to LOS E or F. Results of this analysis are presented in Table 2 and compared to the results presented in the DEIR. Analysis worksheets are provided in Attachment 1.

In the 2025 condition, the Hammer Lane/I-5 Southbound off-ramp intersection is projected to operate at an acceptable LOS C during the AM peak hour and an acceptable LOS D during the PM peak hour. Reassigning project traffic to the southbound off-ramp/northbound on-ramp would not result in deficient operations. The Hammer Lane/I-5 Northbound off-ramp intersection is projected to degrade to LOS E with the addition of project traffic in the DEIR and a significant impact was identified at this location. With the reassignment of project traffic to the southbound off-ramp/northbound on-ramp, this interchange intersection would also degrade to LOS E. Mitigation identified in the DEIR would also mitigate the projects impact under with reassignment of traffic. Results of this analysis are presented in Table 2 and compared to the results presented in the DEIR Analysis worksheets are provided in Attachment 1.

In the 2035 condition, the Hammer Lane/I-5 Southbound off-ramp intersection is projected to operate at an unacceptable LOS F during the AM peak hour and an acceptable LOS D during the PM peak hour. During the AM peak hour, the addition of project traffic, as shown in the DEIR, would increase average delay by 3 seconds, which is not considered significant based on City of Stockton significance criteria. Reassigning project traffic to the southbound off-ramp/northbound on-ramp would not increase delay by more than the 3 seconds during the AM peak hour, nor would it result LOS E or F operations in the PM peak hour.

The Hammer Lane/I-5 Northbound off-ramp intersection is projected to operate at an acceptable LOS D during the AM peak hour and an unacceptable LOS F during the PM peak hour in the 2035 analysis. During the PM peak hour, the addition of project traffic would increase average delay by 2 seconds, which is not considered significant. Reassigning project traffic to the southbound off-ramp/northbound on-ramp would increase delay by 2 seconds, which is less than the 5-second increase needed to result in a significant impact, based on City of Stockton significance criteria. During the AM peak hour, reassignment of project traffic would not result LOS E or F operations. Results of this analysis are presented in Table 2 and compared to the results presented in the DEIR. Analysis worksheets are provided in Attachment 1.

Therefore, reassigning project traffic as suggested by the commenter would not result in any additional significant impacts at the Hammer Lane interchange. However, it should be noted that the Project Applicant will contribute to planned improvements at the interchange through the payment of the City's traffic impact fee.

Table 2: Hammer Lane Interchange Service Level Summary[1]

Intersection	Peak Hour	Existing Plus Approved Projects			2025 Condition			2035 Condition		
		DEIR Analysis		New Analysis with Project	DEIR Analysis		New Analysis with Project	DEIR Analysis		New Analysis with Project
		Without Project	With Project		Without Project	With Project		Without Project	With Project	
Hammer Lane/I-5 Southbound Ramps	AM	21/C	21/C	21/C	29/C	30/C	30/C	**138/F**	**141/F**	**140/F**
	PM	21/C	21/C	21/C	39/C	39/D	40/C	48/D	50/D	51/D
Hammer Lane/I-5 Northbound Ramps	AM	16/B	16/B	16/B	17/B	17/B	17/B	51/D	54/D	54/D
	PM	43/D	45/D	45/D	54/D	***58/E***	***58/E***	**112/F**	**114/F**	**114/F**

Notes: Delay in Seconds/Level of Service presented
Bold indicates deficient operations; ***Bold Italics*** indicates significant impact

CT-3: The procedure used to develop traffic forecasts for the PA/ED differs from that used in the DEIR (and other project-level EIRs throughout the City of Stockton). The cumulative scenario for these EIRs is based on full buildout of the City of Stockton General Plan, consistent with the City's guidelines for traffic impact studies. In contrast, traffic forecasts for the I-5 North Stockton PA/ED are based on a 20-year planning horizon consistent with SJCOG regional projections, per the approach agreed upon with Caltrans and SJCOG. This latter approach is necessary for infrastructure projects so as to provide consistency with the air quality conformity analysis completed by SJCOG. As a result of these differences in approach, there are some circumstances in which the mitigations outlined in the DEIR exceed the interchange configurations that are currently under study in the PA/ED. However, as noted above, the PA/ED has not been completed and further adjustments to the interchange configurations may be incorporated. Until then, it is not only impracticable, but it is impossible, to determine the precise mitigation. And because it cannot be concluded with certainty that the mitigation measures cited in this DEIR will be constructed, and because there are no assurances that the mitigation will be completed in a manner and timeline that adequately addresses each impact because the City does not have jurisdiction to control the implementation process, the impacts are identified as significant and unavoidable.

The DEIR acknowledges that the PA/ED is being conducted for interchange and freeway mainline improvements in the study area. The DEIR also states that as (at the time of the DEIR analysis) the improvements were not yet identified nor fully funded, the impacts would remain significant and unavoidable. The DEIR does not include statements that the I-5 PA/ED would provide complete

[1] It should be noted that this table and the other new information does not disclose: (1) a new significant environmental effect; or, (2) a substantial increase in the severity of an environmental effect; or (3) new feasible mitigation measures or project alternatives; or, (4) that the draft EIR is inadequate and conclusory that it precludes meaningful public review and comments. Therefore recirculation is not required.

mitigation for project impacts to the state highway system. Project impacts were identified at the following Caltrans facilities on I-5 (for the specified analysis scenarios):

- Eight Mile Road/I-5 Southbound Ramps (2035)
- Eight Mile Road/I-5 Northbound Ramps (EPAP, 2025, 2035)
- Hammer Lane/I-5 Northbound Ramps (2025)
- I-5 South of Hammer Lane – Northbound (EPAP, 2025)
- I-5 South of Hammer Lane – Southbound (EPAP, 2025)

The DEIR identifies an improvement at each impacted location that would be needed to reduce the impacts to a less-than-significant level. The planned (as of December 2007) I-5 PA/ED improvements are consistent with the mitigation measure identified in the DEIR at the Eight Mile Road/I-5 Northbound Ramps (TRAF 1c, TRAF 5b), Hammer Lane/I-5 Northbound Ramps (TRAF 5e), and I-5 South of Hammer Lane (northbound and southbound) (TRAF 4, TRAF 6). Payment of the City Traffic Impact Fee would constitute the Project's fair share contribution towards these mitigation measures.

Mitigation, consistent with the PA/ED improvements, that would result in LOS E at the Eight Mile Road/I-5 Southbound Ramps in 2035 was identified (TRAF 7d). With adoption of the 2035 General Plan Update, LOS E is considered acceptable at this location.

CT-4: The City of Stockton adopted the Highway Capacity Manual (HCM) method and the Traffix software program for intersection operations analyses in their Transportation Impact Analysis Guidelines. This method is used to evaluate all of the intersections in the Crystal Bay DEIR analysis, except for the intersections near freeway interchanges. For the intersections near freeway interchanges, because they are so closely-spaced, the traffic consultant used the Synchro 6.0 software program, which more accurately evaluates the effects of signal coordination of closely spaced intersections.

It appears than the commenter intended to state that SimTraffic (not Synchro 6.0) be used. Using a micro-simulation tool such as SimTraffic can take into account the effects of vehicle queue spillback or turn lane pocket overflow. Micro-simulation models follow the behavior of individual vehicles through the system. This is what generally makes them superior to macroscopic models such as Synchro. However, when demand far exceeds capacity, which is what is expected at the I-5 interchange locations and adjacent intersections in the General Plan Buildout scenario, system wide gridlock develops. When system wide gridlock develops, the results from the simulation model become meaningless. As demand exceeds capacity at the intersections located at the edges of the roadway network, the amount of traffic getting into the system begins to get metered. As the demand grows, less traffic gets into the system. Therefore, it is possible that an intersection located inside the system will operate better at a higher theoretical demand than a lower theoretical demand due to effects of metering at the network edges. Using simulation under this occurrence can result in a misrepresentation of a project's impacts. Therefore, for the purposes of determining project specific impacts for the Crystal Bay Project, Synchro 6.0 was used to evaluate freeway ramp intersections.

CT-5: The Caltrans level of service policy is noted in the DEIR. The DEIR used the City of Stockton's level of service policy to determine standards of significance.

CT-6: The level of service standard change at the Eight Mile Road/I-5 interchange is being considered as part of the General Plan Update, independent of this project.

CT-7: The comment is correct in noting that the impacts on the State highway system are identified as significant and unavoidable. The DEIR identifies improvements required to mitigate the impacts to a less-than-significant level. It also acknowledges that a PA/ED is being prepared to identify improvements to the freeway mainline segments and freeway interchanges in the study area. However, as neither the City nor Project Applicant can control the scope, timing or implementation of improvements to state facilities the impacts are identified as significant and unavoidable. Nonetheless, the impacts to the highway system have not been ignored. Indeed, the DEIR identifies those impacts and their importance explicitly in the document.

Once the interchange configurations are determined and the PA/ED is completed, the applicant will pay the City's impact fee as its fair share contribution. Until then, it is not only impracticable, but it is impossible to determine the precise mitigation. And because it cannot be concluded with certainty that the mitigation measures will be constructed, the impacts are identified as significant and unavoidable. California courts have held that the project's payment of traffic impact fees is a reasonable mitigation. While there must be a reasonable plan for mitigation (as is the case here), there is no requirement that the project set forth a time-specific schedule, as this is impossible so early in the planning process.

CT-8: A California appeals court recently held that programs in which developers pay their "fair share" for improvements to public facilities made necessary by new development are considered reasonable mitigation. In Friends of Lagoon Valley v. City of Vacaville (2007) 154 Cal.App.4th 807, 818-819, the group Friends of Lagoon Valley complained that there was no guarantee that improvements to freeway ramps, freeway widening and offsite road improvements would be implemented due to the "current funding situation of the state in general, and Caltrans in particular." *Id.* The Court rejected this argument, noting that "All that is required by CEQA is that there be a reasonable plan for mitigation. Nothing required the City to set forth a time-specific schedule for the completion of specific roadway improvements." *Id.* at 819. Similarly here, a reasonable plan for mitigation exists and the project applicant will be required to pay its fair share contribution to these mitigation programs.

CT-9: See Responses to comments CT-1 through CT-4.

CT-10: City staff is committed to working cooperatively with Caltrans to address regional transportation issues in Stockton.

STATE OF CALIFORNIA ARNOLD SCHWARZENEGGER, *Governor*

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

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November 26, 2007

File Ref: SCH# 2007032116

Clear
12.14.07
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City of Stockton
c/o Community Development Department
Planning Division
Attn: Jenny Liaw
345 North El Dorado Street
Stockton, CA 95202

Subject: Public Review of the DEIR for the Crystal Bay Master Development Plan

Dear Ms Liaw:

The State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes which include waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. The landward boundaries of the State's sovereign interests in areas that are subject to tidal action are generally based upon the ordinary high water marks of these waterways as they last naturally existed. In non-tidal navigable waterways, the State holds a fee ownership in the bed of the waterway between the two ordinary low water marks as they last naturally existed. The entire non-tidal navigable waterway between the ordinary high water marks is subject to the Public Trust Easement. Both the easement and fee-owned lands are under the jurisdiction of the State Lands Commission. The locations of the ordinary high and low water marks are often related to the last natural conditions of the river, and may not be apparent from a present day site inspection.

As the proposed project may involve State-owned sovereign lands, the project proponent should contact Diane Jones, Public Land Manager, at 916-574-1843, to discuss the potential sovereign interests within the proposed project.

The DEIR must address the public's constitutional rights of access and the use of the waterways within the subject area. Since 1879, the California Constitution (currently Article X, § 4) has mandated that the Legislature enact laws to provide for public access to navigable waterways. Government Code §§66478.1 – 66478.14, of the Subdivision Map Act, is such a law. The Map Act prohibits a local government from approval of

SLC-1

either a tentative or final subdivision map (§66478.5 (a)) that does not expressly designate (§66478.6) access via dedicated public easements both to (§66478.4) and along (§66478.5) the waterway involved (*Kern River Public Access Committee v. City of Bakersfield* (1985) 170 Cal. App. 3d 1205). Approval of a tentative map without the easement is a violation of the act. SLC-1 Cont.

In addition, greenhouse gas emissions information consistent with the California Global Warming Solutions Act (AB 32) should be included. This would include a determination of the greenhouse gases that will be emitted, a determination of the significance of the impact, and mitigation measures to reduce that impact. SLC-2

If you have any questions regarding the CSLC's environmental concerns, please contact Steve Mindt at (916) 574-1497.

Sincerely,

Marina R. Brand

Marina R. Brand, Assistant Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
State Clearinghouse
Diane Jones, CSLC
Steve Mindt, CSLC

California State Lands Commissions (November 26, 2007)

Response to Comments

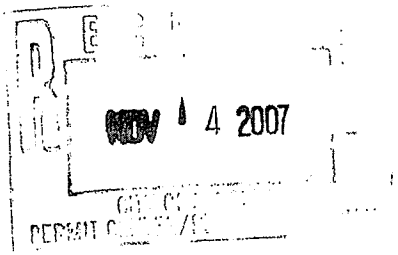
SLC-1: In any approval of the proposed project the City would comply with the requirements of the Subdivision Map Act, including Government Code §§66478.1 – 66478.14. As currently designed, the project complies with the Subdivision Map Act's requirement to expressly designate access by public roadway as well as to provide access via dedicated public easement along the waterway. As specified in the DEIR, the proposed project includes 8.7 acres of levee/open space land uses (bike and pedestrian trails) along the existing levees adjacent to Bishop Cut.

SLC-2: AB 32, known as the California Global Warming Solutions Act of 2006 requires that a list of emission reduction strategies be published to achieve the goals set out in AB 32. Executive Order S-3-05 states that the following greenhouse gas emission reduction targets shall be met: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. However, until AB 32 reduction strategies are published, emission reduction strategies to meet Executive Order S-3-05 will be relied upon. It is the City's opinion that the substantial compliance of the project with these greenhouse gas emission reduction strategies would indicate that the project will not have a significant effect on global warming. A determination of the significance of the impact and mitigation measures to reduce that impact are included in section 4.2 of the DEIR, specifically impact AIR-4 and Mitigation Measure AIR-1.

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791



November 5, 2007

Jenny Liaw, Senior Planner
City of Stockton
Community Development Department, Planning Division
345 North El Dorado Street
Stockton, California 95202

Public Review of the Draft Environmental Impact Report for the Crystal Bay Master Development Plan (EIR6-05)

The project corresponding to the subject SCH identification number has come to our attention. The limited project description suggests your project may be an encroachment on the State Adopted Plan of Flood Control. You may refer to the California Code of Regulations, Title 23 and Designated Floodway maps at http://recbd.ca.gov/. Please be advised that your county office also has copies of the Board's designated floodways for your review. If indeed your project encroaches on an adopted food control plan, you will need to obtain an encroachment permit from the Reclamation Board prior to initiating any activities. The attached Fact Sheet explains the permitting process. Please note that the permitting process may take as much as 45 to 60 days to process. Also note that a condition of the permit requires the securing all of the appropriate additional permits before initiating work. This information is provided so that you may plan accordingly. DWR-1

If after careful evaluation, it is your assessment that your project is not within the authority of the Reclamation Board, you may disregard this notice. For further information, please contact me at (916) 574-1249.

Sincerely,

Christopher Huitt
Staff Environmental Scientist
Floodway Protection Section

Enclosure

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Encroachment Permits Fact Sheet

Basis for Authority

State law (Water Code Sections 8534, 8608, 8609, and 8710 – 8723) tasks the Reclamation Board with enforcing appropriate standards for the construction, maintenance, and protection of adopted flood control plans. Regulations implementing these directives are found in California Code of Regulations (CCR) Title 23, Division 1.

Area of Reclamation Board Jurisdiction

The adopted plan of flood control under the jurisdiction and authority of the Reclamation Board includes the Sacramento and San Joaquin Rivers and their tributaries and distributaries and the designated floodways.

Streams regulated by the Reclamation Board can be found in Title 23 Section 112. Information on designated floodways can be found on the Reclamation Board's website at http://recbd.ca.gov/designated_floodway/ and CCR Title 23 Sections 101 - 107.

Regulatory Process

The Reclamation Board ensures the integrity of the flood control system through a permit process (Water Code Section 8710). A permit must be obtained prior to initiating any activity, including excavation and construction, removal or planting of landscaping within floodways, levees, and 10 feet landward of the landside levee toes. Additionally, activities located outside of the adopted plan of flood control but which may foreseeable interfere with the functioning or operation of the plan of flood control is also subject to a permit of the Reclamation Board.

Details regarding the permitting process and the regulations can be found on the Reclamation Board's website at http://recbd.ca.gov/ under "Frequently Asked Questions" and "Regulations," respectively. The application form and the accompanying environmental questionnaire can be found on the Reclamation Board's website at http://recbd.ca.gov/forms.cfm.

Application Review Process

Applications when deemed complete will undergo technical and environmental review by Reclamation Board and/or Department of Water Resources staff.

Technical Review

A technical review is conducted of the application to ensure consistency with the regulatory standards designed to ensure the function and structural integrity of the adopted plan of flood control for the protection of public welfare and safety. Standards and permitted uses of designated floodways are found in CCR Title 23 Sections 107 and Article 8 (Sections 111 to 137). The permit contains 12 standard conditions and additional special conditions may be placed on the permit as the situation warrants. Special conditions, for example, may include mitigation for the hydraulic impacts of the project by reducing or eliminating the additional flood risk to third parties that may caused by the project.

Additional information may be requested in support of the technical review of

your application pursuant to CCR Title 23 Section 8(b)(4). This information may include but not limited to geotechnical exploration, soil testing, hydraulic or sediment transport studies, and other analyses may be required at any time prior to a determination on the application.

Environmental Review

A determination on an encroachment application is a discretionary action by the Reclamation Board and its staff and subject to the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.). Additional environmental considerations are placed on the issuance of the encroachment permit by Water Code Section 8608 and the corresponding implementing regulations (California Code of Regulations – CCR Title 23 Sections 10 and 16).

In most cases, the Reclamation Board will be assuming the role of a "responsible agency" within the meaning of CEQA. In these situations, the application must include a certified CEQA document by the "lead agency" [CCR Title 23 Section 8(b)(2)]. We emphasize that such a document must include within its project description and environmental assessment of the activities for which are being considered under the permit.

Encroachment applications will also undergo a review by an interagency Environmental Review Committee (ERC) pursuant to CCR Title 23 Section 10. Review of your application will be facilitated by providing as much additional environmental information as pertinent and available to the applicant at the time of submission of the encroachment application.

These additional documentations may include the following documentation:

- California Department of Fish and Game Streambed Alteration Notification (http://www.dfg.ca.gov/1600/),
- Clean Water Act Section 404 applications, and Rivers and Harbors Section 10 application (US Army Corp of Engineers),
- Clean Water Act Section 401 Water Quality Certification, and
- corresponding determinations by the respective regulatory agencies to the aforementioned applications, including Biological Opinions, if available at the time of submission of your application.

The submission of this information, if pertinent to your application, will expedite review and prevent overlapping requirements. This information should be made available as a supplement to your application as it becomes available. Transmittal information should reference the application number provided by the Reclamation Board.

In some limited situations, such as for minor projects, there may be no other agency with approval authority over the project, other than the encroachment permit by Reclamation Board. In these limited instances, the Reclamation Board

may choose to serve as the "lead agency" within the meaning of CEQA and in most cases the projects are of such a nature that a categorical or statutory exemption will apply. The Reclamation Board cannot invest staff resources to prepare complex environmental documentation.

Additional information may be requested in support of the environmental review of your application pursuant to CCR Title 23 Section 8(b)(4). This information may include biological surveys or other environmental surveys and may be required at anytime prior to a determination on the application.

Department of Water Resources (November 5, 2007)

Response to Comments

DWR-1: The Crystal Bay project is not located within the area subject to the State Adopted Plan of Flood Control, and therefore, an encroachment permit is not needed. The EIR states the following:

A proposed revision to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM) was made in 1988. At the time, the greater project area was determined to be within the 100-year flood plain due to insufficient flood improvement protection. The area's flood control levees could not provide a minimum of three feet of freeboard above the theoretical 100-year flood plain elevation, a criterion used by FEMA to determine if a property is within the flood plain.

In 1990, Local Reclamation District 20-42 (RD 20-42) applied to FEMA to remove the 100-year flood plain designation from the greater Bishop Tract area. In 1992, FEMA accepted the request based on the passage of a Mello-Roos bond to initiate levee improvements, which are now complete.

A hydraulic analysis was performed to incorporate levee and interior drainage systems north of Bear Creek and west of Interstate 5 designed to mitigate flooding from the San Joaquin/Sacramento River Delta. A Letter of Map Revision (LOMR) was issued on December 28, 1992 which modified the base flood elevations north of Bear Creek and west of Interstate 5.

In 1994, FEMA studied the upstream channels that are tributary to the San Joaquin Delta and determined that they did not provide 100-year protection to the greater project area. This determination would have placed the project site and surrounding properties back into the 100-year flood plain. However, the San Joaquin Area Flood Control Agency (SJAFCA), a joint powers agency of the City of Stockton and San Joaquin County, was formed to assist in resolving regional flood control issues. A total of $70 million was allocated towards flood control improvements through a regional benefit assessment district.

In July 1996, the first flood control project to improve the upstream channels was initiated to correct the 100-year flood plain issue, followed by other widespread flood control improvements. Both the U.S. Army Corps of Engineers (ACOE) and RD 20-42 have acknowledged the improvements meet FEMA standards and resolve the flooding issue. The FIRM map issued on April 2, 2002, indicates that the proposed project site is located in Zone B. Zone B is defined as: "areas between the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood."

S J C O G, Inc.

555 East Weber Avenue • Stockton, CA 95202 • (209) 468-3913 • FAX (209) 468-1084

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

SJMSCP RESPONSE TO LEAD AGENCY ADVISORY AGENCY NOTICE TO SJCOG, Inc.

To: Jennie Liaw, City of Stockton Community Development Department

From: Anne~Marie Poggio-Castillou, SJCOG, Inc.

Date: November 8, 2007

Re: **Lead Agency Project Title:** DEIR: Crystal Bay

Lead Agency Project Number: Draft EIR 6-05

Assessor Parcel Number(s): 066-060-01, 02, & 03

Total Acres to be converted from Open Space Use: 173 acres

Habitat Types to be Disturbed: Agriculture (C34)

Species Impact Findings: Findings to be determined by SJMSCP biologist.

Dear Mrs.Liaw:

SJCOG, Inc. has reviewed application DEIR 06-05. The proposed project consists of residential uses at a variety of densities. The development plan consists of five types of housing units, major circulation roads and a project created lake. The community is anticipated to include approximately 1,363 total units. A total of 13.1 acres of parkland will be dedicated as part of this pr5oject. Additional open space/greenbelt landscape containing a total of 21 acres will be located within the proposed project. The project is located within the San Joaquin County near the northwest portion of the City of Stockton. The project site is bounded to the north by Eight Mile Road, to the south and east by Westlake villages, and to the west by Bishop cut and Rio Blanco Road.

San Joaquin County is a signatory to San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP satisfies requirements of both the state and federal endangered species acts, and ensures that the impacts are mitigated below a level of significance in compliance with the California Environmental Quality Act (CEQA). Although participation in the SJMSCP is voluntary, lead agents should be aware that if project applicants choose against participating in the SJMSCP, they will be required to provide alternative mitigation in an amount and kind equal to that provided in the SJMSCP. SJCOG-1

It should be noted that two important federal agencies (U.S. Army Corps of Engineers and the California Regional Water Quality Control Board) have not issued permits to the SJCOG and so payment of the fee to use the SJMSCP will not modify requirements that could be imposed by these two agencies. Potential waters of the United States [pursuant to Section 404 Clean Water Act] are believed to occur on the project site. It may be prudent to obtain a preliminary wetlands map from a qualified consultant. If waters of the United States are confirmed on the project site, the Corps and the Regional Water Quality Control Board (RWQCB) would have regulatory authority over those mapped areas [pursuant to Section 404 and 401 of the Clean Water Act respectively] and permits would be required from each of these resource agencies prior to grading the project site.

This Project is subject to the SJMSCP. Per requirements of the SJMSCP, this project must seek coverage due to required Army Corp permitting, and is subject to a case-by-case review. This can be a 90 day process and it is recommended that the project applicant contact SJMSCP staff as early as possible.

After this project is approved by the Habitat Technical Advisory Committee and the SJCOG Inc. Board, the following process must occur to participate in the SJMSCP:

- Schedule a SJMSCP Biologist to perform a pre-construction survey ***prior to any ground disturbance***
- Sign and Return Incidental Take Minimization Measures to SJMSCP staff (given to project applicant after pre-construction survey is completed)
- Pay appropriate fee to the City of Stockton based on SJMSCP findings
- Receive your Certificate of Payment and release the required permit

SJCOG-2

If you have any questions, please call (209) 468-3913.

SJCOG, inc. (November 8, 2007)

Response to Comments

SJCOG-1: Comment noted. The applicant plans to participate in the SJMSCP and pay associated fees. The applicant is also aware that permitting from the U.S. Army Corps of Engineers and the California Regional Water Quality Control Board may be required.

SJCOG-2: Comment noted. See response to SJCOG-1.

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

REPLY TO
ATTENTION OF

January 15, 2008

Regulatory Branch (SPK-200702253)

Jenny Laiw
City of Stockton
Community Development Dept. Planning Division
345 North El Dorado Street
Stockton California 95202

Dear Ms. Laiw:

We are responding to your November 1st 2007 request for comments on the Crystal Bay project. This project is located at Latitude 38° 43' 20.4", Longitude 121° 24' 41.6", Township 2 North, Range 3 East, MDB&M, near Stockton, in San Joaquin County, California. Your identification number is EIR File No. 6-05.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work. CORPS-1

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

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation. CORPS-2

Please refer to identification number 200700253 in any correspondence concerning this project. If you have any questions, please contact William Guthrie at our Sacramento Delta Office, 1325 J Street, Room 1480, email William.h.guthrie@usace.army.mil, or telephone 916-557-5269. You may also use our website: *www.spk.usace.army.mil/regulatory.html.*

Sincerely,

Kathleen Dadey, Ph.D.
Chief, California Central Valley
South and Nevada Section

Copy furnished without enclosure(s)

Jeff Bray, LSA Associates, Incorporated, 4200 Rocklin Road, Suite 11B, Rocklin, California 95677

Department of Army, Corps of Engineers (January 15, 2008)

Response to Comments

CORPS-1: Comment noted. A wetland delineation will be submitted to the Corps of Engineers.

CORPS-2: Comment noted. At the time that permits are requested (if required) the potential further review of alternatives will be considered. The No Project Alternative analyzed in the DEIR would avoid potential waters of the U.S. (assuming waters are in Corps jurisdiction).

Morris L. Allen
Consulting Civil Engineer
6881 Atlanta Circle
Stockton CA 95219
Telephone and FAX (209) 474-6716
Cell (209) 639-9683

December 10, 2007

Mike Niblock
Director of Community Development
City of Stockton
345 N El Dorado Street
Stockton CA 95202-1997

CBMDP MASTER DEVELOPMENT PLAN DRAFT EIR

Background
The consulting firm of LSA Associates has developed a draft EIR (DEIR) for the CBMDP Master Development Plan (CBMDP) for the City of Stockton This Plan is intended to provide for expansion of public services to an approximately 173 acre, mainly residential subdivision development with an anticipated population of approximately 4,251 residents This Specific Plan Area is outside the current Urban Services Area of the 1990 General Plan, and therefore, zoning and land use changes proposed in this CBMDP would result in an increase in the projections of population and water use in the 1990 General Plan In preparing this DEIR, the Consultant has relied upon Appendix F – Water Supply Assessment for the CBMDP Master Plan Development (WSA)

As requested by my Client, the Morada Area Association, I have carefully reviewed the above document, including pertinent sections of the CBMDP DEIR that pertain to water supply for this project, and have the following comments

The consultants in the CBMDP DEIR largely sidestep the issue of regional groundwater overdraft, and, instead, focus on the narrow issues regarding groundwater availability and use in the urban area. This is a major and very significant discrepancy in the CBMDP DEIR for two main reasons

1 Historically, the City of Stockton metropolitan area (COSMA) met its water supply requirements by total reliance on groundwater San Joaquin County's groundwater system is the Northeastern San Joaquin subbasin of the larger San Joaquin Valley Groundwater Complex The largest historical user in terms of volume of groundwater has been agriculture Because the volume of groundwater withdrawals has grossly exceeded natural recharge, this subbasin has been classified by the Department of Water Resources as "in a critical condition of overdraft" The actual amount of the overdraft has been estimated by different authorities as 160,000 acre feet/year (San Joaquin County), 200,000 acre feet/year (USA Corps of Engineers), and 150,000

CBMDP MASTER DEVELOPMENT PLAN DRAFT EIR

acre feet/year (US Geological Survey) The CBMDP DEIR fails to note that this subbasin is being overdrafted by at least 150,000 acre feet per year As a result of the overdraft, the basin has lost 1,000,000 acre feet of active storage, and groundwater levels have declined by as much as 100 ft (USA Corps of Engineers) over the last 30 to 40 years The subbasin serves the cities of Ripon, Manteca, Lathrop, Stockton, and Lodi, in addition to agricultural areas generally east of the urbanized areas According to the *Eastern San Joaquin Groundwater Management Plan,* "Current and historical groundwater pumping rates exceed the sustainable yield of the underlying groundwater basin on an average annual basis "

As a result of this situation, in 1977, the Stockton East Water District (Stockton East) began to supply treated surface water to the urban area to replace groundwater At that time, the source of this surface water was the Calaveras River via New Hogan Dam In approximately 1990, this supply was extended to the north Stockton area In 1983, Stockton East contracted with the US Bureau of Reclamation (Bureau) for an additional supply of water from the Stanislaus River, however, the WSA erroneously calls this a firm supply This should not be noted as a firm supply The Bureau characterizes this supply only as "long-term interim" The CBMDP DEIR does mention, however, that the Stanislaus River supplies are only anticipated to be available in above-normal and wet years This is not the type of water supply source that can be committed to new (or existing) customers, because of its intermittent and unreliable nature In addition, the Central San Joaquin Water Conservation District's (Central) contract with the Bureau for New Melones Water calls for 49,000 acre feet of firm and 31,000 acre feet of "long-term interim" supply per year However, neither Stockton East nor Central has received either the firm or "long-term interim" supply on a reliable basis each year, and as a result, Stockton East sued the federal government to perfect this right However, the CBMDP DEIR fails to note that Stockton East recently lost its case before the Court of Claims to force the Bureau to live up to the terms of its contract with the Districts In addition, Stockton East receives excess water from the Stanislaus River under a temporary contract with Oakdale and South San Joaquin Irrigation Districts As noted in Appendix G of the CBMDP DEIR, this contract expires in 2009 While negotiations are currently underway to renew this agreement, the agreement has not been renewed, and therefore this water cannot be assured to the City or Cal-Water, and should not be shown as available to support the requirements of this Mater Development Plan

MA-1

MA-2

MA-3

At Page 15 of the WSA, there begins a discussion and "clarification" of the water rights and entitlements of the Stockton East Water District (SEWD) This discussion is totally irrelevant except insofar as the Second Amended Contract of 1987 is concerned This Contract provides for a firm entitlement of only **20,000 acre feet per year** of treated water to the City of Stockton Metropolitan Area (COSMA), shared in proportion to the total water use of the City of Stockton's Water Utility, California Water Service Company (Cal-Water), and San Joaquin County Maintenance Districts The COSMA itself is not a political entity or a water purveyor, and therefore **has no source of surface water available to it** COSMA did not prepare the Water Supply Assessment for this DEIR, it was prepared by the City of Stockton Therefore, it is incorrect for the WSA to state, at Page 15, that "the COSMA currently has 134 17 TAF/year"

MA-4

CBMDP MASTER DEVELOPMENT PLAN DRAFT EIR

yield available to it It is also incorrect to state that "COSMA" has 104 17 TAF/year in "firm" surface water contracts "COSMA" does not have any surface or any other contracts, since it is not a legal entity, and, furthermore, what the ESA calls "firm" surface water is not firm at all, but optimal yields under the most favorable climatological conditions The State Water Code requires a WSA to consider existing "firm" surface water contracts **of the entity or water purveyor preparing the WSA**, not the wholesaler who supplies water to that entity SEWD **is not** the water purveyor to the City of Stockton's proposed General Plan 2035, or to this Master Development Plan area MA-5

2 The second reason why this CBMDP DEIR is inadequate is that it and the accompanying WSA should discuss groundwater issues relevant and pertinent to the area proposed for development It is significant that the development plan does not show the location of any new wells in the development, even though the WSA, on page 3, describes the need for approximately 251,000 gallons per day average domestic water demand at buildout, or 281 acre feet per year This level of demand would normally require at least one new water supply well to be located within the subdivision Neither the WSA nor the CBMDP DEIR point out, however, that the groundwater in the project area is totally unsuitable for potable well development Furthermore, the WSA is in effect claiming a safe groundwater yield for this acreage of 103 acre feet, by including this acreage in the total safe yield of the urban area Even if the WSA is correct in claiming that the City of Stockton can rely on a safe yield of 0 6 acre feet/acre/year in the urbanized area (and my discussion below will refute this assumption), the CBMDP Subdivision is starting out with an initial groundwater deficit of 178 acre feet per year which will have to be made up from offsite groundwater sources located east of the development MA-6

The state's common law groundwater rules are relatively straightforward Overlying owners generally may pump groundwater from aquifers beneath their land for use on that land *See City of Barstow v Mojave Water Agency*, 23 Cal 4th 1224, 1240 (2000) If multiple owners overly the same aquifer, as in the Morada area, their use rights are "correlative," meaning that in times of shortage each has only the right to pump his "reasonable share" *Pasadena v Alhambra*, 33 Cal 2d 908, 926 (1949), *see San Bernardino v Riverside*, 186 Cal 7, 14 (1921) (explaining the hydrologic basis for this rule) Those owners also must use water "reasonably," meaning they cannot use water wastefully or with excessive inefficiency Cal Const art X § 2, *Barstow*, 23 Cal 4th at 1240 If a surplus exists, appropriators-that is, users who would pump the water for non-overlying or municipal use-may take a share, but their rights always are subservient to those of overlying users *Barstow*, 23 Cal 4th at 1240, *Peabody v Vallejo*, 2 Cal 2d 351, 370-71 (1935), *San Bernardino*, 186 Cal at 15 *State of Cal v Rank (1961) 293 F 2d 340* MA-7

However, where a surplus does *not* exist, and the aquifer is in overdraft as it is here, overlying users can assert the primacy of their rights and obtain declaratory or injunctive relief precluding water exports *Peabody v Vallejo*, 2 Cal 2d at 374 (observing that superior water rights are entitled to protection "at law or equity") The Crystal Bay project would be considered an

CBMDP MASTER DEVELOPMENT PLAN DRAFT EIR

"appropriator" and with the current long term overdraft would have no legal right to the water Stockton, likewise, given the situation in the aquifer, would have no legal right to send water to Crystal Bay One danger for the developer is at that at some time, should the overdraft increase because of new developments overlying the aquifer, then a person overlying the aquifer, or an association, could obtain injunctive relief to prevent the shipping of water to the proposed development Given this possibility, it is hard to imagine how the water requirements for Crystal Bay can be met in a fashion that will insure that they are actually available *Vineyard Area Citizens v Rancho Cordova (2007) 40 Cal 4th 412*

Existing Water Sources

Table 4 of the City's Water Supply Assessment purports to provide information regarding SEWD's sources of supply and critical year availability The numbers shown in this Table are unsubstantiated by any reference to an independent hydrologic analysis, and therefore only represent the conclusion of the WSA preparer Furthermore, these sources are not controlled by or attributable to the City of Stockton and cannot be claimed to support the requirements of the CBMDP As the Water Supply Assessment correctly notes, these sources are attributable to the Stockton East Water District Therefore, despite claims to the contrary in the City's Water Supply Assessment and the CBMDP DEIR, the only firm water sources available to the City's Water Utility at this time to support the increased water demands described in the CBMDP DEIR are as follows

MA-7 Cont.

- Surface Water via Stockton East Water District (Second Amended Agreement) – 20,000 acre feet/yr, allocated to the City of Stockton's Water Utility, San Joaquin County Maintenance Districts, and to Cal-Water on a basis proportionate to overall cosumption

Non-firm supplies being relied upon by the City of Stockton's Water Utility to meet demand from this proposed subdivision and other anticipated developments

- Groundwater basin (currently in critical overdraft) In my professional opinion, the existing groundwater basin cannot be considered a firm water supply for the CBMDP since it has been found by the Department of Water Resources and the authorities noted above to be in critical overdraft, however, the consultants who have prepared the CBMDP DEIR do not concur with this assessment, and indicate that "the basin is recovering and is stabilized". If this statement is correct, why are all of the water agencies, including San Joaquin County, the City of Stockton and the City of Lodi, *working diligently to find ways and means to recharge the basin?*
- Surface water supplied from Stockton East from the Stanislaus River under contract from the US Bureau of Reclamation – quantity varies from 0-40,000 acre feet/yr
- Surface water supplied from Stockton East from the Stanislaus River under contract from OID/SSJID – quantity varies from 8-30,000 acre feet/yr

MA-8

While this combination of sources has been meeting the immediate demands of the City of

CBMDP MASTER DEVELOPMENT PLAN DRAFT EIR

Stockton and the other retail water agencies, they can not be considered firm or reliable, nor can they legally be committed to new developments, and the net result of the City of Stockton's utilizing increasing amounts of groundwater to meet the needs of an increasing number of customers has been to make a significant contribution to the groundwater overdraft in this subbasin MA-8 Cont.

Existing Water Demands

Water use for the COSMA has varied over the years, consisting of a mix of groundwater and surface water supplied by Stockton East Average use of surface water over the last twelve years has been 39,527 acre feet per year, as reported by the City of Stockton During this same period, an average of 23,422 acre feet per year of groundwater has been used (please refer to Figure 10, from the City's *Water Supply Assessment*) Average total COSMA water demand is therefore 62,949 acre feet per year, and the 2005 water year use is 68,777 acre feet Although the Stockton East Water District has been able to consistently supply to the COSMA almost 20,000 acre feet per year is in excess of its firm supply, this amount cannot be relied upon in drier than normal years or extended drought cycles, and can therefore not be allocated to new developments Also, MA-9

COSMA urban uses have been contributing to the existing groundwater basin overdraft by an average of over 23,000 acre feet per year This amount represents at least 10% of the existing Eastern San Joaquin groundwater basin overdraft Based upon the City's analysis of new potable water demands for this project, an additional 281 acre feet of groundwater overdraft will be created by the CBMDP, since no new surface supplies will be available to meet this new demand, as further explained below Also, this new demand has been grossly underestimated in the City's WSA. MA-10

The most commonly accepted value for water consumption by urban single-family residential customers is 0 5 acre feet/year/connection, and for urban multi-family residential of 0 33 acre feet/year/connection Applying these estimating factor results in an estimated domestic water demand of 847 acre feet/year for residential and 34 acre feet for parks for a total potable water demand and additional groundwater overdraft of 881 acre feet/year MA-11

Not accounted for in the above water use statistics is water used within the COSMA by agriculture, which amounts to approximately 17,000 acre feet of groundwater per year Figure 10 of the City's *Water Supply Assessment* should be corrected to reflect this additional 17,000 acre feet per year of groundwater use Therefore, including agricultural use, the total existing overdraft within the COSMA is closer to 40,000 acre feet per year, and this project would increase the overdraft to approximately 41,000 acre feet per year MA-12

Delta Water Supply Project

In 1996, the City of Stockton submitted an Application to the State Water Resources Control Board (SWRCB) for the right to divert water from the San Joaquin River Delta The intent of the Application was to correct existing supply deficiencies and provide sufficient supplies to support the population projections of the 1990 General Plan, and anticipated growth in water demands to 2050 The Application was later bifurcated to request water rights sufficient to MA-13

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support only the requirements anticipated in the 1990 General Plan. This right was requested in accordance with Section 1485 of the Water Code, which provides that the City of Stockton has the right to obtain water from the Delta in an amount roughly equal to the amount of reclaimed water discharged to the Delta via the San Joaquin River Any future needs above this amount must be the subject of a future Application process In December, 2005, the SWRCB issued a Permit to the City to divert up to a maximum of 33,000 acre feet per year, subject to Standard Term 91 and other conditions Standard Term 91 is imposed by the SWRCB to prevent diversions whenever the diversion would require the release of State or Federal Project water to maintain water quality requirements in the Delta This means that, if the State or Federal projects are required to release water to keep the Delta in balance, in consideration of existing exports and inbasin uses, the City (or other Term 91 users) must curtail diversions Also, the City must curtail diversions to protect Delta Smelt and other protected species

MA-13 Cont.

Based upon the *City of Stockton Delta Water Supply Project Modeling Technical Appendix*, Tables 4-5, 4-13, and 4-20, for the majority of the time that Stockton proposes to divert at either the current Permitted 30 MGD level, or at the projected 160 MGD level, the Delta is in a "balanced" condition Quoting from this report, at page 4-13 "Balanced water condition diversions must be off-set by a corresponding increase in Delta inflow from CVP-SWP storage release, or a reduction in CVP-SWP exports" Therefore, under Term 91, the **City will be unable to divert water at these times.** The additional yields noted by the Water Supply Assessment for the Delta Water Supply Project to meet immediate, foreseeable and long-term demands will not be available at the levels indicated in the City's *Water Supply Assessment* and cannot be included in the determination of sufficiency for this CBMDP As the City's *Water Supply Assessment* indicates, without the water supply available from the Delta Water Supply project, there is insufficient water supply available to support this project, along with all of the other pending development projects which have been approved or anticipated

Water Production Estimates

The City's *Water Supply Assessment for the Crystal Bay Master Development Plan* and the *Water Supply Evaluation for the General Plan* consistently overstate the water production from the existing and proposed water treatment facilities by confusing capacity with production A water treatment facility cannot produce treated water up to its design capacity on a consistent basis due to operational considerations, even if there is a consistent incoming water source of supply For example, filters are taken off line routinely for backwashing Equipment malfunctions or fails and must be repaired Routine maintenance of all of the facilities is required to keep them operating efficiently For planning purposes, it should not be assumed that a water production facility can be more than 75% efficient This means that, for a 45 MGD water treatment plant, the facility owned and operated by Stockton East, only 34 MGD can be produced on a long-term, reliable basis This compares favorably with actual statistics from Stockton East, and shows that the District is doing a first-class job in maintaining their water treatment plant Therefore, the total water production estimates given in the referenced documents are overstated by 25% and must be reduced accordingly Also, the analysis in the

MA-14

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City's *Water Supply Assessment* assumes that capacity of the Stockton East Water Treatment Plant will be increased to 60 MGD by 2009, and a production amount of 66,000 acre feet is assumed This amount, which should be reduced to 49,500 acre feet/year for the reasons noted above, is highly speculative and requires that Stockton East acquire rights to new sources of water from the SWRCB At the present time, water sources available to Stockton East will only support current Plant capacity In my professional judgment, this type of speculation has no place in a water supply assessment, and is not allowed by the statute

Additional Water Supplies Necessary to support the CBMDP

The several technical reports cited above which are intended to justify the sufficiency of water supplies necessary to support the additional demand of the Crystal Bay Master Development Plan along with other anticipated growth in water demand rely on overstated water production from existing and new water treatment plants, and highly optimistic assumptions of the availability of water sources and allocation of additional water rights In my professional opinion, the speculations and wishful thinking contained in these documents is highly inappropriate in a Draft EIR or Water Supply Assessment In order to meet the requirements of CEQA, the DEIR must undertake a rigorous analysis of supply and demand and resource limitations

MA-14 Cont.

Page 12 of the City's *Water Supply Assessment* notes that the average water demands within COSMA are expected to increase to 156,083 acre feet per year at buildout of the proposed *2035 General Plan Update* In order to meet this average water demand, the COSMA will have to develop an average of about 90,000 acre feet per year of new water supplies Considering the fact that the COSMA now has only 20,000 acre feet per year of **firm** water supplies to rely on under contract with Stockton East, by 2035, COSMA will be exceeding its firm supplies by 136,000 acre feet per year

While the City of Stockton and Stockton East are engaged in a number of activities to develop additional water rights for additional water supplies to serve COSMA, there is no assurance whatsoever that any additional water rights will be obtained for either expanding the Delta Water Supply Project as planned, or for expanding the Stockton East Water Treatment Plant as assumed in the City's *Water Supply Assessment* This means that the additional 136,000 acre feet per year required to support growth contemplated in the City's proposed General Plan Update-2035 and the City's *Water Supply Assessment for the CBMDP* must come from groundwater, which is already seriously overdrafted This will increase the groundwater overdraft in the subbasin to at least 300,000 acre feet per year, which, in my professional judgment, would place the overdraft at the crisis level

Setting aside the issue of **firm** water supplies for a moment, let's assume for purposes of argument that, on average, the COSMA continues to receive its allotment from Stockton East Water District, and that Stockton East Water District does expand its Water Treatment Plant to 60 MGD by 2016 Let's also assume that the City is able to pump 50% of the time from the

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Delta (even though the City's own analysis of this project indicates this will not be possible due to "balanced conditions" prohibitions) Under these most favorable conditions, this means that a total of 61,875 acre feet of surface water will be available, on average, to meet a COSMA average demand of 156,083 acre feet, and the remaining demand of 94,208 acre feet must come from the existing overdrafted groundwater basin This would still create an overdraft of at least 250,000 acre feet per year in this subbasin, also at the crisis level

MA-14 Cont.

Impact on Groundwater Basin

As previously noted, the Eastern San Joaquin Groundwater Basin is in a "critical condition of overdraft " The City and its consultants need to acknowledge in the Water Supply Assessment that the Eastern San Joaquin Groundwater Basin is one basin, and that it does not have a hydrogeologic barrier that divides the agricultural areas from the urban areas Even though some of the urban area's monitoring wells do show an increase in groundwater elevations, the basin as a whole is still in critical condition of overdraft, and therefore cannot be counted upon as a firm source of water until the basin is in hydrologic balance Any additional groundwater extracted by the urban area to support new developments worsens the groundwater basin overdraft

MA-15

As I have noted in the above discussion, appropriators of groundwater such as the City cannot legally rely on this source of water unless there is an excess of water in the groundwater basin, since to do so jeopardizes the rights of existing individual groundwater pumpers extracting water legally from beneath their properties A groundwater basin in a critical condition of overdraft does not have an excess of water available for appropriation Also, the CBMDP DEIR and the Water Supply Assessment does not acknowledge the fact that other San Joaquin County cities, including Ripon, Lathrop, Manteca, and Lodi all rely heavily on groundwater use, and that significant growth is also occurring in these cities

MA-16

The City of Stockton must combine its current and planned uses of groundwater with those of all other San Joaquin County cities to determine what impact all cities, including Stockton, will have on groundwater availability There are no estimates in any of Stockton's documentation that attempt to quantify the groundwater demands of the other cities overlying the Eastern San Joaquin Groundwater Basin This is a serious flaw in the analysis, because it underestimates the City's significant adverse direct and cumulative impacts on regional groundwater supplies

The *Stockton Delta Water Project Draft EIR*, at page 5-18, presents graphic illustrations of the effect this additional pumping will have on groundwater

Figure 5-5 of this report, reproduced below, illustrates the simulated responses to the groundwater basin represented by six wells located in and around the COSMA This figure shows that, despite the City's claim that the portion of the groundwater basin under the COSMA is "stabilized" and at "equilibrium", groundwater levels have continued to decline, and the rate of decline is increasing Unless substantial amounts of surface water are imported into the COSMA to reduce groundwater pumping and offset this trend, growth contemplated by the General Plan

MA-17

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2035 DPEIR and this CBMDP DEIR will cause an even more rapid decline in groundwater levels. Declining groundwater levels will result in (1) increased pumping costs for all existing residential, commercial, agricultural and industrial users due to increased hydraulic lift, (2) decreased yields due to decreased aquifer saturated thickness, and (3) greater tendency for eastward migration of saline water from the west due to a steeper hydraulic gradient Eastward movement of salinity will threaten and eventually eliminate many existing municipal wells on the westward edge of the COSMA as salinity exceeds the maximum contaminant levels set by the State for drinking water MA-18

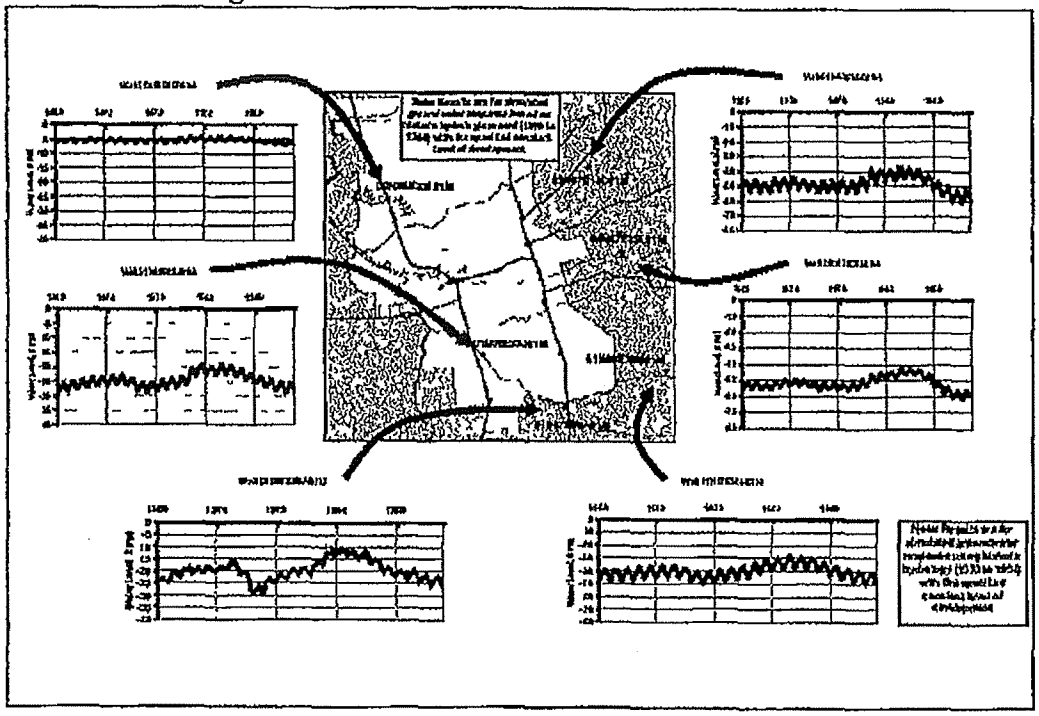

Figure 5-5

Figure 5-7 reproduced below illustrates the effect on groundwater if growth contemplated in the GPU-2035 continues until 2050 Also illustrated is the effect of the importation of surface water developed from the proposed Delta Water Supply Project at the Delta Water Supply's ultimate development This figure shows that, even in the unlikely event of full development of the water supply contemplated by the Delta Water Supply Project, groundwater levels will continue to decline, although, of course, groundwater levels would be significantly improved by the addition of this surface water However, as noted above, it is **highly unlikely** that the City will ever be able to achieve the level of importation of Delta water contemplated and desired, due to the restriction on pumping during "balanced conditions" in the Delta Furthermore, the figure assumes that the City will be able to recharge the groundwater aquifer with any surface water pumped from the Delta and not immediately needed by water users within COSMA. The City MA-19

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does not have the rights for this additional water over and above the Phase I Project, nor does it have the right to store this water underground, or have any project or system contemplated to do this Therefore, what can only be predicted from the impact of population growth projected from the GPU-2035 is an average of a 20 foot decline in groundwater levels by 2050

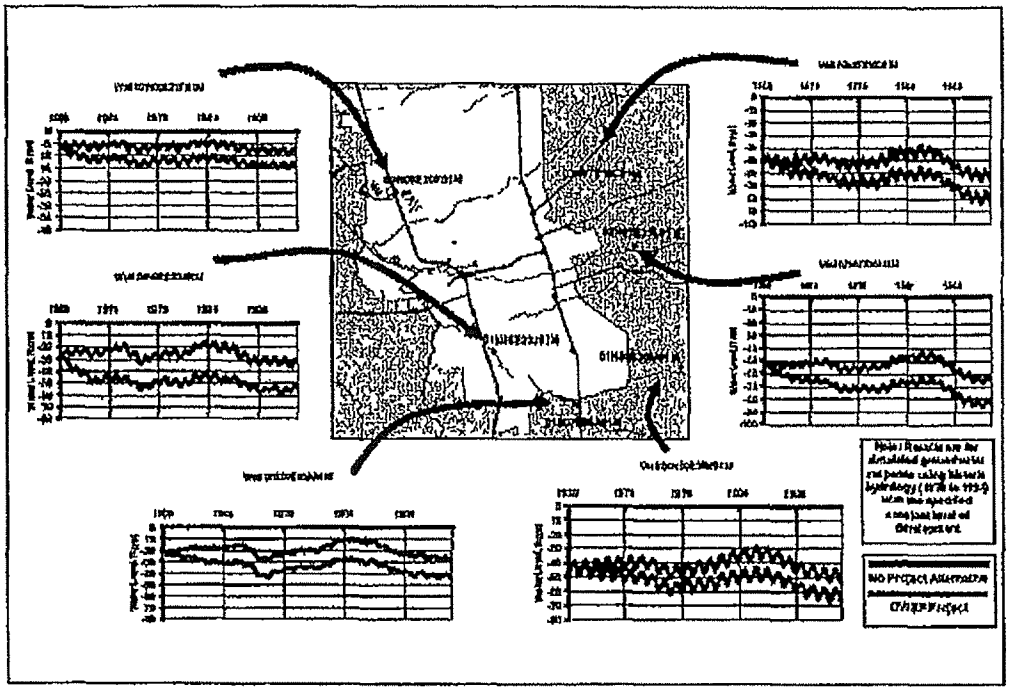

Figure 5-7
Simulated Groundwater Level Response
Comparison of Project and No Project – 2050 Cumulative Conditions

The USGS has evaluated groundwater in wells in the Eastern San Joaquin County subbasin of the Central Valley Groundwater Basin and has published a report of its findings (Open File Report 2006-1309) They have found that water levels have declined, and chloride concentrations have increased in a number of public supply, agricultural and domestic wells in this area Many of the wells now exceed the USEPA Secondary maximum Contaminant Level for chloride of 250 milligrams per liter The USGS found that the high chloride levels have been found further to the east since measurements began to be taken in 1984 While the USGS found a number of sources for the high chloride water found in wells, lowering of the ground water table by pumping in excess of natural recharge has and will continue to exacerbate the problem MA-20

Agricultural Credits

In its *Water Supply Assessment,* at Page 48 the City refers to the concept of "Agricultural Credits" which it introduced in its *Water Supply Evaluation* for the General Plan 2035 Update

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DPEIR The City attempts to justify this "credit" by stating that this "acknowledges that the groundwater basin was being used for agriculture prior to urbanization" To account for this prior agricultural pumping, which has not been quantified with any documentation, the City uses a "credit" of not to exceed 1 0 acre foot per acre per year as a firm yield from the groundwater basin in these areas In my professional opinion, there is absolutely no merit to this argument, and it runs completely contrary to what the City says it is trying to achieve by setting a "target" yield from the groundwater basin of not more than 0 6 acre feet per acre per year

As noted above, the groundwater basin is in a critical condition of overdraft This has resulted from all users exceeding the safe yield of the groundwater basin In the case of a basin in critical overdraft, no "credit" can be assumed by converting from one groundwater use to another At best, the "critical condition of overdraft" has been slightly reduced by some unquantified level of agricultural pumping This type of speculation is a very poor substitute for actual documentation of prior water uses on the subject property, and has no place in a Water Supply Assessment

The basic flaw in the analysis of "groundwater credits" can be taken from Exhibit "F" to the City's *Water Supply Evaluation* for the General Plan 2035 Update Draft Program EIR at Page 1 This report states that "If any one of these groundwater extractors are [sic] removed or are [sic] taken off of groundwater there is a recognition that, if *groundwater elevations are acceptable today* [my emphasis] and the *groundwater basin is in a state of equilibrium,* [my emphasis] that groundwater pumping can continue at the same rate without further impacting the groundwater basin" As noted in the above discussion, the Department of Water Resources, San Joaquin County, and the US Geological Survey all classify the groundwater basin as being overdrafted with groundwater elevations declining The City can not therefore claim any "groundwater credits" The City's report goes on to state that the City is interested in reducing reliance on groundwater over time and wishes to target groundwater use to below today's level The use of a "groundwater credit" in a Water Supply Assessment is therefore invalid on the City's own terms, and must be discarded MA-21

The stated goal of the water agencies and cities in northern San Joaquin County is to maximize the use of surface water and minimize the use of groundwater to reduce the drain on the overdrafted groundwater basin Records of groundwater production in the agricultural areas proposed for urbanization are either not available or not accurate COSMA should therefore not use "agricultural credits" in any calculation of groundwater yield The intent of this proposed action by the City is clear on Page 5 of Exhibit "F" by the statement "the COS wishes to take some credit for this benefit by extracting a greater amount of groundwater until recharge technologies or more surface water becomes available to replace this need" In my professional opinion, this statement meets the classic definition of a "mining" of groundwater, and application of this "credit" by the City will result in an adverse impact on the groundwater basin

Summary

Approval of the development proposed in the CBMDP DEIR will result in an additional demand

on the COSMA potable water system of at least 281 acre feet per year However, because the domestic water requirements are grossly underestimated in the WSA, this additional domestic demand will be closer to 881 acre feet/year

COSMA water utilities currently rely on an overdrafted groundwater basin and favorable hydrologic conditions to provide for an estimated 276,000 persons, with an estimated total demand of approximately 70,000 acre feet per year Firm sources of water supply available to the COSMA water utilities amount to only 20,000 acre feet per year under a contract with the Stockton East Water District Under historical drought conditions, Stockton East has only been able to supply approximately 12,000 acre feet per year to the COSMA. The groundwater basin is not a firm source of supply to the COSMA appropriators because it is in a "critical condition of overdraft "

In order to partially alleviate this problem, the City has received a Water Rights Permit from the Water Resources Control Board to extract as much as 33,000 acre feet of water from the Delta An actual project to finance and construct an intake and treatment facility to appropriate this water is not yet underway, much less completed Constraints placed upon the City's proposed new facilities are so severe that it is unlikely that the City will be able to obtain more than a small fraction of this amount In addition, a recent decision in Federal Court affecting State and Federal diversions from the Delta may make Stockton's Delta Water Supply Project infeasible

The only source of water supply legally available to the City of Stockton for this proposed CBMDP development is therefore from the already overdrafted groundwater basin This will increase the overdraft in the basin by at least 281 acre feet per year, and potentially 881 acre feet per year if my estimates of residential water use are accurate This is an unacceptable adverse environmental impact which has not been mitigated

Morris L Allen

MORRIS L ALLEN, P E
CONSULTING CIVIL ENGINEER

Morris Allen (December 10, 2007)

Response to Comments

MA-1: Mr. Allen's comment that this should not be noted as a firm supply is correct. The Stanislaus River water supply is a "long-term interim" contract. However, although the WSA refers to the total supplies as "firm" in one statement, the WSA expressly recognizes that these supplies are not firm when it states:

> *This Stanislaus River water source is only available in wet and above-normal years. Under a Bureau of Reclamation contract as part of the Central Valley Project, SEWD is entitled to 40,000 AF/year for municipal and industrial uses. The infrastructure to supply this water is complete, but the source is not reliable since the Central Valley Project Improvement Act and other regulatory actions have reduced the quantity of water available from this source.*

The New Melones Project is operated in accordance with the Interim Plan of Operation. The City ran the IPO pursuant to the 70-year hydrology and came up with long-term average. The WSA acknowledges, however, that there will be no water from New Melones available in dry years. There are significant amounts of water available from New Melones in many year types, and the WSA would be foolish not to incorporate those on a conjunctive use basis. Wet year water supplies can be committed to a municipal supply when there are sufficient substitute supplies available in drier years. This method is called conjunctive use, and it is the basis for the WSA.

MA-2: Stockton east did not sue the federal government to perfect its right; its right was perfected in 1983 when it entered into a water supply contract with the United States. Stockton East sued in an attempt to receive water more frequently than contemplated by the IPO. The result of the suit has no impact on the continued availability of New Melones water pursuant to the IPO, upon which the calculations in the WSA are based.

MA-3: It is true that this contract has not yet been renewed. However, (1) the existing contract has a renewal provision, and (2) the Boards of both OID and SSJID have indicated their willingness to renew the contract with price being the only term being negotiated. In fact, the WSA assumes only that one of the contracts will be renewed, which is very conservative for planning purposes, as it appears that both contracts will be renewed shortly for an additional 10-year period.

MA-4: This discussion is most relevant. While the City of Stockton does have a contract with the Stockton East Water District that guarantees an annual entitlement of 20,000 acre feet of water, the past practice of SEWD has been to provide the urban area with all available water that can be treated at the treatment plant. This practice is illustrated by the historic SEWD deliveries to the City. Table 3 (provided by Stockton East Water District) depicts how much water was provided by the SEWD Water Treatment Plant (WTP) to its urban contractors. It is clear that in no year has the 20,000 acre foot entitlement been a limiting factor in water deliveries to the urban area.

Table 3: Water provided by the SEWD

Water Year	Water Actually Delivered from WTP (AF)
1991-1992	24,358
1992-1993	23,921
1993-1994	37,333
1994-1995	35,973
1995-1996	39,364
1996-1997	41,149
1997-1998	36,617
1998-1999	40,336
1999-2000	39,698
2000-2001	38,729
2001-2002	38,345
2002-2003	40,272
2003-2004	39,724
2004-2005	39,051
2005-2006	42,069
2006-2007	43,639

The COSMA is defined as the City of Stockton Municipal Area, which is not an entity, but a geographic location, and cannot prepare a WSA. The City of Stockton Municipal Utility Department prepared the Water Supply Assessment.

The referenced statement is found in Section 2.4.2 in context below:

> The COSMA currently receives surface water supplies (via SEWD) from five sources as shown in Table 4 and Figure 6. Surface water supplies can come from many sources in the eastern Sierra Nevada foothills. Total existing "firm" supplies for municipal and industrial (M&I) uses are approximated to yield 104.17 TAF/year under wet and above average hydrologic conditions. Including interim supplies the COSMA currently has 134.17 TAF/year. Their full entitlements in wet years including interim and future supply sources could yield as much as 180 TAF/year. As required by the State Water Code, the WSE only considers existing "firm" surface water contracts or the 104.17 TAF/year.

It appears that the question is why is the City of Stockton Municipal Utility Department preparing a WSA addressing water supplies of the entire geographic City of Stockton Municipal Area. The response is that it is following the mandates of the California Water Code.

Water Code section 10910 requires that the City of Stockton identify the public water system that may supply water for the project, and then request that public water system to prepare the required documentation. Consequently, because the City of Stockton Municipal Utility Department will provide water to the project, it is the proper entity to prepare the WSA.

In turn, Water Code section 10911(a) requires that the public water system determine whether it water supplies will be sufficient to meet the needs of the proposed development, in addition to the supplier's existing and planned future uses. Consequently, the City of Stockton Municipal Utility Department could have evaluated only its water supplies, and planned future uses within the service area of the Municipal Utility Department. However, the City of Stockton planning area includes not only areas served by the Municipal Utility Department, but also areas served by other water providers, as stated in the WSA:

> Relying on a combination of surface water and groundwater, the COSMA is served by three water retail providers: (i) the California Water Service Company, (ii) City of Stockton Municipal Utilities Department (COSMUD), and (iii) County Maintenance Districts. Due to the Project's geographic location, it will be served entirely by COSMUD. Because water supply for the entire COSMA is coordinated between the three retail providers and relies on the same sources of water, this WSA evaluates demand for the entire COSMA. Based on past water deliveries and the most recent water demand calculations, total water demand for the Stockton Metropolitan Area is currently 68,500 AF/year.

In fact, the source for the COSMA provision of 134.17 TAF/year is provided in the WSA, and the above explanatory paragraph provides the background explanation.

MA-5: The assertion of what is included in the State Water Code is incorrect.

- The Water Code sections governing Water Supply Assessments, §§10910 – 10915, do not include the word "firm".
- The WSA defines the term "sufficient water supply" as "the total water supplies available during the normal, single-dry, and multiple-dry years within a 20 year projection that will meet the projected demand associated with the proposed subdivisions, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses." This definition comes directly from Government Code section 66473.7(a) (2), which was adopted by SB 221 legislation, a companion bill to SB 610.
- Water Code Section 10910 is much broader than described. It is not limited to a consideration of the contracts held by the public water system preparing the WSA. It also includes:
  - "total projected water supplies" §10910(c) (3)
  - "any existing water supply entitlements, water rights, or water service contracts" §10910(d) (2)
  - "written contracts or other proof of entitlement to an identified water supply" §10910(d) (2) (A) (emphasis added)

The WSA correctly and accurately informs the reader that the underlying contracts for water are held by the Stockton East Water District, and explains the contractual relationship between the City of Stockton and the district.

MA-6: This is not a requirement of the Water Code, and makes little legal or hydrogeologic sense. Groundwater at the area proposed for development is not evaluated because no wells are being

proposed for the property. The City's groundwater system contributes water on a conjunctive use basis to the City's system as a whole. Consequently, the impact of groundwater pumping must be evaluated on the City as a whole, and the WSA does so.

MA-7: Again, the assertions of California law are not correct. The City of Stockton is considered a groundwater appropriator from the basin. It does not legally follow that the City does not have a right to appropriate simply because the Department of Water Resources concluded the basin water overdrafted in 1981, for various reasons.

The determination of whether or not the existing groundwater basin can be considered a water supply for the proposed project is not determined by the 1981 conclusion by the Department of Water Resources that the basin was overdrafted. As stated by DWR in its Bulletin 118-03 in Chapter 6:

> *Despite its common usage, the term overdraft has been the subject of debate for many years. Groundwater management is a local responsibility; therefore, the decision whether a basin is in a condition of overdraft is the responsibility of the local groundwater or water management agency. In some cases local agencies may choose to deliberately extract groundwater in excess of recharge in a basin (known as "groundwater mining") as part of an overall management strategy. An independent analysis of water levels in such a basin might conclude that the basin is in overdraft. In other cases, where basin management is less active or nonexistent, declining groundwater levels are not considered a problem until levels drop below the depth of many wells in the basin.*

Second, the assertion that a condition of overdraft is equivalent to no surplus is not correct. The determination of overdraft to determine the right of a groundwater appropriator must be undertaken by the court. There has been no challenge to the City's pumping, and no court determination that no surplus water is available in the basin.

A court determination on this issue is complicated. The definition of overdraft was articulated by the California Supreme Court in 1975. There, the court held that overdraft begins when extractions exceed the safe yield of a basin plus any temporary surplus. Safe yield is defined as the maximum quantity of water which can be withdrawn annually from a groundwater supply under a given set of conditions without causing a gradual lowering of the groundwater levels resulting, in turn, in the eventual depletion of the supply. "Temporary surplus" is the amount of water that can be pumped from a basin to provide storage space for surface water that would be wasted during wet years if it could not be stored in the basin.

Notwithstanding the priority of overlying users as against appropriators, it does not necessarily follow that overlying users may prevent extractions by an appropriator depending upon the timing of an action against the appropriator and the appropriator's use of the water. Where the appropriated water has been put to public use, an injunction prohibiting further appropriation may not necessarily be issued. If an overdraft continues for more than five years prescriptive rights can accrue to those parties who extract water during the overdraft period. City of Pasadena v. City of Alhambra (1949) 22 Cal.2d 908. One court has stated "where the interests of the public are involved and the court can arrive in terms of money at the loss . . . an absolute injunction should not be granted, but an injunction conditional merely upon the failure of the defendant to make good the damage which results from its work. Such

an action, if successful, should be regarded in its nature as the reverse of an action in condemnation." Also, an absolute injunction will not be granted where other forms of relief are available and would be adequate.

Further, the comment addresses only native groundwater, i.e., percolating groundwater that occurs naturally and is not imported. Imported water is water derived from outside the watershed that is purposefully recharged into the groundwater basin, essentially creating an "account" for the recharger. Imported water belongs solely to the importer, who may extract it (even if the basin is in overdraft) and use or export it without liability to other basin users. Los Angeles v. San Fernando (1975) 14 Cal.3d 199. Since 1976 the City has been importing water, and has conducted in-lieu recharge of the groundwater basin. That water belongs to the City and can be extracted for use without challenge from overlying groundwater users.

MA-8: The determination of whether or not the existing groundwater basin can be considered a water supply for the proposed project is not determined by the 1981 conclusion by the Department of Water Resources that the basin was overdrafted. As stated by DWR in its up date to Bulletin 118 (Bulletin 118-03) in Chapter 6:

> *Despite its common usage, the term overdraft has been the subject of debate for many years. Groundwater management is a local responsibility; therefore, the decision whether a basin is in a condition of overdraft is the responsibility of the local groundwater or water management agency. In some cases local agencies may choose to deliberately extract groundwater in excess of recharge in a basin (known as "groundwater mining") as part of an overall management strategy. An independent analysis of water levels in such a basin might conclude that the basin is in overdraft. In other cases, where basin management is less active or nonexistent, declining groundwater levels are not considered a problem until levels drop below the depth of many wells in the basin.*

MA-9: This statement is consistent with the conclusions in the WSA. The WSA makes very clear that surface water supplies available from Stockton East Water District are not available in all year types and are not solely relied upon to sustain new development. The surface water supplies available from Stockton East Water District are combined in the WSA with groundwater supplies on a conjunctive use basis.

MA-10: These assertions are not factually supported. In fact, since 1976 the City has been importing water, and has conducted in-lieu recharge of the groundwater basin. That water belongs to the City and can be extracted for use without challenge from overlying groundwater users, and does not contribute to the overdraft. In addition, the WSA has demonstrated that there are new surface water supplies available when combined with the use of groundwater on a conjunctive use basis that will meet the new demand.

MA-11: Development of the estimated water demand for the proposed project is based on historical unit water demand factors assigned to the various General Plan and Project land use categories.

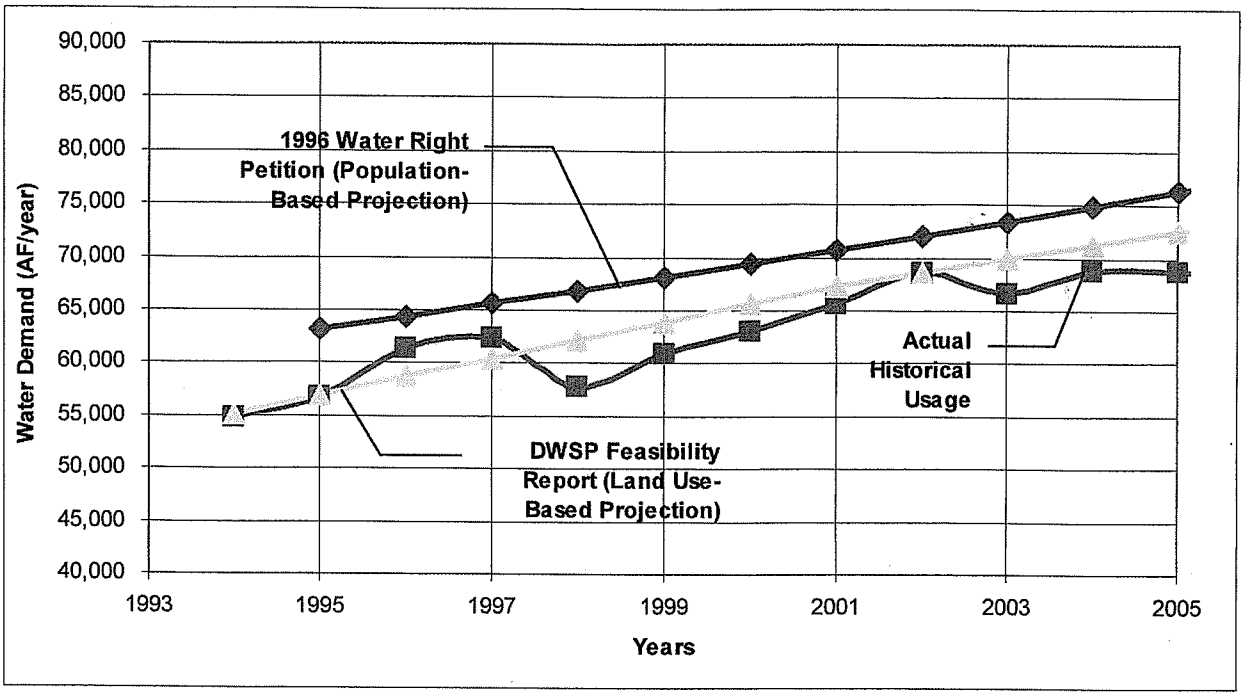
COSMUD developed gross-demand factors as part of the DWSP Feasibility Report. The DWSP demand calculations were based on unit-demand factors developed from actual metered water for each land use category and records from production facilities such as the SEWD water treatment plant and the COSMA's groundwater wells. Compared to other municipal agencies in Northern California, COSMUD's unit–demand factors are statistically low. This is due primarily to the City's implementation of water conservation measures, including metered pricing, and less water intensive landscaping (drought tolerant) over the past 30+ years. In the COS's water right petition submitted in 1996, on the other hand, a forecasted water demand was provided based on population projections (i.e., a constant 1.9% annual increase) consistent with the 1990 General Plan. These population-based water demands were developed prior to the determination of the acreage demand factors. In 2002, when the DWSP Feasibility Report (DWSP Report) was completed, a comparison was done to verify the accuracy of its forecasts in the water right petition. A comparison of the approaches found that actual water demands were actually lower than the population-based forecasts in the water rights petition. The acreage-based water demand factors thus provide more accurate estimates of actual water demand. This is shown in the figure on the following page.

In addition to calculating the proposed project's water demand based on the land-use based method, the WSA also applied the more conservative (and less accurate) population-based method for gross acreage (1,967 acres). So while the project water demand was identified as 2,667 AF/year, the water demand used for purposes of the WSA was actually 3,147 acre feet/year (See Section 2.3 of the proposed project WSA.). Under either method, however, the conclusion remains the same – with build-out of the DWSP Phase 1, COSMUD's water supplies will be sufficient to meet the demands of the proposed project, as well as existing and planned future uses within the service area.

The commenter incorrectly states that agricultural demand within the COSMA has not been considered. Agricultural demand for groundwater has been factored into the calculations of sustainable yield by reducing the total acreage of allowable allocation towards the sustainable yield by the agriculture water demands that have existed over time (e.g., total urban acreage * 0.60 acre feet/acre/year = sustainable yield; whereas, total agricultural acreage * [x] = sustainable yield for existing agricultural production). Furthermore, the WSA recognizes that agricultural water demands have priority water rights to both surface water and groundwater. In the DWSP Report, agricultural water demands were considered in the determination of the sustainable yield of the groundwater basin in the following manner:

> *"AGRICULTURAL WATER DEMAND PROJECTIONS FOR GROUNDWATER MANAGEMENT PURPOSES - The 17,000 acre feet/year of groundwater demand for agricultural uses presented in Table 2-3 [not shown] is added to the amount of groundwater for urban uses and included as part of the City's overall management of the groundwater supply. Over time, the 17,000 acre feet/year is assumed to decrease as agricultural areas shown within the General Plan Boundary (within and outside of the Urban Service Area) are urbanized. At General Plan build-out (anticipated to be 2015), the agricultural water demand served by groundwater within the Urban Service Area is estimated at 12,400 acre feet/year. Because the COSMA's water rights application extends beyond General Plan build-out, continued decreases in agricultural demands are assumed to occur until agricultural groundwater demands have been replaced with urban demands." (DWSP Report, January 2003, Pg 2-14)*

Water Demand Methodology Comparison



"Based on the 0.75 acre feet/ac/year factor, the COSMA's Urban Services Area of 66,000 acres could potentially use up to 50,000 acre feet/year of groundwater. Currently, the total estimated groundwater extraction within the Urban Services Area is 44,000 acre feet/year that includes approximately 17,000 acre feet/year from agricultural uses, and 27,000 acre feet/year from municipal uses including the COSMA, Cal Water, and County service areas." (DWSP Report, January 2003, Pg 3-10)

Using this approach, the WSA finds that existing groundwater extractions by agriculture and municipal uses fall well below the sustainable yield of 0.75 acre feet/acre/year. With the displacement of agriculture due to urbanization, total groundwater use is expected to remain below the sustainable yield of the groundwater basin and sub-basins.

MA-12: See above response.

MA-13: This statement is factual error. Permit 21176 issued for Phase I of the Delta Water Supply Project is based upon Water Code Section 1485 and does not include Standard Term 91. The permit allows year-round diversion equal to the 15-day running average of discharges of effluent from the Regional Wastewater Control Facility into the San Joaquin River, not to exceed 33,600 acre feet annually.

MA-14: The current actual capacity of Stockton East Water District's Dr. Joe Waidhofer Water Treatment Plant is 50 MGD (the plant received DHS recertification for treating 50 mgd in May 2007). SEWD plans to expand the WTP and the pipelines supplying the WTP to an average and peak capacity of 60 and 70 MGD, respectively. SEWD is investigating the existing treatment facilities to determine the required upgrades to expand the DJWWTP to treat 72 mgd.

The WSA assumed that SEWD would maintain its existing 50 mgd surface WTP until 2016 when it is assumed that SEWD WTP capacity would be expanded to 60 mgd. The WSA (Figure 12) does not contemplate ever receiving more than 50,000 acre-feet annually from SEWD, well within the long-term average of the expanded 60 mgd treatment plant.

MA-15: The commenter requests an acknowledgement that the Eastern San Joaquin Groundwater Basin is one basin, with no hydrogeologic barrier, and despite the results of monitoring wells in urban areas, the entire basin is still in critical overdraft and cannot be relied upon as a firm water supply. The commenter states his opinion that any additional withdrawal worsens the overdraft.

To clarify, the COSMA is within a sub-basin of the Central Valley groundwater basin, which includes the Eastern San Joaquin Groundwater Basin. The COSMA sub-basin extends from the Mokelumne River to the north, the Stanislaus River to the south, the San Joaquin River and Delta to the west, and the Sierra Nevada foothills to the east.

The COSMA has consistently described its continued use of the aquifer in a conservative manner as described in published documents (the DWSP Feasibility Report, General Plan Update WSE, Crystal

Bay WSA and COSMUD's 2005 Urban Water Management Plan). Further discussion is presented in Response to Comment 8-2. The Central Valley groundwater basin (and the COSMA's sub-basin) is a firm and reliable water supply for the COSMA so long as average groundwater withdrawals remain below sustainable levels. These withdrawals can occur without worsening the overdrafted condition. Indeed, reduced pumping within urban areas, including the COSMA, can improve conditions throughout the basin. COSMA's location adjacent to the significant groundwater recharge sources of the San Joaquin River and Delta make it an ideal location for maintaining a strong hydraulic connection with the recharge source and management of withdrawals to help avoid or minimize the rate of movement of saline water from the west.

The analysis in the WSA concludes that projected water use within the entire basin will stay within the pumping amounts contemplated in the Eastern San Joaquin Groundwater Basin Groundwater Management Plan (GMP) (Northeastern San Joaquin County Groundwater Banking Authority, September 2004). The GMP contains significant and relevant information as it relates to the evaluation of basin-wide sustainability and the need to monitor groundwater elevations and provide the most efficient means of bringing surface water into the basin. While the GMP concludes that substantive measures need to take place within the groundwater basin to protect groundwater supplies, the findings indicate that through integrated regional cooperation, groundwater use can be sustainable.

In Tables 2-4 and 2-5 of the GMP, total water demand for the entire Basin (including the Central Valley sub-basin) in 1996 is estimated to be 82 TAF/year for M&I and 1,522 TAF/year for agriculture. In 2030, the estimates for M&I and agriculture are 241 TAF/year, and 1,390 TAF/year, respectively. When combined, the total difference results in a net increase in water demands of 27 TAF/year over the next 22 years. Demands used in the regional groundwater modeling assumed that M&I and agricultural demands outside the COSMA remain at 1990 levels. But we know that this is not the case, particularly as agricultural demands are decreasing with the conversion from agricultural uses (over 4 AF/acre/year) to much less demanding municipal uses (less than 2 - 2.5 AF/acre/year, as the gross weighted average at Sanctuary was calculated at 1.36 AF/acre/year). By assuming full build of the COSMA General Plan Update, the WSE predicts even greater conversion from agricultural to urban uses. Thus, the WSE is even more conservative than contemplated in the basin-wide GMP.

Furthermore, the GMP and DWSP go hand-in-hand in helping to achieve regional groundwater sustainability. The GMP provides several Basin Management Objectives (BMOs), as well as Best Management Practices (BMPs) for meeting those objectives. This regional objective is consistent with the third objective of the DWSP to improve the quality and quantity of groundwater supplies. Consequently, the DWSP is one of several conjunctive use programs that can help achieve the BMOs of the GMP, by helping to maintain and enhance regional groundwater elevations to meet the long-term needs of the basin's groundwater users.

The COSMUD has endeavored, and will continue to endeavor, to maintain groundwater extractions within the conservative sustainable yield of the regional aquifer consistent with its own policies in coordination with such agencies as the Northeastern San Joaquin County Groundwater Banking Authority. The COSMA also supports regional programs outside the COSMA. The monitoring of groundwater elevations, completed a minimum of twice a year, show the recovery and stabilization of the aquifer underlying the COSMA and adjacent areas over the past 10 years (note: groundwater elevation graphs are included in the WSA at three control points in the sub-basin). As stated above, the portion of the groundwater basin underlying the COSMA is not critically over-drafted as suggested.

SEWD, COSMA, and agricultural users continue to seek opportunities and partnerships in groundwater management strategies (e.g., the Integrated Regional Water Management Plan), and the COSMA water purveyors continue to manage their portions of the groundwater basin within the existing partnership with SEWD. This combination of efforts results in an optimization of San Joaquin County's total water resources without impacting overall groundwater quality or quantity in the COSMA and surrounding areas.

A contemplated future element of COSMUD's conjunctive use program is the recognition that the conversion of agricultural (groundwater only) pumping to urban conjunctive use pumping results in a net decrease in the basin's groundwater extractions. This decrease in extractions is acknowledged as a benefit to the groundwater basin that can be exercised in a manner that will not impact the aquifer or users of the aquifer. This net benefit results in COSMUD's ability to pump slightly more than its self-imposed 0.75 AF/acre/year limit in a single dry year, and still achieve less overall groundwater extraction when compared to the previous long-term agricultural pumping that is displaced by urban development. In other words, COSMUD can reasonably calculate and rely on the benefits associated with decreases in agricultural uses.

As written in studies of agricultural credits (see Appendix F of the Water Supply Evaluation of the General Plan Update), the use of groundwater for municipal purposes in areas that have historically extracted groundwater for irrigation uses results in a significant decrease in groundwater pumping, contrary to comments made that equate urban pumping with agricultural pumping. Agricultural uses require anywhere from 2 to 4 acre feet/acre/year from groundwater. Under self-imposed groundwater management programs, the sustainable yield for lands converted to urban uses within the COSMA is 0.75 acre feet/acre/year. That is, as each new acre of planned development occurs, a maximum of 0.75 acre feet/year of groundwater can be extracted in any one given year, and the average over multiple years cannot exceed 0.60 acre feet/year).

The assumptions used in the Agricultural Credit study that was completed in support of the Water Supply Evaluation considered the entire groundwater basin. The benefits of converting agricultural uses to urban uses were quantified through a regional groundwater model that covered all of San Joaquin County and included pumping from all users of the basin(s) with water demands as described above. Three constraints to the groundwater were formulated for the protection of the groundwater as follows:

1. Do not increase the rate of movement of the known salinity front along the western boundary of the COSMA. The gradient (or slope) of the groundwater piezometric surface (groundwater table) should not increase (or steepen) in the area of the existing salinity front.

2. Groundwater elevations within the COSMA should not go below pre-development conditions (assuming agricultural pumping) anywhere throughout the basin. This translates into a model constraint on groundwater elevations such that elevations shall not drop more than a foot within the COSMA. As a result, areas of historical agricultural pumping improve considerably due to the shift in pumping from those lands to the M&I wells of the three water retailers.

3. For regional basin protection, the lowest elevation of the regional cone of depression for San Joaquin County is not to be lowered.

The resulting groundwater yield based on meeting these criteria was determined to be 0.87 acre feet/acre/year (a 0.12 acre feet/acre/year increase from the 0.75 acre feet/acre/year factor) and resulted in an increase of approximately 4.5 feet in groundwater elevations in the agricultural areas previously irrigated with groundwater. The accounting of an agricultural credit is made at the time the irrigated lands develop to urban uses to avoid having the agricultural credit taken and used while agricultural irrigation is continuing to take place. This will likely take place close to build-out of the proposed 2035 Stockton General Plan Update, if approved.

In sum, increases in groundwater uses for municipal purposes throughout the basin are not anticipated to worsen present overdraft conditions. Instead, conversion from agricultural to urban uses should result in a net-decline in overall groundwater use, and increased flexibility in implementing conjunctive use programs.

As noted in the EIR, a consequence of developing the proposed project is that water rights formerly used on lands within the project area can be used on the project area for project demands, or treated by the COS for use on those same lands. As a result, the demand on existing and planned future water supplies by uses within the project area will be significantly lower from the amounts projected.

Senate Bill 610 does not require a water supplier to identify other water supplies not needed to meet future water demands. However, the COS is providing an assessment of the current water rights now utilized by the project area lands and how those rights can be used by the COS within the project area. These water rights were not relied upon by the COS in preparing the WSA—existing and proposed future water supplies for the three COSMA urban water retailers are sufficient to meet existing water demands and the water demands of the project and all reasonably foreseeable planned future uses in wet and above-normal hydrologic years and in dry and critical years and under sustained drought conditions without considering these water rights. If at some future date the COS does develop and use these rights, these supplies may be referenced in future WSAs or equivalent evaluations.

All of the project area is entitled to riparian water. The doctrine of riparian water rights confers on the owner of land, contiguous to a watercourse, the right to withdraw water from the water body for reasonable and beneficial use on his land. The riparian water right is a right of property and when the land is conveyed the riparian right passes with it. The riparian right can be lost if the land is severed from, or loses contiguity with, the watercourse; the rule in California is that the riparian right extends only to the smallest tract held under one title in the chain of title leading to the present owner. Rancho Santa Margarita v. Vale (1938) 11 Cal.2d 501. Therefore, in order to determine whether property now has a riparian right every land transaction from the original patent or grant to the present must be examined.

A chain of title review documenting riparian rights for the property was undertaken by Herum Crabtree Brown in 2006. The conclusions reached on the riparian status of each of the properties are illustrated below on Table 4.

Table 4: Riparian Water Rights

APN	Parcel Acres	Status of Acreage Included in Project
055-31-04	49.9	Riparian to Telephone Cut and Bishop Cut
055-31-05	62.63	Riparian to Telephone Cut and Bishop Cut
055-31-06	61.53	Riparian to Telephone Cut
Total Acreage	174.06	All acreage riparian

All of the total 174.06 acres included in the project are riparian to Telephone Cut and could be served by riparian water from this watercourse on a year-round basis for domestic purposes. Parcels 4 and 5 (112.53 of the 174.06 acres) are also riparian to Bishop Cut. Therefore, the entire project water demand could be met through use of the riparian water right held by the properties.

Riparian water rights are associated with lands immediately adjacent to a natural body of water. These rights allow the owner of the land to withdraw water from the water body for use on that land. If land with riparian water rights is subdivided, the rights may be retained for the entire acreage, even if some parcels are no longer adjacent to the water body, provided that the documents of conveyance state that riparian water rights are retained. Riparian water rights will be retained for the eligible parcels with in the project site, a proposed Community Services District (or other public agency) will take an assignment of those rights from the future property owners, withdraw water from the Delta using these rights, treat and distribute the same volume of water to those same parcels.

Although riparian water rights are not limited to specific volumes of water, the amount of water that may be withdrawn using these rights is a good indicator of what can be diverted without infringement of the rights of other water diverters. The exact historic water use on these land are unknown; however, the acres identified as possessing riparian rights have historically been used for the production of alfalfa, silage and other grains. The average annual water use for production of these crops on Delta lands is generally estimated to be 3 to 4 acre feet per acre, so the 1.6 acre feet annually estimated by the COS to be needed on these properties when developed could be easily supplied by the riparian right without infringement upon the rights of other water users in the Delta.

Although the riparian rights held by the property have historically been used for irrigation purposes only, unlike appropriative rights, no regulatory approval is needed to initiate or change the purpose of use for a riparian right. The California Supreme Court has stated that:

> So long as the riparian owner takes no more than his reasonable share and uses it upon his riparian land, without unreasonable waste, other riparian owners below have no right to inquire, how, or by what means, or at what place, he manages to divert his share from the stream. . . *Turner v. The James Canal Company* (1909) 155 Cal. 82, 92.

Riparian water may be used for municipal and industrial uses and various forms of irrigation, such as for landscaping and parks. Riparian water can also be used for recreation, such as maintaining lake levels.

Riparian water diverted pursuant to rights held by the development lands could also be diverted at the intake facility developed for the COS DWSP, located on the southwest tip of Empire Tract adjacent to the San Joaquin River. Although the properties' riparian rights extend to Telephone Cut, and have historically been diverted at this location, the point of diversion for a riparian right can be changed to upstream or downstream of the riparian land provided the change does not injure the rights of other lawful users. The riparian water diverted at the COS DWSP intake facility would also be conveyed to and treated at the planned Stockton WTP to be constructed approximately three miles east of I-5 and 0.5 mile north of Eight Mile Road along Lower Sacramento Road.

MA-16: Water Code section 10910(f describes the information that must be included in a Water Supply Assessment when a water supply for a proposed project includes groundwater. This information includes: a description of the basin; information on what DWR has reported in its most current bulletin to characterize the basin and whether DWR has characterized it as being in overdraft; information on the past 5 years of pumpage by the public water system; a 20-year projection of the groundwater to be pumped by the public water system; and a determination of the sufficiency of the groundwater from the basin to meet the projected water demands of the proposed project. Water Code §§10910(f) (2)-(5). The WSA includes each of these required elements. The water code does not require that a WSA estimate undocumented historical or future pumping outside of the City of Stockton.

MA-17: The referenced figure illustrates the existing condition of groundwater in the COSMA. This information is not relevant to the information contained and conclusions reached in the WSA.

MA-18: The comment addresses the impact of potential declining groundwater levels. However, the commenter has not documented that declining groundwater levels, which have been documented in San Joaquin County since 1911, will result from the project. To the contrary, COSMA has implemented a 20 percent reduction in the amount of groundwater that the COSMA is currently using based on the 0.75 AF/ac/year extraction rate. The purpose of this reduction is to fulfill the COS's objective of managing the underlying groundwater basin for the protection of groundwater resources indefinitely.

The conclusion from the WSA, and from the studies and evaluations cited in the WSA, is that use of groundwater under full build out conditions of the General Plan Update at the 0.75 AF/ac/year maximum set in the WSA will not impact the larger groundwater basin; therefore the Project's use of groundwater, if held to the same constraint, will not have a negative effect on regional groundwater elevations, water quality, or groundwater quantity. See Figures 18, 19 and 20 in the WSA.

MA-19: This statement is factual error. Permit 21176 issued for Phase I of the Delta Water Supply Project is based upon Water Code Section 1485 and does not include Standard Term 91. The permit allows year-round diversion equal to the 125-day running average of discharges of effluent from the Regional Wastewater Control Facility into the San Joaquin River, not to exceed 33,600 acre feet annually.

MA-20: See Response to MA-18.

MA-21: It is not necessary to address these comments because the WSA makes very clear that while the concept of "Agricultural Credits" is discussed, the determination of sufficiency in the WSA concludes that the use of agricultural credits is not required.

3.0 TRANSMITTALS, NOTICES AND LEGAL ADVERTISEMENTS

STATE OF CALIFORNIA

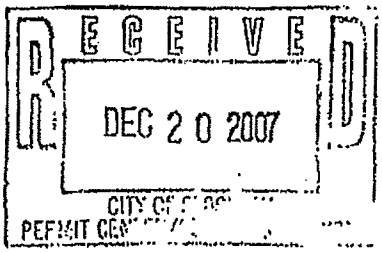
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

December 17, 2007



Jenny Liaw
City of Stockton
Community Development Department
345 N. El Dorado Street
Stockton, CA 95202

Subject: Crystal Bay
SCH#: 2007032116

Dear Jenny Liaw:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 14, 2007, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2007032116
Project Title Crystal Bay
Lead Agency Stockton, City of

Type EIR Draft EIR

Description The Crystal Bay Master Development Plan project proposes a General Plan Amendment, Prezoning, Master Development Plan, Vesting Tentative Map, Development Agreement, Precise Road Amendment and annexation of three parcels comprising the 173 acre site. The proposed project consists of residential uses at a variety of densities. The development plan consists of five types of housing units, major circulation roads, and a project created lake. The community is anticipated to include approximately 1,363 total units. A total of 13.1 acres of parkland will be dedicated as part of this project. Additional open space landscape areas total of 21 acres within the proposed project.

Lead Agency Contact

Name Jenny Liaw
Agency City of Stockton
Phone 209-937-8266 **Fax**
email
Address Community Development Department
345 N. El Dorado Street
City Stockton **State** CA **Zip** 95202

Project Location

County San Joaquin
City Stockton
Region
Cross Streets Eight Mile Road / Rio Blanco Road
Parcel No. 066-060-01, -02, -03
Township 2N **Range** 5E **Section** **Base** MDB&M

Proximity to:

Highways I-5
Airports
Railways
Waterways Bishop Cut
Schools Manillo Silva Elementary
Land Use Present LU: Agriculture
Zoning: (SJ Co) CR - Commercial Recreation
General Plan: (SJ Co) C/R - Commercial Recreation

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Drainage/Absorption; Economics/Jobs; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 2; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services; California Highway Patrol; Caltrans, District 10; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

Date Received 10/31/2007 **Start of Review** 10/31/2007 **End of Review** 12/14/2007

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

rm A

otice of Completion and Environmental Document Transmittal

SCH # 2007032116

ail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 916/445-0613

oject Title: Crystal Bay

ad Agency: City of Stockton — Contact Person: Jenny Liaw, Senior Planner

eet Address: 345 N. El Dorado Street — Phone: (209) 937-8266

y: Stockton — Zip: 95202 — County: San Joaquin

oject Location:

unty: San Joaquin — City/Nearest Community: Stockton

ss Streets: Eight Mile Road/Rio Blanco Road — Zip Code: 95219 — Total Acres: 173

essor's Parcel No(s):066-060-01, -02, -03, — Twp. T2N — Range: R5E — Base: MDM

hin 2 Miles: State Hwy #: I-5 — Waterways: Bishop Cut

Airports: n/a — Railways: n/a — Schools: Manilo Silva Elementary

cument Type:

QA:
- ☐ NOP
- ☐ Early Cons
- ☐ Neg Dec
- ☒ Draft EIR
- ☐ Supplement/Subsequent EIR (Prior SCH No.) _____
- ☐ Other _____

NEPA:
- ☐ NOI
- ☐ EA
- ☐ Draft EIS
- ☐ FONSI

Other:
- ☐ Joint Document
- ☐ Final Document
- ☐ Other _____

cal Action Type:

- ☐ General Plan Update
- ☐ General Plan Amendment
- ☐ General Plan Element
- ☐ Community Plan
- ☐ Specific Plan
- ☒ Master Plan
- ☐ Planned Unit Development
- ☐ Site Plan
- ☐ Rezone
- ☒ Prezone
- ☐ Use Permit
- ☒ Land Division (Subdivision, etc.)
- ☒ Annexation
- ☐ Redevelopment
- ☐ Coastal Permit
- ☒ Other: Development Agreement, Precise Road Amendment

velopment Type:

- Residential: Units 1,363 Acres 173 (approx.)
- Office: Sq. ft. _____ Acres _____ Employees _____
- Commercial: Sq. ft. _____ Acres _____ Employees _____
- ndustrial: Sq. ft. _____ Acres _____ Employees _____
- Educational _____
- Recreational _____

- ☐ Water Facilities: Type _____ MGD _____
- ☐ Transportation: Type _____
- ☐ Mining: Mineral _____
- ☐ Power: Type _____ Watts _____
- ☐ Waste Treatment: Type _____
- ☐ Hazardous Waste: Type _____
- ☐ Other: _____

ding (approx.):

Federal $ _____ State $ _____ Total $ _____

ject Issues Discussed in Document:

- ☐ Aesthetic/Visual
- ☐ Agricultural Land
- ☒ Air Quality
- ☐ Archeological/Historical
- ☐ Coastal Zone
- ☐ Drainage/Absorption
- ☐ Economic/Jobs
- ☐ Fiscal
- ☒ Flood Plain/Flooding
- ☐ Forest Land/Fire Hazard
- ☒ Geologic/Seismic
- ☐ Minerals
- ☒ Noise
- ☒ Population/Housing Balance
- ☒ Public Services/Facilities
- ☒ Recreation/Parks
- ☐ Schools/Universities
- ☐ Septic Systems
- ☒ Sewer Capacity
- ☒ Soil Erosion/Compaction/Grading
- ☒ Solid Waste
- ☒ Toxic/Hazardous
- ☒ Traffic/Circulation
- ☒ Vegetation
- ☒ Water Quality
- ☒ Water Supply/Groundwater
- ☒ Wetland/Riparian
- ☒ Wildlife
- ☒ Growth Inducing
- ☒ Land use
- ☒ Cumulative Effects
- ☐ Other _____

sent Land Use/Zoning/General Plan Designation:

Present LU: Agriculture Z: (SJ Co) CR – Commercial Recreation GP: Co) C/R – Commercial Recreation

ect Description:

The Crystal Bay Master Development Plan project proposes a General Plan Amendment, Prezoning, Master Development Plan, ng Tentative Map, Development Agreement, Precise Road Amendment and annexation of three parcels comprising the 173 acre site. The proposed project sts of residential uses at a variety of densities. The development plan consists of five types of housing units, major circulation roads, and a project created The community is anticipated to include approximately 1,363 total units. A total of 13.1 acres of parkland will be dedicated as part of this project. Additional space/greenbelt landscape containing a total of 21 acres will be located within the proposed project.

REVIEWING AGENCIES CHECKLIST

Form A, continued

See Attached List

KEY
S = Document sent by lead agency
X = Document sent by SCH
√ = Suggested distribution

Resources Agency
_____ Boating & Waterways
_____ Coastal Commission
_____ Coastal Conservancy
_____ Colorado River Board
_____ Conservation
_____ Fish & Game
_____ Forestry & Fire Protection
_____ Office of Historic Preservation
_____ Parks & Recreation
_____ Reclamation Board
_____ S.F. Bay Conservation & Development Commission
_____ Water Resources (DWR)

Business, Transportation & Housing
_____ Aeronautics
_____ California Highway patrol
_____ CALTRANS District # _____
_____ Department of Transportation Planning (Headquarters)
_____ Housing & Community Development

Food & Agriculture

Health & Welfare
_____ Health Services _____

State & Consumer Services
_____ General Services
_____ OLA (Schools)

Environmental Protection Agency
_____ Air Resources Board
_____ California Waste Management Board
_____ SWRCB: Clean Water Grants
_____ SWRCB: Delta Unit
_____ SWRCB: Water Quality
_____ SWRCB: Water Rights
_____ Regional WQCB # _____ (_____)

Youth & Adult Corrections
_____ Corrections

Independent Commissions & Offices
_____ Energy Commission
_____ Native American Heritage Commission
_____ Public Utilities Commission
_____ Santa Monica Mountains Conservancy
_____ State Lands Commission
_____ Tahoe Regional Planning Agency

Other _____

Public Review Period (to be filled in by lead agency)

Starting Date: November 1, 2007

Ending Date: December 17, 2007

Signature: Jerry Diaw

Date: October 31, 2007

Lead Agency (Complete if applicable):
Consulting Firm: LSA Associates, Inc.
Address: 4200 Rocklin Blvd., Suite 11B
City/State/Zip: Rocklin, CA 95677
Contact: Bill Mayer
Phone: (916) 630-4600

For SCH Use Only:
Date Received at SCH _____
Date Review Starts _____
Date to Agencies _____
Date to SCH _____
Clearance Date _____
Notes:

Applicant: Spanos Family Partnership, Jim Panagopoulos
Address: 10100 Trinity Parkway, Fifth Floor
City/State/Zip: Stockton, CA 95219
Phone: (209) 955-2550

CITY OF STOCKTON
PUBLIC NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL IMPACT REPORT
(Pursuant to Public Resources Code Sections 21092 and 21092.3 and Cal. Code of Regulations Title 14, Section 15087)

The City of Stockton Community Development Department has completed, independently reviewed and analyzed the following Draft Environmental Impact Report: DEIR 6-05 for the Crystal Bay Master Development Plan (CBMDP), which would guide development of a residential community in three separate phases. The CBMDP is a planned residential community of ±173 acres and approximately 1,363 residential units, consisting of four residential product types (traditional detached single-family residential, compact single-family residential, small lot courtyard detached residential and high density multi-family residential units). A total of ±34 acres of park land will be dedicated as part of this proposed project which would include one neighborhood park, five mini parks and a greenbelt along Rio Blanco Road. The proposed development will be landscaped within the entire community. The bike and pedestrian trails will provide access to and between important destinations within the project area and links to outside Crystal Bay including the commercial center in Spanos Park West, the community centers and parks in Westlake and the Delta system.

Entitlement being sought by the project applicant includes approval of General Plan Amendment, Prezoning, Development Agreement, Master Development Plan, Vesting Tentative Map, Precise Road Plan Amendment and Annexation of three parcels. The CBMDP Project is generally located on the south side of Eight Mile Road, east of Rio Blanco Road and west of Westlake Drive

A copy of the Draft EIR may be reviewed and/or obtained at the following addresses:

Community Development Department
Planning Division
345 North El Dorado Street
Stockton, CA 95202

or at: *http://www.stocktongov.com/CD/index.cfm*

The Draft EIR may also be reviewed at the following public library locations:

Cesar Chavez Central Library
605 North El Dorado Street
Stockton, CA 95202

Maya Angelou Branch Library
2324 Pock Lane
Stockton, CA 95205

Fair Oaks Branch Library
2370 East Main Street
Stockton, CA 95205

Margaret K. Troke Branch Library
502 West Benjamin Holt Drive
Stockton, CA 95207

Any written comments on this document must be received at this same address no later than **December 17, 2007 at 5:00 p.m.**. Further information may be obtained by contacting the City Planning Division at (209) 937-8266.

MICHAEL M. NIBLOCK, DIRECTOR
COMMUNITY DEVELOPMENT DEPARTMENT

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CITY OF STOCKTON
STATE CLEARINGHOUSE TRANSMITTAL LETTER
FOR ENVIRONMENTAL DOCUMENTS

TO: State Clearinghouse
Office of Planning & Research
P.O. Box 3044
Sacramento, CA 95812-3044

FROM: Lead Agency
City of Stockton
c/o Community Development Dept.
Planning Division
345 North El Dorado Street
Stockton, CA 95202-1997

SUBJECT: **PUBLIC REVIEW OF A DRAFT ENVIRONMENAL IMPACT REPORT FOR THE CRYSTAL BAY MASTER DEVELOPMENT PLAN PROJECT (EIR6-05)**

Enclosed please find 15 copies of the above-named environmental document for review, comments, recommendations, and distribution to other State agencies which have jurisdiction over one or more aspects of the project. Also enclosed is a list of agencies to which the environmental document and/or related Public Notice of Completion (NOC) has been referred directly.

Please schedule the review period to end on **December 17, 2007 by 5:00 p.m.** and return the comments to the above-noted Lead Agency address.

If you have any questions or comments regarding this matter, please contact Jenny Liaw, Senior Planner the above-noted Lead Agency address or by telephone at (209) 937-8316.

MICHAEL M. NIBLOCK, DIRECTOR
COMMUNITY DEVELOPMENT DEPARTMENT

By Jenny Liaw
Jenny Liaw, Senior Planner

Date: October 31, 2007

Enclosures

MMN:

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CITY OF STOCKTON
ENVIRONMENTAL DOCUMENT TRANSMITTAL LETTER

November 1, 2007

TO: (See Attached List)

FROM: Lead Agency
City of Stockton
c/o Community Development Dept.
Planning Division
345 North El Dorado Street
Stockton, CA 95202

SUBJECT: **PUBLIC REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CRYSTAL BAY MASTER DEVELOPEMENT PLAN (EIR6-05)**

Enclosed is a copy of the Notice of Availability (NOA) and Notice of Completion (NOC) for the above-named environmental document. Also, a copy of the environmental document, with applicable attachments, is also being transmitted to each "Responsible", "Trustee", and other public agency included on the attached list, as applicable. State agencies, however, should obtain the environmental document, with attachments, directly from the State Clearinghouse.

The remaining agencies, organizations and individuals on the attached list are receiving only this transmittal letter and the NOA/NOC. Public agencies may obtain a free copy of the above-named environmental document at the above-noted Lead Agency address. Private individuals, organizations, and corporations may purchase a copy of the environmental document for a fee of $50.00. If mailing is requested, please remit an additional fee of $5.00 for postage and handling. A CD version of the DEIR is available for a fee of $5.00. If mailing is requested, please remit an additional fee of $2.00 for postage and handling. The DEIR is available on the City's website: www.stocktongov.com. Checks should be made payable to the City of Stockton and any written orders must identify the project title and document identification number, as noted above.

Any written comments regarding the above-named environmental document must be received at the Lead Agency address no later than **December 17, 2007 by 5:00 p.m.** If no comments are received by the date indicated, it will be assumed that the document is acceptable. Further information may be obtained by contacting Jenny Liaw, Senior Planner the Community Development Department, Planning Division at (209) 937-8316.

MICHAEL M. NIBLOCK, DIRECTOR
COMMUNITY DEVELOPMENT DEPARTMENT

By Jenny Liaw
Jenny Liaw, Senior Planner

Date October 31, 2007

MMN: JL

Enclosures

::ODMA\GRPWISE\COS.CDD.CDD_Library:64398.1

PROOF OF PUBLICATION
NOTICE

STATE OF CALIFORNIA
COUNTY OF SAN JOAQUIN

THE UNDERSIGNED SAYS:

I am a citizen of the United States and a resident of San Joaquin County; I am over the age of 18 years and not a part to or interested in the above-entitled matter. I am the principal clerk of the printer of THE RECORD, a newspaper of general publication, printed and published daily in the City of Stockton, County of San Joaquin and which newspaper has been adjudged a newspaper of general circulation in the City of Stockton and the County of San Joaquin by the Superior Court of the County of San Joaquin, State of California, under the date of February 26, 1952, File No. 52857, San Joaquin County Records; that the notice of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates,

To wit., Nov.1

~~All in the year, 2007~~

I declare under penalty of perjury that the foregoing is true and correct.
Executed on Nov. 1st ,2007
In Stockton, California.

Laurie Costello
Laurie Costello

CITY OF STOCKTON
PUBLIC NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL IMPACT REPORT
(Pursuant to Public Resources Code Sections 21092 and 21092.3 and [illegible] Cal. Code of Regulations Title 14, Section 15087)

The City of Stockton Community Development Department has completed [illegible] independently reviewed and analyzed the following Draft Environmental Impact Report - DEIR 6-05 for the Crystal Bay Master Development Plan (CBMDP), which would guide development of a residential community in three separate phases. The CBMDP is a planned residential community of ±173 acres and approximately [illegible] residential units consisting of four residential product types (traditional detached single-family residential, compact single-family residential, small lot courtyard detached residential and high density multi-family residential units). A total of [illegible] acres of parkland will be dedicated as part of this proposed project which would include one neighborhood park, five mini-parks, and a greenbelt along Rio Blanco Road. The proposed development will be landscaped within the entire community. The bike and pedestrian trails will provide access to and between important destinations within the project area and links to outside Crystal Bay including the commercial center in Spanos Park West, the community centers and parks in Westlake and the Delta system.

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Stockton, CA 95202

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Stockton, CA 95207

Any written comments on this document must be received at this same address no later than December 17, 2007. Further information may be obtained by contacting the City Planning Division at (209) 937-8266.

MICHAEL M. NIBLOCK, DIRECTOR
COMMUNITY DEVELOPMENT DEPARTMENT

#6429 11/1/07

CITY OF STOCKTON
PUBLIC NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL IMPACT REPORT
(Pursuant to Public Resources Code Sections 21092 and 21092.3 and Cal. Code of Regulations Title 14, Section 15087)

The City of Stockton Community Development Department has completed, independently reviewed and analyzed the following Draft Environmental Impact Report: DEIR 6-05 for the Crystal Bay Master Development Plan (CBMDP), which would guide development of a residential community in three separate phases. The CBMDP is a planned residential community of ±173 acres and approximately 1,383 residential units, consisting of four residential product types (traditional detached single-family residential, compact single-family residential, small lot courtyard detached residential and high density multi-family residential units). A total of ±31 acres of parkland will be dedicated as part of this proposed project which would include one neighborhood park, five mini parks and a greenbelt along Rio Blanco Road. The proposed development will be landscaped within the entire community. The bike and pedestrian trails will provide access to and between important destinations within the project area and links to outside Crystal Bay including the commercial center in Spanos Park West, the community centers and parks in Westlake and the Delta system.

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MICHAEL M. NIBLOCK, DIRECTOR
COMMUNITY DEVELOPMENT DEPARTMENT

#642911 11/1/07

ATTACHMENT 1

SIGNALIZED INTERSECTION CAPACITY ANALYSIS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.97	0.91					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	3433	5085					1681	1681	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	3433	5085					1681	1681	1583
Volume (vph)	0	551	722	1610	823	0	0	0	0	447	0	80
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	592	776	1731	885	0	0	0	0	481	0	86
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	72
Lane Group Flow (vph)	0	592	776	1731	885	0	0	0	0	241	240	14
Turn Type			Free	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			Free							4		4
Actuated Green, G (s)		23.0	120.0	64.8	91.8					19.6	19.6	19.6
Effective Green, g (s)		23.4	120.0	64.8	92.2					19.8	19.8	19.8
Actuated g/C Ratio		0.19	1.00	0.54	0.77					0.17	0.17	0.17
Clearance Time (s)		4.4		4.0	4.4					4.2	4.2	4.2
Vehicle Extension (s)		3.0		3.0	3.0					2.0	2.0	2.0
Lane Grp Cap (vph)		690	1583	1854	3907					277	277	261
v/s Ratio Prot		c0.17		c0.50	0.17							
v/s Ratio Perm			0.49							c0.14	0.14	0.01
v/c Ratio		0.86	0.49	0.93	0.23					0.87	0.87	0.05
Uniform Delay, d1		46.7	0.0	25.6	3.9					48.8	48.8	42.2
Progression Factor		0.45	1.00	0.52	0.27					1.00	1.00	1.00
Incremental Delay, d2		1.4	0.1	8.4	0.1					23.7	22.8	0.0
Delay (s)		22.4	0.1	21.8	1.2					72.6	71.7	42.2
Level of Service		C	A	C	A					E	E	D
Approach Delay (s)		9.8			14.8			0.0			67.6	
Approach LOS		A			B			A			E	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.81	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			7544	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			7544	1583	1681	1681	2787			
Volume (vph)	110	887	0	0	2043	312	389	0	670	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	118	954	0	0	2197	335	418	0	720	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	45	0	0	15	0	0	0
Lane Group Flow (vph)	118	954	0	0	2197	290	209	209	705	0	0	0
Turn Type	Prot					Perm	Split		custom			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			1 8			
Actuated Green, G (s)	15.0	47.6			71.7	71.7	20.0	20.0	63.1			
Effective Green, g (s)	15.0	48.2			72.3	72.3	20.7	20.7	63.8			
Actuated g/C Ratio	0.12	0.40			0.60	0.60	0.17	0.17	0.53			
Clearance Time (s)	4.0	4.6			4.6	4.6	4.7	4.7				
Vehicle Extension (s)	2.0	3.0			3.0	3.0	2.0	2.0				
Lane Grp Cap (vph)	221	1421			4545	954	290	290	1482			
v/s Ratio Prot	0.07	c0.27			c0.29		c0.12	0.12				
v/s Ratio Perm						0.18			0.25			
v/c Ratio	0.53	0.67			0.48	0.30	0.72	0.72	0.48			
Uniform Delay, d1	49.2	29.4			13.4	11.6	46.9	46.9	17.6			
Progression Factor	0.16	0.13			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.6	1.4			0.4	0.8	7.3	7.3	0.2			
Delay (s)	8.5	5.1			13.7	12.4	54.2	54.2	17.9			
Level of Service	A	A			B	B	D	D	B			
Approach Delay (s)		5.5			13.6			31.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.97	0.91					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	3433	5085					1681	1681	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	3433	5085					1681	1681	1583
Volume (vph)	0	834	595	1270	1685	0	0	0	0	486	0	80
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	887	633	1351	1793	0	0	0	0	517	0	85
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	887	633	1351	1793	0	0	0	0	259	258	55
Turn Type			Free	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			Free							4		4
Actuated Green, G (s)		38.7	130.0	55.6	98.3					23.1	23.1	23.1
Effective Green, g (s)		39.1	130.0	55.6	98.7					23.3	23.3	23.3
Actuated g/C Ratio		0.30	1.00	0.43	0.76					0.18	0.18	0.18
Clearance Time (s)		4.4		4.0	4.4					4.2	4.2	4.2
Vehicle Extension (s)		3.0		3.0	3.0					2.0	2.0	2.0
Lane Grp Cap (vph)		1064	1583	1468	3861					301	301	284
v/s Ratio Prot		c0.25		c0.39	0.35							
v/s Ratio Perm			0.40							c0.15	0.15	0.03
v/c Ratio		0.83	0.40	0.92	0.46					0.86	0.86	0.19
Uniform Delay, d1		42.4	0.0	35.1	5.8					51.8	51.7	45.4
Progression Factor		0.39	1.00	0.54	0.25					1.00	1.00	1.00
Incremental Delay, d2		0.8	0.1	7.8	0.2					20.7	20.0	0.1
Delay (s)		17.4	0.1	26.6	1.7					72.5	71.7	45.5
Level of Service		B	A	C	A					E	E	D
Approach Delay (s)		10.2			12.4			0.0			68.4	
Approach LOS		B			B			A			E	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	121.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.81	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			7544	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			7544	1583	1681	1681	2787			
Volume (vph)	110	1209	0	0	1871	515	1084	0	1540	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	1314	0	0	2034	560	1178	0	1674	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	111	0	0	8	0	0	0
Lane Group Flow (vph)	120	1314	0	0	2034	449	589	589	1666	0	0	0
Turn Type	Prot					Perm	Split		custom			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			1 8			
Actuated Green, G (s)	11.6	49.4			53.8	53.8	51.3	51.3	71.3			
Effective Green, g (s)	11.6	50.0			54.4	54.4	52.0	52.0	72.0			
Actuated g/C Ratio	0.09	0.38			0.42	0.42	0.40	0.40	0.55			
Clearance Time (s)	4.0	4.6			4.6	4.6	4.7	4.7				
Vehicle Extension (s)	2.0	3.0			3.0	3.0	2.0	2.0				
Lane Grp Cap (vph)	158	1361			3157	662	672	672	1544			
v/s Ratio Prot	0.07	c0.37			0.27		0.35	0.35				
v/s Ratio Perm						0.28			c0.60			
v/c Ratio	0.76	0.97			0.64	0.68	0.88	0.88	1.08			
Uniform Delay, d1	57.8	39.2			30.1	30.7	36.0	36.0	29.0			
Progression Factor	0.27	0.45			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	10.9	13.0			1.0	5.5	12.0	12.0	47.6			
Delay (s)	26.4	30.6			31.1	36.2	48.0	48.0	76.6			
Level of Service	C	C			C	D	D	D	E			
Approach Delay (s)		30.2			32.2			64.8			0.0	
Approach LOS		C			C			E			A	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.97	0.91					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	3433	5085					1681	1681	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	3433	5085					1681	1681	1583
Volume (vph)	0	609	690	1580	678	0	0	0	0	551	0	80
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	655	742	1699	729	0	0	0	0	592	0	86
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	69
Lane Group Flow (vph)	0	655	742	1699	729	0	0	0	0	296	296	17
Turn Type			Free	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			Free							4		4
Actuated Green, G (s)		26.1	130.0	64.8	94.9					25.1	25.1	25.1
Effective Green, g (s)		27.1	130.0	64.8	95.9					26.1	26.1	26.1
Actuated g/C Ratio		0.21	1.00	0.50	0.74					0.20	0.20	0.20
Clearance Time (s)		5.0		4.0	5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		738	1583	1711	3751					337	337	318
v/s Ratio Prot		c0.19		c0.49	0.14							
v/s Ratio Perm			0.47							c0.18	0.18	0.01
v/c Ratio		0.89	0.47	0.99	0.19					0.88	0.88	0.05
Uniform Delay, d1		50.0	0.0	32.4	5.2					50.4	50.4	42.0
Progression Factor		0.71	1.00	0.44	0.20					1.00	1.00	1.00
Incremental Delay, d2		12.5	0.8	18.6	0.1					21.8	21.8	0.1
Delay (s)		48.1	0.8	32.9	1.1					72.2	72.2	42.0
Level of Service		D	A	C	A					E	E	D
Approach Delay (s)		23.0			23.4			0.0			68.4	
Approach LOS		C			C			A			E	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.81	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			7544	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			7544	1583	1681	1681	2787			
Volume (vph)	120	1040	0	0	1824	363	434	0	670	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	129	1118	0	0	1961	390	467	0	720	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	60	0	0	75	0	0	0
Lane Group Flow (vph)	129	1118	0	0	1961	330	234	233	645	0	0	0
Turn Type	Prot					Perm	Perm		custom			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		1 8			
Actuated Green, G (s)	18.3	79.6			65.4	65.4	32.3	32.3	40.4			
Effective Green, g (s)	18.3	80.6			66.4	66.4	33.3	33.3	41.4			
Actuated g/C Ratio	0.14	0.62			0.51	0.51	0.26	0.26	0.32			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.0	5.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	249	2194			3853	809	431	431	888			
v/s Ratio Prot	0.07	c0.32			0.26							
v/s Ratio Perm						0.21	0.14	0.14	c0.23			
v/c Ratio	0.52	0.51			0.51	0.41	0.54	0.54	0.73			
Uniform Delay, d1	51.8	13.7			21.0	19.7	41.8	41.7	39.3			
Progression Factor	0.18	0.54			0.43	0.26	1.00	1.00	1.00			
Incremental Delay, d2	0.8	0.4			0.2	0.5	1.4	1.4	3.0			
Delay (s)	10.0	7.8			9.3	5.7	43.2	43.1	42.3			
Level of Service	A	A			A	A	D	D	D			
Approach Delay (s)		8.0			8.7			42.6			0.0	
Approach LOS		A			A			D			A	

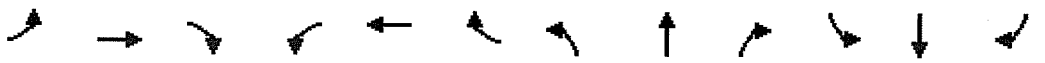
Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.97	0.91					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	3433	5085					1681	1681	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	3433	5085					1681	1681	1583
Volume (vph)	0	662	502	1230	1731	0	0	0	0	554	0	100
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	704	534	1309	1841	0	0	0	0	589	0	106
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	17
Lane Group Flow (vph)	0	704	534	1309	1841	0	0	0	0	295	294	89
Turn Type			Free	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			Free							4		4
Actuated Green, G (s)		45.3	130.0	43.0	92.3					27.7	27.7	27.7
Effective Green, g (s)		46.3	130.0	43.0	93.3					28.7	28.7	28.7
Actuated g/C Ratio		0.36	1.00	0.33	0.72					0.22	0.22	0.22
Clearance Time (s)		5.0		4.0	5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1260	1583	1136	3649					371	371	349
v/s Ratio Prot		c0.20		c0.38	0.36							
v/s Ratio Perm			0.34							c0.18	0.17	0.06
v/c Ratio		0.56	0.34	1.15	0.50					0.80	0.79	0.25
Uniform Delay, d1		33.6	0.0	43.5	8.1					47.9	47.8	41.8
Progression Factor		0.79	1.00	0.29	1.81					1.00	1.00	1.00
Incremental Delay, d2		1.5	0.5	77.0	0.2					11.2	11.0	0.4
Delay (s)		28.2	0.5	89.4	14.9					59.1	58.9	42.2
Level of Service		C	A	F	B					E	E	D
Approach Delay (s)		16.2			45.9			0.0			56.4	
Approach LOS		B			D			A			E	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	144.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.81	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			7544	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			7544	1583	1681	1681	2787			
Volume (vph)	200	1015	0	0	1855	931	1106	0	1540	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	1103	0	0	2016	1012	1202	0	1674	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	204	0	0	17	0	0	0
Lane Group Flow (vph)	217	1103	0	0	2016	808	601	601	1657	0	0	0
Turn Type	Prot					Perm	Perm		custom			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		1 8			
Actuated Green, G (s)	18.5	49.0			55.5	55.5	42.0	42.0	71.0			
Effective Green, g (s)	18.5	50.0			56.5	56.5	43.0	43.0	72.0			
Actuated g/C Ratio	0.14	0.38			0.43	0.43	0.33	0.33	0.55			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.0	5.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	252	1361			3279	688	556	556	1544			
v/s Ratio Prot	0.12	c0.31			0.27							
v/s Ratio Perm						c0.51	0.36	0.36	c0.59			
v/c Ratio	0.86	0.81			0.61	1.17	1.08	1.08	1.07			
Uniform Delay, d1	54.5	35.8			28.4	36.8	43.5	43.5	29.0			
Progression Factor	0.97	0.63			0.27	0.74	1.00	1.00	1.00			
Incremental Delay, d2	22.0	4.5			0.1	80.0	61.9	61.9	45.3			
Delay (s)	74.6	26.9			7.8	107.0	105.4	105.4	74.3			
Level of Service	E	C			A	F	F	F	E			
Approach Delay (s)		34.7			41.0			87.3			0.0	
Approach LOS		C			D			F			A	

Intersection Summary			
HCM Average Control Delay	58.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	144.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.97	0.91					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	3433	5085					1681	1681	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	3433	5085					1681	1681	1583
Volume (vph)	0	1588	1622	1580	1528	0	0	0	0	773	0	154
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	1708	1744	1699	1643	0	0	0	0	831	0	166
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	44
Lane Group Flow (vph)	0	1708	1744	1699	1643	0	0	0	0	416	415	122
Turn Type			Free	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			Free							4		4
Actuated Green, G (s)		46.0	130.0	45.0	95.0					25.0	25.0	25.0
Effective Green, g (s)		47.0	130.0	45.0	96.0					26.0	26.0	26.0
Actuated g/C Ratio		0.36	1.00	0.35	0.74					0.20	0.20	0.20
Clearance Time (s)		5.0		4.0	5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1279	1583	1188	3755					336	336	317
v/s Ratio Prot		c0.48		c0.49	0.32							
v/s Ratio Perm			c1.10							0.25	0.25	0.08
v/c Ratio		1.34	1.10	1.43	0.44					1.24	1.24	0.38
Uniform Delay, d1		41.5	65.0	42.5	6.6					52.0	52.0	45.1
Progression Factor		0.51	1.00	1.32	1.42					1.00	1.00	1.00
Incremental Delay, d2		151.4	46.9	196.0	0.2					130.1	128.9	0.8
Delay (s)		172.4	111.9	252.2	9.6					182.1	180.9	45.8
Level of Service		F	F	F	A					F	F	D
Approach Delay (s)		141.8			132.9			0.0			158.9	
Approach LOS		F			F			A			F	

Intersection Summary			
HCM Average Control Delay	140.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.81	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			7544	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			7544	1583	1681	1681	2787			
Volume (vph)	262	2100	0	0	2234	431	884	0	680	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	282	2258	0	0	2402	463	951	0	731	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	75	0	0	3	0	0	0
Lane Group Flow (vph)	282	2258	0	0	2402	388	476	475	728	0	0	0
Turn Type	Prot					Perm	Perm		custom			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		1 8			
Actuated Green, G (s)	26.7	70.1			47.4	47.4	41.9	41.9	49.9			
Effective Green, g (s)	26.7	71.1			48.4	48.4	42.9	42.9	50.9			
Actuated g/C Ratio	0.21	0.55			0.37	0.37	0.33	0.33	0.39			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.0	5.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	364	1936			2809	589	555	555	1091			
v/s Ratio Prot	0.16	c0.64			c0.32							
v/s Ratio Perm						0.25	c0.28	0.28	0.26			
v/c Ratio	0.77	1.17			0.86	0.66	0.86	0.86	0.67			
Uniform Delay, d1	48.8	29.5			37.6	33.9	40.7	40.7	32.6			
Progression Factor	1.47	0.85			0.54	0.37	1.00	1.00	1.00			
Incremental Delay, d2	1.0	75.4			1.7	2.6	12.4	12.3	1.6			
Delay (s)	72.6	100.5			22.0	15.0	53.1	53.0	34.1			
Level of Service	E	F			C	B	D	D	C			
Approach Delay (s)		97.4			20.9			44.8			0.0	
Approach LOS		F			C			D			A	

Intersection Summary			
HCM Average Control Delay	54.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.97	0.91					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	3433	5085					1681	1681	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	3433	5085					1681	1681	1583
Volume (vph)	0	1165	1052	1240	2972	0	0	0	0	836	0	205
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1239	1119	1319	3162	0	0	0	0	889	0	218
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	2
Lane Group Flow (vph)	0	1239	1119	1319	3162	0	0	0	0	445	444	216
Turn Type			Free	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			Free							4		4
Actuated Green, G (s)		41.0	130.0	45.0	90.0					30.0	30.0	30.0
Effective Green, g (s)		42.0	130.0	45.0	91.0					31.0	31.0	31.0
Actuated g/C Ratio		0.32	1.00	0.35	0.70					0.24	0.24	0.24
Clearance Time (s)		5.0		4.0	5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1143	1583	1188	3560					401	401	377
v/s Ratio Prot		c0.35		c0.38	0.62							
v/s Ratio Perm			0.71							c0.26	0.26	0.14
v/c Ratio		1.08	0.71	1.11	0.89					1.11	1.11	0.57
Uniform Delay, d1		44.0	0.0	42.5	15.5					49.5	49.5	43.7
Progression Factor		1.09	1.00	0.57	1.09					1.00	1.00	1.00
Incremental Delay, d2		47.3	1.6	54.9	0.4					78.1	77.2	2.1
Delay (s)		95.4	1.6	79.2	17.3					127.6	126.7	45.8
Level of Service		F	A	E	B					F	F	D
Approach Delay (s)		50.9			35.5			0.0			111.1	
Approach LOS		D			D			A			F	

Intersection Summary			
HCM Average Control Delay	50.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	162.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.81	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			7544	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			7544	1583	1681	1681	2787			
Volume (vph)	178	1823	0	0	2504	865	1676	0	1550	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	193	1982	0	0	2722	940	1822	0	1685	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	147	0	0	1	0	0	0
Lane Group Flow (vph)	193	1982	0	0	2722	793	911	911	1684	0	0	0
Turn Type	Prot					Perm	Perm		custom			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		1 8			
Actuated Green, G (s)	12.0	52.0			50.0	50.0	54.0	54.0	68.0			
Effective Green, g (s)	12.0	53.0			51.0	51.0	55.0	55.0	69.0			
Actuated g/C Ratio	0.09	0.41			0.39	0.39	0.42	0.42	0.53			
Clearance Time (s)	4.0	5.0			5.0	5.0	5.0	5.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	163	1443			2960	621	711	711	1479			
v/s Ratio Prot	0.11	c0.56			0.36							
v/s Ratio Perm						c0.50	c0.54	0.54	0.60			
v/c Ratio	1.18	1.37			0.92	1.28	1.28	1.28	1.14			
Uniform Delay, d1	59.0	38.5			37.6	39.5	37.5	37.5	30.5			
Progression Factor	1.72	0.39			0.44	0.24	1.00	1.00	1.00			
Incremental Delay, d2	88.8	168.5			0.6	125.8	137.2	137.2	71.2			
Delay (s)	190.4	183.3			17.1	135.4	174.7	174.7	101.7			
Level of Service	F	F			B	F	F	F	F			
Approach Delay (s)		184.0			47.5			139.6			0.0	
Approach LOS		F			D			F			A	

Intersection Summary			
HCM Average Control Delay	113.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	162.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

ATTACHMENT 2

SOIL SAMPLING AND ANALYSIS

KLEINFELDER
An employee owned company

File No. 35623.P02
January 14, 2008

Mr. Jim Panagopoulos
A.G. Spanos Companies
10100 Trinity Parkway, Fifth Floor
Stockton, CA 95219

Subject: **Report**
Limited Soil Sampling and Analysis
Crystal Bay Project
Southeast of Eight Mile Road and South Rio Blanco Road
Stockton, California

Dear Mr. Panagopoulos:

In accordance with your request and authorization, Kleinfelder has conducted limited soil sampling and analysis at the above-referenced subject site. The following includes background information, a summary of field activities, analytical results and our conclusions and recommendations:

1.0 BACKGROUND

Kleinfelder conducted a Phase I Environmental Site Assessment (ESA) of the subject site titled, "Phase I Environmental Site Assessment, Carl Thompson Property, Southeast Corner of Eight Mile Road and Rio Blanco Road, Stockton, California" (File No. 35623.P01/SAC3R441, dated October 21, 2003). The following conclusion was included in that report:

- Due to the past and current agricultural use of site, environmentally persistent pesticides may exist in the onsite soil. If the client requires a greater level of certainty, soil samples can be collected and analyzed for organochlorine pesticides.

Kleinfelder was also forwarded comments submitted by the Department of Toxic Substances Control (DTSC) to the City of Stockton in response to the draft of the Environmental Impact Report for the Crystal Bay Project. The letter is titled "Draft Environmental Impact Report (EIR) for the Chrystal Bay Project (SCH #2007032116)", dated December 3, 2007.

KLEINFELDER 2825 East Myrtle Street, Stockton, CA 95205-4794 (209) 948-1345 (209) 948-0621 fax

In that letter DTSC raised the following concerns;

- "The site should be evaluated to determine if and where storage, mixing, rinsing and disposal of pesticides may have occurred and whether contamination exists".

- ... if pesticides have historically been used on the property, we strongly recommend that these areas be tested for environmentally persistent pesticides such as organic pesticides and metals prior to development.

Kleinfelder's ESA did not find evidence of pesticide storing, mixing, or rinsing areas. To address the ESA recommendation and DTSC's additional concerns noted above. Kleinfelder conducted Limited Soil Sampling and Analyis to evaluate the shallow soil at the site for potential residual pesticides and elevated concentrations of metals. This report summarizes Kleinfelder's findings for Limited Soil Sampling and Analyses at the approximately 174-acre site at the above referenced location.

2.0 FIELD ACTIVITIES

On January 7, 2008, Kleinfelder personnel collected 22 soil samples from 12 borings located throughout the subject site. Soil samples from nine borings (B1 through B9) were collected in random, but approximately equal areas of the site in which former agricultural fields were identified. These locations were selected for the purpose of evaluating residual OCPs and metals associated with the normal application of OCPs. Boring B10 was located to evaluate potential OCP accumulation within an onsite irrigation ditch. Soil samples were collected from two borings (BG1 and BG2) at slightly deeper depths along the borders of the site for the purpose of evaluating potential background metal values in soil as compared to near surface metal values potentially associated with past agricultural use. Background samples were not obtained from adjacent properties as those properties also have histories of agricultural use. Two discrete soil samples were collected at approximate depths of 0 to 6 and 12 to 18-inches below ground surface (bgs) from each of ten borings B1 through B10 advanced at the site. The background samples from borings BG1 and BG2 were collected at approximate depths of 3.5 and 5 feet bgs, respectively. Groundwater was encountered during the attempt to advance boring BG1 to five feet bgs and therefore the soil sample was collected at the shallower depth (3.5 feet). During the advancement of both background borings a change in soil type, from clay to a clayey silt was noted at approximately 18-inches bgs.

The soil borings were advanced with a stainless steel hand auger. Surface debris was removed prior to sample collection. Soil samples were obtained by slide hammering a 2-inch diameter by 6-inch long stainless steel tube into the soil at the desired sampling depth. The stainless steel tube was then removed from the boring and sealed with Teflon® sheeting and tight-fitting plastic end caps. The soil samples were immediately stored in an iced cooler. The soil samples were transported under chain-of-custody

control to Kleinfelder's office and then transported by courier in a chilled ice chest to a state certified laboratory for the requested analyses.

The stainless steel sampling equipment and sample tubes were cleaned between sample locations with a Liquinox® (laboratory-grade detergent) and potable water wash, followed by a distilled water rinse. New stainless steel tubes used for sample collection were also cleaned using the same methodology.

The soil encountered in the shallow (0 to 6-inches bgs) soil borings were noted as a dark brown clay. During the advancement of the borings associated with the background samples a transition in soil type to a light brown clayey silt was noted at approximately 18-inches bgs. No unusual odors or soil discoloration were noted during the advancement of the hand auger borings. The shallow borings were backfilled with the soil generated during sampling.

3.0 LABORATORY ANALYSIS

A total of 22 soil samples were were submitted under chain-of-custody control to California Lab Services (CLS) of Rancho Cordova, California. Ten near surface discrete soil samples (B1 through B10) and two slightly deeper soil samples (BG1 and BG2) were subsequently analyzed. CLS is certified by the State of California to perform the requested analyses. The samples were submitted on a rush 2-working day turnaround time (TAT). Ten of the 22 soil samples collected at deeper depths from borings B1 through B10 were placed on hold at the laboratory.

The ten discrete shallow soil samples, collected from approximately 0 to 6-inches bgs, in borings B1 through B10 located throughout the site, were analyzed for the following:

- Organochlorine Pesticides by EPA Method 8081A

The samples collected from borings B6 and B7 and the two background samples BG1 and BG2 were analyzed for the following;

- Total Threshold Limit Concentrations (TTLCs) of California Assessment Manual (CAM-17) metals by EPA 6000/7000 Series Methods

The samples collected from borings B8, B9, and B10 were also analyzed for the following metals which are often primary metals of concern. Arsenic is a metal of concern associated with past agricultural operations;

- Total Lead by EPA Method 6010B
- Total Arsenic by EPA Method 6020

4.0 SOIL SAMPLING ANALYTICAL RESULTS

The following section details the results of the laboratory results of the analyses conducted on the soil samples collected from the site. Complete laboratory analytical results are included in Appendix B.

4.1 Organochlorine Pesticides

No organochlorine pesticides were detected by EPA Method 8081A in the ten shallow soil samples collected from the subject site.

4.2 CAM 17 Metals

Ten of the seventeen CAM 17 metals were detected in at least one of the two shallow soil samples analyzed for CAM 17 metals and/or in the two background samples collected from the site. The detected metals include: arsenic, barium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, and zinc. Arsenic and lead were also detected in three soil samples in which only these two metals were requested. The following text Table 1 summarizes the range of metal concentrations of analytes detected at the site including applicable goals for onsite soil use and regulatory limits typically used for hazardous waste classification.

Table 1. Concentrations of Detected CAM 17 Metals

Metal	SAMPLE LOCATION					BACKGROUND SAMPLES		Residential PRGs For Soil (10/01/02)	TTLC (mg/kg)	STLC (mg/l)
	B6	B7	B8	B9	B10	BG1	BG2			
Arsenic	5.9	17	3.6	8.3	4.9	1.8	2.4	0.062 (2) / 0.39(1)	500	5
Barium	140	170	NA			150	140	5,400	10,000	100
Cobalt	5.3	5.1				8.5	8.1	900(1)	8,000	80
Chromium	21	24				18	13	210(1)	2,500	5
Copper	15	21				14	12	3,100	2,500	25
Lead	3.8	6.1	3.8	4.6	3.2	3.6	3.3	400 / 150 (2)	1,000	5
Molybdenum	ND(<1.0)	1.8	NA			ND (<1.0)	ND (<1.0)	390	3,500	350
Nickel	16	21				14	10	1,600	2,000	20
Vanadium	48	53				51	44	78	2,400	24
Zinc	30	25				48	48	23,000	5,000	250
Units	mg/kg									

Notes: mg/kg =milligrams per a kilogram
PRG = Preliminary Remediation Goals, non-carcinogenic hazard, except when noted otherwise
(1) = cancer risk 1E-06 (2) = CAL-Modified PRG
TTLC = Total Threshold Limit Concentration
STLC = Soluble Threshold Limit Concentration

The laboratory analytical results and copies of the chain-of-custody records are included in Appendix B.

5.0 DISCUSSION OF FINDINGS

The following section discusses a comparison of analytical results obtained to regulations and/or goals as applicable. The results for arsenic were also compared to publicized background values.

Organochlorine Pesticides

The analytical results for the ten soil samples collected did not indicate the presence of OCPs in the locations and depths sampled. Based on this finding and that no OCP storage or mixing areas were identified at the site, Kleinfelder is not recommending additional soil sampling for OCPs in shallow soil at the site.

CAM 17 Metals

The analytical results for the CAM 17 metals were compared to the United States Environmental Protection Agency (EPA) Region IX Preliminary Remediation Goals (PRGs) for residential sites dated October, 2004. Residential PRGs were selected for comparison due to the proposed use of the site. PRGs are contaminant concentrations in environmental media (i.e. soil, air, water), calculated by the U.S. EPA, which can be used as screening tools to evaluate a site for potential human health risks. PRGs are calculated using standard assumptions and are specific for land use conditions (e.g. residential or industrial).

The chemical concentrations calculated by the U.S. EPA typically correspond to a fixed level of risk (usually 10^{-6}, or 1 in 1,000,000 cancer risk, or a non-cancer hazard quotient of 1) for soil, air, and water. The following exposure pathways were accounted for in the PRG calculation for soils assuming residential land use:

- Ingestion
- Inhalation of particulates
- Inhalation of volatiles
- Dermal (skin) absorption

In addition, the results of the laboratory analyses were evaluated against the Total Threshold Limit Concentrations (TTLC) and Soluble Threshold Limit Concentrations (STLC) as expressed in the California Code of Regulations (22CCR§66261.24). The TTLC and STLC values are used to identify the potential of hazardous waste for management and disposal purposes.

With the exception of arsenic concentrations, the concentrations of the metals detected in the samples collected from throughout the site were well below residential PRGs.

Reported arsenic concentrations in the soil samples collected from throughout the site ranged from 3.6 mg/kg (B8-6") to 17 mg/kg (B7-6") with an average of 7.94 mg/kg. The reported concentration of arsenic in the background soil samples BG1-3.5' and BG2-5' were 1.8 and 2.4 mg/kg, respectively. The arsenic concentrations in each of the five samples collected from throughout the site and the two background samples were found to be above the residential PRGs for a one in a million cancer risk of 0.39 mg/kg and the CAL Modified PRG of 0.062 mg/kg. However, exceedences of this particular goal in San Joaquin County are common.

Please note that average concentration of the Kleinfelder data set in near surface soils (B6 through B10) for arsenic is approximately 7.94 mg/kg. This average value falls within the range of natural background concentrations expected based on a study of Air Force bases in California (Hunter et al. 2005). In this study the 95th Percentile Background Concentrations at California Air Force Bases (mg/kg) was 12.7 mg/kg for arsenic. It has also been Kleinfelder's experience that naturally occurring arsenic concentrations will typically range from approximately 1 to 15 mg/kg, and at times may be higher depending upon the specific area. There is one onsite sample (B7) in which the maximum onsite arsenic value of 17 mg/kg appears markedly higher than the remaining data set. This value was more than twice the arsenic concentration of the next highest arsenic value of 8.3 mg/kg (Sample B9) and is just above the upper limit of typical background arsenic values based on Kleinfelder's experience.

The onsite arsenic data (B6 through B10) was also statistically evaluated to determine possible outliers within this data set. The Grubb's test using a 95% confidence level was implemented to detect possible outliers. The Grubb's test is a quantitative technique that detects one outlier at a time in an iterative process. According to the test the maximum arsenic concentration (17 mg/kg) detected at the site, was right at the upper limit range before being considered an outlier. This beginning of the upper outlier value was calculated to be approximately 17.087 mg/kg, which is just beyond the maximum value detected at the site.

The background arsenic values have not been discussed above for two primary reasons. The soil classification/type of the background soil samples was noted to vary with the primary near surface soil samples collected and due to the proximity of shallow subsurface water to the deeper background samples. Differing soil types would be expected to yield varying metal values and shallow subsurface water may interact with metals in soil potentially changing metal values in the soil. Neither of these conditions are desired when comparing background values.

In summary, it is Kleinfelder's opinion that the arsenic values detected at the site are likely within background concentrations even though a single soil sample (B7) with an arsenic values of 17 mg/kg is just above the upper limit for what is usually within background range. That the detected metals, including arsenic represent background levels and not an impact from pesticide application is supported by the lack of the detection of OCPs in any of the ten samples collected from throughout the site. It has been Kleinfelder's experience that regulatory agencies are aware of background

concentrations of arsenic exceeding PRG goals for a cancer risk and that these concentrations would not generally trigger additional sampling or enforcement actions by regulatory enforcement agencies for the site.

None of the reported concentrations of CAM 17 metals were above the TTLC limits or above 10-times the STLC limits (a factor commonly used as an indicator as to whether or not a STLC analysis should be conducted on the sample). TTLC and STLC limits are associated with disposal and transportation requirements.

6.0 CONCLUSIONS AND RECOMMENDATIONS

1. No organochlorine pesticides were detected in any of the ten soil samples collected from throughout the site. Based on these results, it does not appear that shallow soils at the site have been impacted by the normal application of pesticides and that additional sampling for OCPs is not warranted at this time.

2. Kleinfelder has compared the concentrations of the CAM 17 metals in the onsite samples collected to the residential PRGs, TTLC and ten times the STLC regulated levels. With the exception of the residentilal PRGs for arsenic, these goals and limits were not exceeded. It is Kleinfelder's opinion that the arsenic values detected at the site are likely representative of background concentrations. If the client desires a greater level of certainty, additional soil sampling for arsenic would provide a larger data set from which to evaluate if the onsite arsenic values fall within background ranges. Based on the soil sampling results, Kleinfelder does not recommend sampling for other CAM 17 metals.

3. The references to TTLC and STLC levels in this report are for evaluation and management purposes only. If excess soil is generated during construction activities and is planned for relocation or disposal, Kleinfelder recommends sampling and analysis of any stockpiled soil for proper characterization prior to relocation or disposal.

LIMITATIONS

Kleinfelder has prepared this report in accordance with the generally accepted standards of care, which exist in San Joaquin County, California at the time of writing. It should be recognized that definition and evaluation of geologic and chemical subsurface conditions are difficult. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and/or historic conditions applicable to the site. More extensive studies may further reduce the uncertainties associated with this assessment. Kleinfelder should be notified for additional consultation if the client wishes to reduce the uncertainties beyond the level associated with this report. No warranty, expressed or implied, is made.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help understand and manage the level of risk. Since detailed investigation and analysis involves greater expense, our clients participate in determining levels of service which provide adequate information for their purposes at acceptable levels of risk. AG Spanos Companies has reviewed the scope of work and determined that it does not need or want a greater level of service than what was provided.

Regulations and professional standards applicable to Kleinfelder's services are continually evolving. Techniques are, by necessity, often new and relatively untried. Different professionals may reasonably adopt different approaches to similar problems. Therefore, no warranty or guarantee, expressed or implied, will be included in Kleinfelder's scope of service.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder will assume no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials.

Nothing contained in this scope of work should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order.

This document may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this document by any unauthorized party.

CLOSING

If there are any questions, or if we may be of any further assistance, please do not hesitate to contact our office at (209) 948-1345.

Respectfully submitted,

KLEINFELDER WEST, INC.

Francis Bean, P.G.
Project Geologist

Don D'Amico, CAC
Environmental Group Manager

Attachments

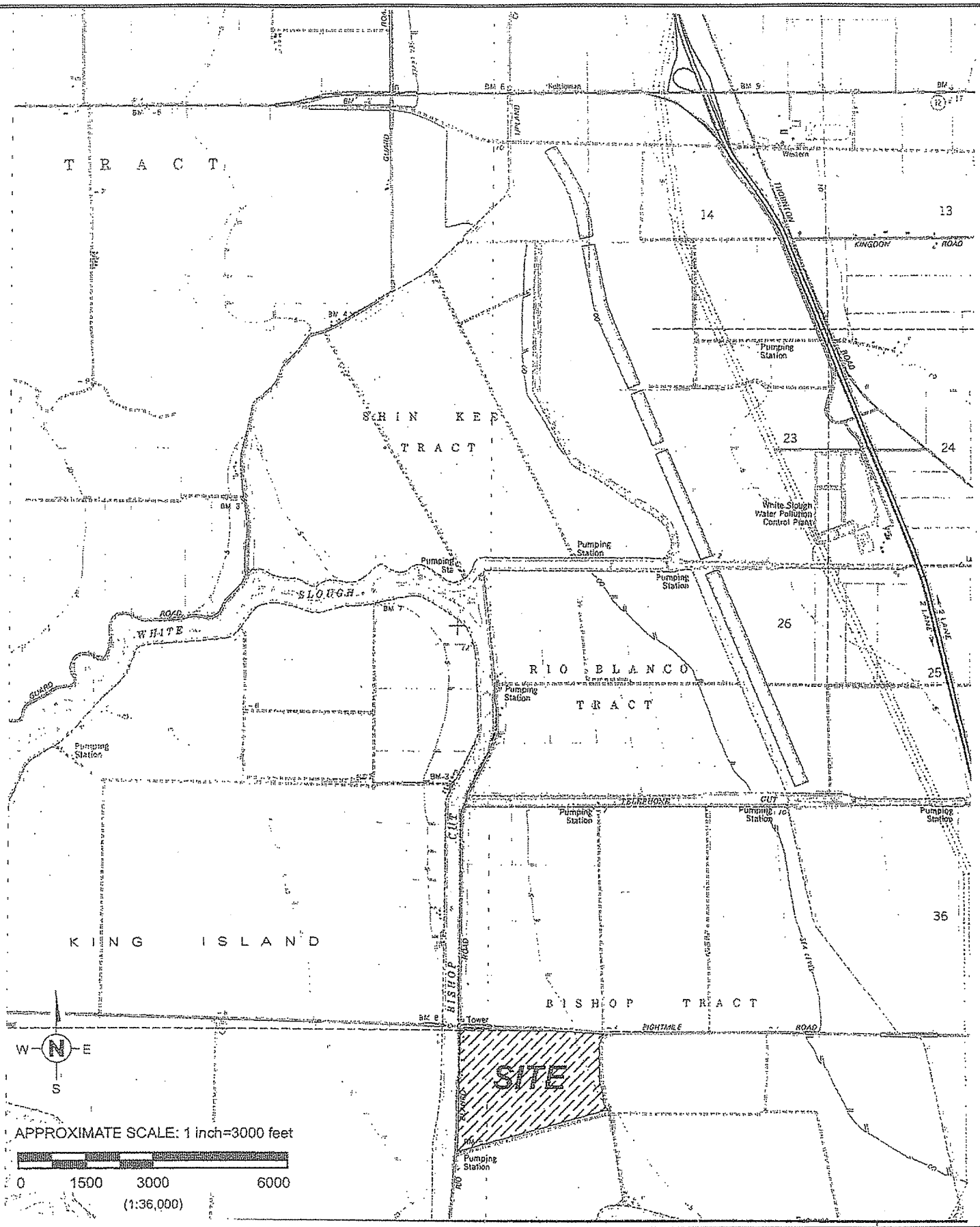
PLATES

1	Site Location Map
2	Soil Sample Location Map

APPENDICES

A	Typical Kleinfelder Field Protocol
B	Laboratory Data Sheets and Chain of Custody Records

PLATES



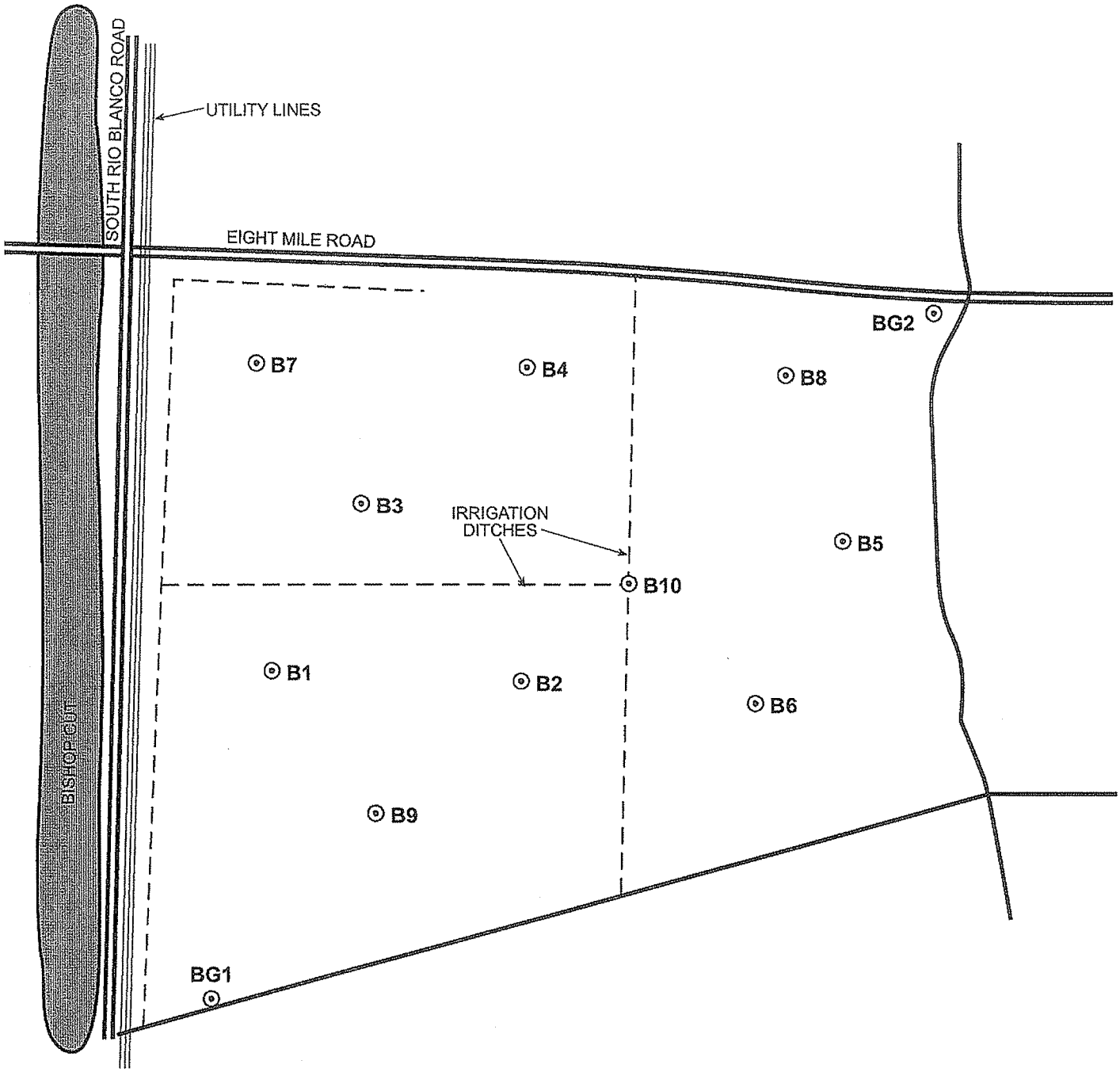
KLEINFELDER

DATE PRODUCED:1/11/2008	DATE REVISED:
PROJ. NO.:35623.P02	FILENAME:STO8D020.FH11

SITE LOCATION MAP
CRYSTAL BAY PROJECT AREA
SE CORNER OF EIGHT MILE ROAD AND SOUTH RIO BLANCO ROAD
STOCKTON, CALIFORNIA

PLATE No.

1



KLEINFELDER

DATE PRODUCED:1/11/2008	DATE REVISED:
PROJ. NO.:35623.P02	FILENAME:STO8D021.FH11

SOIL SAMPLE LOCATION MAP
CRYSTAL BAY PROJECT AREA
SE CORNER OF EIGHT MILE ROAD
AND SOUTH RIO BLANCO ROAD
STOCKTON, CALIFORNIA

PLATE No.

2

APPENDIX A
TYPICAL KLEINFELDER FIELD PROTOCOL

APPENDIX A
TYPICAL KLEINFELDER FIELD PROTOCOL

A-1 FIELD PREPARATION

Before performing work in the field, environmental staff reviews the scope of work, prepares a health and safety plan, coordinates the work to be done with their supervisor, assembles the necessary sample equipment containers, and checks, calibrates and cleans equipment to be used in the field. Underground Service Alert (USA) is also contacted prior to field work with the marked boring locations and the scheduled date of drilling, in addition, a utility locating firm is sometimes employed to check the boring locations.

A-2 DRILLING AND SUBSURFACE SOIL SAMPLING

A-2.1 Drilling

Soil borings are advanced using a truck-mounted drill rig, equipped with hollow stem augers. Subsurface soil samples are collected from the soil borings. While drilling, an experienced environmental geologist classifies the soil, logs the stratigraphy of the borings, and collects soil samples.

A-2.2 Qualitative Field Screening

An organic vapor detector, such as a Photovac TIP, using a photo-ionization detector (PID) or a Foxboro flame-ionization detector (FID), is used to provide a qualitative screening of each soil sample collected from the borings. The organic vapor detector measures ionizable compounds in the air in parts per million by volume (ppmv). Field calibration is performed using a calibrated span gas such as 100 ppm isobutylene. Ambient air is used to set the instrument to zero. The soil contained in the cone of the sampler or in a brass tube is exposed and screened with the organic vapor detector. The vapor reading is noted as the field screening result.

For the protection of the drilling crew, the organic vapor detector also is used to measure the volatile concentrations in the breathing zone prior to and while drilling the borings. Total ionizable hydrocarbon readings in excess of 1 ppmv may necessitate respiratory protection for the affected crewmembers. This requirement is included in the complete field health and safety plan developed for the project prior to the start of fieldwork.

A-2.3 Collection of Soil Samples

Soil samples are collected approximately every 5 to 10 feet for field screening and logging. Samples are collected by advancing the boring to a point immediately above

the desired sampling depth and then driving (vertical borings) or pushing (slant borings) a 2-inch diameter Modified California Split-Spoon Sampler, lined with three 6-inch long brass tubes, into the undisturbed soil. The sampler is then removed from the bottom of the boring. The ends of the bottom (third) tube are covered with Teflon and sealed with tight fitting plastic caps.

Each sample is individually labeled. The label includes Kleinfelder's name, job number, the date and time the sample was collected, the employee number of the individual who performed the sampling, and a unique five-digit sample identification number.

A-2.4 Hydropunch Groundwater Sampling

Hydropunch is a method to collect representative groundwater samples from boreholes without the need to install monitoring wells. This method is usually used as an exploration tool for screening groundwater quality and reducing the number of wells needed at a site.

A boring is drilled to the desired sampling depth, usually to the top of the groundwater surface, using hollow stem augers. The Hydropunch system, consisting of a steel drive point attached to a stainless steel barrel with an internal PVC slotted screen, is driven 2 to 3 feet past the bottom of the boring into the uppermost water bearing zone. The barrel is connected to the surface using clean, 2-inch diameter hollow steel rods. The barrel is then pulled back 1 to 2 feet exposing the internal PVC screen to the soil. Groundwater then enters the barrel through the screen under hydrostatic pressure and is brought to the surface with a clean, Teflon or stainless steel bailer. The samples are immediately labeled and placed in an iced sample container.

Equipment used for Hydropunch sampling is decontaminated prior to use at each sampling location by steam cleaning, or by scrubbing in a trisodium phosphate or non-phosphate detergent wash followed by a distilled water rinse.

A-2.5 Collection of BAT Probe Groundwater Samples

One-time groundwater samples are collected using a BAT Probe, which is an insitu groundwater sampling device. The borings are first advanced to a point immediately above the desired sampling depth where groundwater is encountered. A stainless steel drive tip equipped with a stainless steel filter is lowered into the boring at the end of a 2.5-inch diameter galvanized steel pipe and pushed using the drill rig approximately 6 to 12 inches into the soil/aquifer formation at the bottom of the boring. A sterilized, glass, vacuum sealed sampling ampoule (tube), similar to a standard volatile organics (VOA) vial, is then lowered through the pipe down to the tip with a cable. Between the tip and the sample tube is a double-sided hypodermic needle (syringe), which simultaneously punctures the seals on the stainless steel drive tip and the septum of the glass sample ampoule. The vacuum in the sample ampoule draws groundwater through the tip into the glass ampoule. The glass ampoule is then pulled out of the pipe, disengaging the

syringe. The septum in the glass ampoule and drive tip reseals after the syringe is removed.

To reduce the potential for introducing contaminants into the samples, the drive tip, galvanized pipe, and other equipment used for sample collection are steam cleaned and/or washed with trisodium phosphate or non-phosphate detergent solution and double rinsed with distilled water prior to use. The sample probe and filters are cleaned in TSP solution and rinsed with methyl alcohol followed by a distilled water rinse prior to use. New, factory-sterilized syringe needles, O-rings, septums and sample tubes are used for each sample.

A-2.6 Sample Handling

After labeling, the sample is immediately stored in an iced cooler for transport to Kleinfelder's office sample control or to the analytical laboratory. A Kleinfelder chain-of-custody form accompanies the cooler. The chain-of-custody form includes Kleinfelder's name, address and telephone number, the employee number of the individual who performed the sampling, the sample numbers, the date and time the samples were collected, the number of containers each sample occupies, the sample matrix (soil or water) and the analyses for which the samples are being submitted, if any. The chain-of-custody form is signed by each person who handles the samples, including all Kleinfelder employees and the receiving employee of office sample control or the analytical laboratory when the samples are delivered.

A-2.7 Decontamination of Equipment

To reduce the potential for cross-contamination, augers and associated equipment are steam cleaned prior to drilling each boring. In addition, sampling equipment is cleaned with a trisodium phosphate or non-phosphate detergent wash and rinsed with distilled water prior to collecting each soil sample.

A-2.8 Soil Boring Closure and Cutting Disposal

Soil borings are closed immediately after the collection and logging of soil samples. Closure is accomplished by grouting the boring with a cement/bentonite slurry or as otherwise required.

Drill cuttings will be placed in 55-gallon drums wrapped in plastic or spread around the boring and left on site for disposal by the site owner. If requested, Kleinfelder can coordinate disposal of soil and water after analytical results are available.

A-3 GROUNDWATER WELL INSTALLATION

A-3.1 Monitoring Well Construction

Construction details for shallow groundwater monitoring wells are as follows:

- The well casing are 2- or 4-inch inside diameter, flush threaded joint, schedule 40 PVC pipe.

- The wells are constructed in 8- or 10-inch diameter borings.

- Well screen sections are perforated with 0.010- or 0.020-inch factory-cut slots.

- The wells are generally screened from 5 feet above to 15 feet below first groundwater. The screen length is reduced if an aquitard with a minimum thickness of 5 feet is encountered. If an apparent aquitard is encountered, the well is usually terminated 1 to 2 feet into the aquitard. Effort is made not to screen across two aquifers. If confined aquifer conditions or high vadose zone contamination are encountered, the well screen is usually not set above the depth of first encountered groundwater. Wells are usually not set in areas of suspected significant soil contamination.

- The PVC pipe and end caps are steam cleaned prior to installation.

- The annular space between the screen and the wall of the boring is backfilled with the appropriate clean sand to approximately 2 feet above the top of the perforated sections. Based on soil logs or a sieve test, modifications may be made regarding the size of sand to be used. Installation of the sand may require that the sand be tremmied, using clean water.

- A 3- to 5-foot bentonite plug is placed above the sand pack to provide a seal against surface water infiltration and to reduce the potential for cement grout to infiltrate into the water.

- The remaining annular space is filled to the surface with cement/bentonite grout.

- The wells are secured in an aboveground or underground locking stovepipe. The well heads may be enclosed in a water tight cement utility box set flush to the ground surface when located in a traffic area.

A-3.2 Monitoring Well Development

The wells are developed to reduce the effects of drilling on the formation and to increase the effective hydraulic radius of the wells.

Monitoring wells are generally developed 24 to 48 hours after installation to allow the grout to set. Each well is first sampled with a clear disposable bailer to visually inspect for a hydrocarbon layer or sheen. If no product layer or sheen is observed on the water, the well is developed by surging, pumping or bailing. Surging along the screened interval of the well is performed to draw the sediment from the formation into the filter

pack and the well, and to set the sand pack. Development continues until the discharge runs relatively clear of fines. Approximately 5 to 10 well volumes are generally removed from each monitoring well. Discharge water is stored in 55-gallon drums and left on site for later discharge or disposal by the client, depending on laboratory results. The drums are labeled with the date, well number, and a contact person and phone number.

A-3.3 Equipment Decontamination

To reduce the potential for cross-contamination between wells, developing equipment is washed in a trisodium phosphate or non-phosphate detergent solution and rinsed in distilled water or steam cleaned prior to use in the next monitoring well.

A-3.4 Well Survey

The locations of soil borings and monitoring wells, and the elevation of the top of the PVC casings are usually surveyed and tied into permanent markers, if readily available. Survey accuracy is 0.1 foot for the "x" and "y" coordinates and .01 foot for the "z" coordinate. The depth to static groundwater is measured from a set location at the top of the PVC casing (usually the north rim). The depth of water is then subtracted from the elevation of the top of the well casing to provide a groundwater elevation for each monitoring well location.

A-4 GROUNDWATER MONITORING

A-4.1 Water Level Measurements

Water level measurements are made in the wells prior to purging and sampling the wells. Measurement protocol is as follows:

1. Prior to obtaining water level measurements, the monitoring wells would be opened and allowed to equilibrate for a period of approximately ½ hour.

2. The water level probe is decontaminated in a trisodium phosphate or non-phosphate detergent wash, followed by a distilled water rinse, prior to use in each well.

3. Water level measurements are made using a conductivity-based water-level meter. Depth-to-water is generally measured from a surveyed mark on the north rim of the PVC well casing.

The water level measurements are converted to elevations using the surveyed casing elevations.

A-4.2 Groundwater Sampling

Groundwater samples are collected from the monitoring wells at the site. The sampling protocol for each well is as follows:

1. Down-well equipment (pumps, bailers, etc.) is decontaminated by steam cleaning, or by scrubbing in a trisodium-phosphate or non-phosphate detergent wash followed by a distilled water rinse, prior to use in each well. Bailer cord is replaced prior to use in each well.

2. The depth to groundwater is measured using a conductivity-based water-level meter.

3. The volume of water in gallons standing in the well is calculated by subtracting the depth to groundwater measurement from the depth of the well and multiplying by the appropriate conversion factor (0.16 for 2-inch wells, and 0.65 for 4-inch wells).

4. Three to five well volumes of water are purged from each well using a submersible pump, bladder pump, or Teflon bailer.

5. Physical parameters (pH, electrical conductivity, and temperature) are monitored for stability while purging. The physical parameter measurements are recorded on purge-and-sample logs, along with the time and volume of water purged at each measurement.

6. Samples are collected with a disposable bailer or bladder pump into appropriately prepared bottles provided by the analytical laboratory.

7. Samples for metals analysis are usually filtered in the field at the time of collection.

8. Samples are immediately labeled and placed in an iced sample container. At the end of the day, the samples are delivered to the analytical laboratory under chain-of-custody control.

A-5 Vadose Zone Monitoring

1. Prior to conducting lysimeter sampling, the pressure-vacuum equipment is checked and cleaned. A Soil-Moisture hand pump with a pressure-vacuum gage is used to measure residual and implied pressure-vacuum. Nitrogen gas is used to purge the lysimeter system for sampling. An air pump is available as a back up.

2. Approximately one week to one month prior to conducting the sampling, the residual pressures at the air-line of each lysimeter are measured ad the vacuums reset to manufactured recommended value (usually 50 centibars).

The measurements and applied vacuums are noted on a sampling log form. Kleinfelder has found that resetting the lysimeters vacuums before the sampling yields good sample recovery.

3. The residual pressures are measured just prior to collecting the sample. The water line is then opened and nitrogen gas applied to the air line until either fluid or air is discharged (for dry lysimeters). The sample is contained in a 1 liter unpreserved bottle and the volume recovered is estimated. The fluid is then poured into appropriate preserved or unpreserved bottles of the requested analysis.

4. After the sample is collected, the lysimeter vacuum is reset to the manufacturer's recommended value. The lysimeter is also tested to evaluate potential leaks that may cause vacuum pressure loss.

A-6 Leachate Monitoring

1. The leachate riser or wells are first opened and allowed to equilibrate with the atmosphere.

2. The leachate elevation is then measured from a set location using a conductivity-based water-level meter. The level is generally measured from a surveyed mark on the north rim of the casing.

3. A leachate sample is then collected using a clean, disposable bailer.

4. The sample is labeled and immediately stored in an iced cooler pending transport to the analytical laboratory. The sample is logged on a chain-of-custody.

A-7 Surface Water Monitoring

1. Prior to collecting surface water samples, the depth of water is estimated at a designated location in the surface water body.

2. Surface water samples are collected directly from the stream or surface water using a clean unpreserved plastic bottle, disposable bailer, bailer, coliwasa, Dipstik™, dipper, peristaltic pump, etc., or by directly filling the sample containers. Sampling equipment will either be disposable, dedicated or decontaminated in accordance with the above-defined decontamination protocols. Care is taken not to disturb the stream bottom and introduce sediment in the sample. The fluid is then poured into appropriate preserved or unpreserved bottles for the requested analysis.

3. The sample is labeled and immediately stored in an iced cooler pending transport to the analytical laboratory. The sample is logged on a chain-of-custody.

A-8 TANK REMOVAL SAMPLING

A-8.1 Collection of Soil Samples and Laboratory Analysis

Soil and water samples will be collected during the tank removal operations in accordance with the current Leaking Underground Fuel Tank Field (LUFT) Manual and the Tri-Regional Guidelines issued by the California Regional Water Quality Control Board (RWQCB).

A Kleinfelder, environmental geologist will be on site during the tank removal activities to collect soil samples for qualitative field screening and laboratory analysis. Tank excavation soil samples will be obtained by scraping the sidewalls or excavation bottom at the desired locations with the backhoe bucket. Samples will then be collected from the bucket by packing soil in a clean brass tube with a clean hand trowel. The soil samples may also be collected using a slide hammer lined with a clean brass tube with appropriate extension to reach the desired sampling depth. The collected brass tubes will then be sealed with Teflon sheets and tight fitting plastic caps.

A-8.2 Collection of Water Samples and Laboratory Analysis

If water is encountered in the excavation after the tank is removed, a representative sample will be collected for laboratory analysis. The tank excavation may be purged and allowed to refill before sampling. The water sample will be collected using a clean disposable bailer with new nylon cord. The bailer will be retrieved and the water will be contained in appropriate bottles supplied by the analytical laboratory for the requested analysis.

In accordance with the Tri-Regional Guidelines, one water sample will be collected from the tank excavation. The water sample will be delivered under chain-of-custody procedures to a state certified laboratory.

APPENDIX B
LABORATORY DATA SHEETS AND CHAIN-OF-CUSTODY RECORDS

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

January 10, 2008

CLS Work Order #: CRA0204
COC #:

Francis Bean
Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project Name: Crystal Bay

Enclosed are the results of analyses for samples received by the laboratory on 01/07/08 17:10. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

Kleinfelder (Stockton) 2825 East Myrtle St. Stockton, CA 95205	Project: Crystal Bay Project Number: 35623 Project Manager: Francis Bean	**CLS Work Order #: CRA0204** COC #:

KLEINFELDER

CRA0204 1 of 2

Project No.: 35623 Project Name: Crystal Bay

Samplers: Brian Fing... / 7076

Laboratory: CLS

Instructions/Remarks: Rush 48hr TAT

Date	Time	Sample I.D.	Matrix	[illegible]	17 CAM Metals	Arsenic, Lead	Remarks
1/9/08	1200	204-B1-6"	Soil	X			
	1206	205-B1-18"		HOLD			
	1205	210-B2-6"		X			
	1210	209-B2-18"		HOLD			
	1220	211-B3-6"		X			
	1225	212-B3-18"		HOLD			Please Sample from
	1240	224-B4-6"		X			end of tube
	1245	225-B4-18"		HOLD			marked "X"
	1256	230-B5-6"		X			
	1300	231-B5-18"		HOLD			
	1250	228-B6-6"		X	X		
	1255	229-B6-18"		HOLD			
	1230	217-B7-6"		X	X		
	1235	218-B7-18"		HOLD			
	1250	226-B8-6"		X		X	
	1255	227-B8-18"		HOLD			
	1130	201-B9-6"		X		X	
	1145	203-B9-18"		HOLD			
	1215	214-B10-6"		X		X	
	1216	208-B10-18"		HOLD			

Relinquished by	Date / Time	Received by
Brian Fing...	1/9/08 1400	KA Fridge
KA Fridge	1/10/08 1610	Francis V. Bean
Francis V. Bean	1/10/08 1715	... 1-8 1710

Remarks: Rush 48 hour TAT

Send results to: Attn: Kleinfelder Inc.

KLEINFELDER
2825 EAST MYRTLE STREET
STOCKTON, CA 95205
(209) 948-1345

Fran Bean

CHAIN OF CUSTODY № 5401

Kleinfelder (Stockton) 2825 East Myrtle St. Stockton, CA 95205	Project: Crystal Bay Project Number: 35623 Project Manager: Francis Bean	CLS Work Order #: CRA0204 COC #:

KLEINFELDER CPA0204 2 of 2

Project No.: 35623 — Project Name: Crystal Bay — Lab: CLS

Samplers: Brian Stinger / 7876

Instructions: RUSH → 48 hour TAT

Date	Time	Sample I.D.	Matrix	No. of Containers	Type	Analysis
1/7/08	1150	203-B62-3.5'	Soil	1	Tube	X
↓	1305	203-B62-5'	↓	1	↓	X

Please sample from end of tube marked "X"

Relinquished by: Brian Stinger — 1/7/08 1400 — Received by: RA Fudge

Received for lab: [illegible] 1.7.8

Remarks: Rush 48 hour TAT

Send results to: fbean@kleinfelder.com

KLEINFELDER
2825 EAST MYRTLE STREET
STOCKTON, CA 95205

Fran Bean

1712 CHAIN OF CUSTODY № 5402

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
228-B6-6" (CRA0204-11) Soil Sampled: 01/07/08 12:50 Received: 01/07/08 17:10									
Arsenic	**5.9**	1.0	mg/kg	10	CR00160	01/08/08	01/08/08	EPA 6020	
Selenium	ND	1.0	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	1	CR00161	01/08/08	01/09/08	EPA 6010B	
Barium	**140**	1.0	"	"	"	"	"	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	"	"	
Cobalt	**5.3**	1.0	"	"	"	"	"	"	
Chromium	**21**	1.0	"	"	"	"	"	"	
Copper	**15**	1.0	"	"	"	"	"	"	
Lead	**3.8**	2.5	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**16**	1.0	"	"	"	"	"	"	
Silver	ND	0.50	"	"	"	"	"	"	
Vanadium	**48**	1.0	"	"	"	"	"	"	
Zinc	**30**	1.0	"	"	"	"	"	"	
Mercury	ND	0.10	"	"	CR00159	01/08/08	01/08/08	EPA 7471A	
217-B7-6" (CRA0204-13) Soil Sampled: 01/07/08 12:30 Received: 01/07/08 17:10									
Arsenic	**17**	1.0	mg/kg	10	CR00160	01/08/08	01/08/08	EPA 6020	
Selenium	ND	1.0	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	1	CR00161	01/08/08	01/09/08	EPA 6010B	
Barium	**170**	1.0	"	"	"	"	"	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	"	"	
Cobalt	**5.1**	1.0	"	"	"	"	"	"	
Chromium	**24**	1.0	"	"	"	"	"	"	
Copper	**21**	1.0	"	"	"	"	"	"	
Lead	**6.1**	2.5	"	"	"	"	"	"	
Molybdenum	**1.8**	1.0	"	"	"	"	"	"	
Nickel	**21**	1.0	"	"	"	"	"	"	
Silver	ND	0.50	"	"	"	"	"	"	
Vanadium	**53**	1.0	"	"	"	"	"	"	
Zinc	**25**	1.0	"	"	"	"	"	"	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
217-B7-6" (CRA0204-13) Soil Sampled: 01/07/08 12:30 Received: 01/07/08 17:10									
Mercury	ND	0.10	mg/kg	1	CR00159	01/08/08	01/08/08	EPA 7471A	
203-BG1-3.5' (CRA0204-21) Soil Sampled: 01/07/08 11:50 Received: 01/07/08 17:10									
Arsenic	**1.8**	1.0	mg/kg	10	CR00160	01/08/08	01/08/08	EPA 6020	
Selenium	ND	1.0	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	1	CR00161	01/08/08	01/09/08	EPA 6010B	
Barium	**150**	1.0	"	"	"	"	"	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	"	"	
Cobalt	**8.5**	1.0	"	"	"	"	"	"	
Chromium	**18**	1.0	"	"	"	"	"	"	
Copper	**14**	1.0	"	"	"	"	"	"	
Lead	**3.6**	2.5	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**14**	1.0	"	"	"	"	"	"	
Silver	ND	0.50	"	"	"	"	"	"	
Vanadium	**51**	1.0	"	"	"	"	"	"	
Zinc	**48**	1.0	"	"	"	"	"	"	
Mercury	ND	0.10	"	"	CR00159	01/08/08	01/08/08	EPA 7471A	
232-BG2-5' (CRA0204-22) Soil Sampled: 01/07/08 13:03 Received: 01/07/08 17:10									
Arsenic	**2.4**	1.0	mg/kg	10	CR00160	01/08/08	01/08/08	EPA 6020	
Selenium	ND	1.0	"	"	"	"	"	"	
Thallium	ND	1.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	1	CR00161	01/08/08	01/09/08	EPA 6010B	
Barium	**140**	1.0	"	"	"	"	"	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	"	"	
Cobalt	**8.1**	1.0	"	"	"	"	"	"	
Chromium	**13**	1.0	"	"	"	"	"	"	
Copper	**12**	1.0	"	"	"	"	"	"	
Lead	**3.3**	2.5	"	"	"	"	"	"	
Molybdenum	ND	1.0	"	"	"	"	"	"	
Nickel	**10**	1.0	"	"	"	"	"	"	

Kleinfelder (Stockton)	Project: Crystal Bay	
2825 East Myrtle St.	Project Number: 35623	**CLS Work Order #: CRA0204**
Stockton, CA 95205	Project Manager: Francis Bean	COC #:

CAM 17 Metals

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
232-BG2-5' (CRA0204-22) Soil Sampled: 01/07/08 13:03 Received: 01/07/08 17:10									
Silver	ND	0.50	mg/kg	1	CR00161	01/08/08	01/09/08	EPA 6010B	
Vanadium	44	1.0	"	"	"	"	"	"	
Zinc	48	1.0	"	"	"	"	"	"	
Mercury	ND	0.10	"	"	CR00159	01/08/08	01/08/08	EPA 7471A	

Kleinfelder (Stockton)	Project: Crystal Bay	
2825 East Myrtle St.	Project Number: 35623	**CLS Work Order #: CRA0204**
Stockton, CA 95205	Project Manager: Francis Bean	COC #:

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
226-B8-6" (CRA0204-15) Soil Sampled: 01/07/08 12:50 Received: 01/07/08 17:10									
Arsenic	**3.6**	1.0	mg/kg	10	CR00160	01/08/08	01/08/08	EPA 6020	
Lead	**3.8**	2.5	"	1	CR00161	01/08/08	01/09/08	EPA 6010B	
201-B9-6" (CRA0204-17) Soil Sampled: 01/07/08 11:30 Received: 01/07/08 17:10									
Arsenic	**8.3**	1.0	mg/kg	10	CR00160	01/08/08	01/08/08	EPA 6020	
Lead	**4.6**	2.5	"	1	CR00161	01/08/08	01/09/08	EPA 6010B	
214-B10-6" (CRA0204-19) Soil Sampled: 01/07/08 12:15 Received: 01/07/08 17:10									
Arsenic	**4.9**	1.0	mg/kg	10	CR00160	01/08/08	01/08/08	EPA 6020	
Lead	**3.2**	2.5	"	1	CR00161	01/08/08	01/09/08	EPA 6010B	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
204-B1-6" (CRA0204-01) Soil Sampled: 01/07/08 12:00 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	75	"	"	"	"	"	"	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*133 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*129 %*	*52-141*		"	"	"	"	
210-B2-6" (CRA0204-03) Soil Sampled: 01/07/08 12:05 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
210-B2-6" (CRA0204-03) Soil Sampled: 01/07/08 12:05 Received: 01/07/08 17:10									
Endosulfan I	ND	75	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*137 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*126 %*	*52-141*		"	"	"	"	
211-B3-6" (CRA0204-05) Soil Sampled: 01/07/08 12:20 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	75	"	"	"	"	"	"	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
211-B3-6" (CRA0204-05) Soil Sampled: 01/07/08 12:20 Received: 01/07/08 17:10									
Surrogate: Tetrachloro-meta-xylene		*124 %*		*46-139*	*CR00158*	*01/08/08*	*01/09/08*	*EPA 8081A*	
Surrogate: Decachlorobiphenyl		*117 %*		*52-141*	"	"	"	"	
224-B4-6" (CRA0204-07) Soil Sampled: 01/07/08 12:40 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	75	"	"	"	"	"	"	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*110 %*		*46-139*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*119 %*		*52-141*	"	"	"	"	

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Project Manager: Francis Bean

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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
230-B5-6" (CRA0204-09) Soil Sampled: 01/07/08 12:56 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	75	"	"	"	"	"	"	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*95.5 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*116 %*	*52-141*		"	"	"	"	
228-B6-6" (CRA0204-11) Soil Sampled: 01/07/08 12:50 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
228-B6-6" (CRA0204-11) Soil Sampled: 01/07/08 12:50 Received: 01/07/08 17:10									
Endosulfan I	ND	75	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*109 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*107 %*	*52-141*		"	"	"	"	
217-B7-6" (CRA0204-13) Soil Sampled: 01/07/08 12:30 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	75	"	"	"	"	"	"	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	

Kleinfelder (Stockton)	Project: Crystal Bay	
2825 East Myrtle St.	Project Number: 35623	**CLS Work Order #: CRA0204**
Stockton, CA 95205	Project Manager: Francis Bean	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
217-B7-6" (CRA0204-13) Soil Sampled: 01/07/08 12:30 Received: 01/07/08 17:10									
Surrogate: Tetrachloro-meta-xylene		*102 %*		*46-139*	*CR00158*	*01/08/08*	*01/09/08*	*EPA 8081A*	
Surrogate: Decachlorobiphenyl		*114 %*		*52-141*	"	"	"	"	
226-B8-6" (CRA0204-15) Soil Sampled: 01/07/08 12:50 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00158	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	75	"	"	"	"	"	"	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*90.6 %*		*46-139*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*94.2 %*		*52-141*	"	"	"	"	

Kleinfelder (Stockton)
2825 East Myrtle St.
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Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
201-B9-6" (CRA0204-17) Soil Sampled: 01/07/08 11:30 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00169	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	75	"	"	"	"	"	"	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*108 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*111 %*	*52-141*		"	"	"	"	
214-B10-6" (CRA0204-19) Soil Sampled: 01/07/08 12:15 Received: 01/07/08 17:10									
Aldrin	ND	5.0	µg/kg	5	CR00169	01/08/08	01/09/08	EPA 8081A	
alpha-BHC	ND	10	"	"	"	"	"	"	
beta-BHC	ND	50	"	"	"	"	"	"	
delta-BHC	ND	50	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	50	"	"	"	"	"	"	
Chlordane	ND	100	"	"	"	"	"	"	
4,4'-DDD	ND	75	"	"	"	"	"	"	
4,4'-DDE	ND	75	"	"	"	"	"	"	
4,4'-DDT	ND	75	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
214-B10-6" (CRA0204-19) Soil Sampled: 01/07/08 12:15 Received: 01/07/08 17:10									
Endosulfan I	ND	75	µg/kg	5	CR00169	01/08/08	01/09/08	EPA 8081A	
Endosulfan II	ND	75	"	"	"	"	"	"	
Endosulfan sulfate	ND	75	"	"	"	"	"	"	
Endrin	ND	75	"	"	"	"	"	"	
Endrin aldehyde	ND	75	"	"	"	"	"	"	
Heptachlor	ND	25	"	"	"	"	"	"	
Heptachlor epoxide	ND	10	"	"	"	"	"	"	
Methoxychlor	ND	75	"	"	"	"	"	"	
Mirex	ND	50	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*91.1 %*	*46-139*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*104 %*	*52-141*		"	"	"	"	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
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Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00159 - EPA 7471A										
Blank (CR00159-BLK1)				Prepared & Analyzed: 01/08/08						
Mercury	ND	0.10	mg/kg							
LCS (CR00159-BS1)				Prepared & Analyzed: 01/08/08						
Mercury	0.552	0.10	mg/kg	0.625		88.4	75-125			
LCS Dup (CR00159-BSD1)				Prepared & Analyzed: 01/08/08						
Mercury	0.565	0.10	mg/kg	0.625		90.4	75-125	2.24	25	
Matrix Spike (CR00159-MS1)		**Source: CRA0183-01**		Prepared & Analyzed: 01/08/08						
Mercury	0.636	0.10	mg/kg	0.625	ND	102	75-125			
Matrix Spike Dup (CR00159-MSD1)		**Source: CRA0183-01**		Prepared & Analyzed: 01/08/08						
Mercury	0.660	0.10	mg/kg	0.625	ND	106	75-125	3.66	25	
Batch CR00160 - EPA 3050B										
Blank (CR00160-BLK1)				Prepared & Analyzed: 01/08/08						
Arsenic	ND	0.10	mg/kg							
Selenium	ND	0.10	"							
Thallium	ND	0.10	"							
LCS (CR00160-BS1)				Prepared & Analyzed: 01/08/08						
Arsenic	4.50	0.10	mg/kg	5.00		89.9	75-125			
Selenium	4.15	0.10	"	5.00		83.0	75-125			
Thallium	5.30	0.10	"	5.00		106	75-125			
LCS Dup (CR00160-BSD1)				Prepared & Analyzed: 01/08/08						
Arsenic	4.40	0.10	mg/kg	5.00		88.0	75-125	2.16	25	
Selenium	3.95	0.10	"	5.00		79.0	75-125	5.05	25	
Thallium	5.32	0.10	"	5.00		106	75-125	0.405	25	

Kleinfelder (Stockton)
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CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00160 - EPA 3050B										
Matrix Spike (CR00160-MS1)	**Source: CRA0203-22**			Prepared & Analyzed: 01/08/08						
Arsenic	5.88	1.0	mg/kg	5.00	1.04	96.8	75-125			
Selenium	4.51	1.0	"	5.00	ND	90.2	75-125			
Thallium	5.58	1.0	"	5.00	ND	112	75-125			
Matrix Spike Dup (CR00160-MSD1)	**Source: CRA0203-22**			Prepared & Analyzed: 01/08/08						
Arsenic	5.54	1.0	mg/kg	5.00	1.04	90.1	75-125	5.87	30	
Selenium	4.05	1.0	"	5.00	ND	81.0	75-125	10.7	30	
Thallium	5.31	1.0	"	5.00	ND	106	75-125	4.96	30	
Batch CR00161 - EPA 3050B										
Blank (CR00161-BLK1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Antimony	ND	2.5	mg/kg							
Barium	ND	1.0	"							
Beryllium	ND	0.50	"							
Cadmium	ND	0.50	"							
Cobalt	ND	1.0	"							
Chromium	ND	1.0	"							
Copper	ND	1.0	"							
Lead	ND	2.5	"							
Molybdenum	ND	1.0	"							
Nickel	ND	1.0	"							
Silver	ND	0.50	"							
Vanadium	ND	1.0	"							
Zinc	ND	1.0	"							
LCS (CR00161-BS1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Antimony	24.8	2.5	mg/kg	25.0		99.4	75-125			
Barium	101	1.0	"	100		101	75-125			
Beryllium	2.46	0.50	"	2.50		98.6	75-125			
Cadmium	2.68	0.50	"	2.50		107	75-125			
Cobalt	25.4	1.0	"	25.0		102	75-125			
Chromium	10.2	1.0	"	10.0		102	75-125			

Kleinfelder (Stockton)
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CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00161 - EPA 3050B										
LCS (CR00161-BS1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Copper	12.2	1.0	mg/kg	12.5		98.0	75-125			
Lead	24.6	2.5	"	25.0		98.4	75-125			
Molybdenum	25.5	1.0	"	25.0		102	75-125			
Nickel	24.9	1.0	"	25.0		99.7	75-125			
Silver	2.52	0.50	"	2.50		101	75-125			
Vanadium	24.6	1.0	"	25.0		98.6	75-125			
Zinc	24.7	1.0	"	25.0		98.9	75-125			
LCS Dup (CR00161-BSD1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Antimony	24.0	2.5	mg/kg	25.0		96.2	75-125	3.25	25	
Barium	100	1.0	"	100		100	75-125	0.449	25	
Beryllium	2.39	0.50	"	2.50		95.5	75-125	3.11	25	
Cadmium	2.62	0.50	"	2.50		105	75-125	2.46	25	
Cobalt	24.8	1.0	"	25.0		99.3	75-125	2.49	25	
Chromium	9.94	1.0	"	10.0		99.4	75-125	2.73	25	
Copper	12.5	1.0	"	12.5		100	75-125	2.14	25	
Lead	24.6	2.5	"	25.0		98.6	75-125	0.183	25	
Molybdenum	25.2	1.0	"	25.0		101	75-125	1.28	25	
Nickel	24.2	1.0	"	25.0		96.9	75-125	2.89	25	
Silver	2.44	0.50	"	2.50		97.6	75-125	3.03	25	
Vanadium	24.3	1.0	"	25.0		97.3	75-125	1.31	25	
Zinc	23.9	1.0	"	25.0		95.5	75-125	3.56	25	
Matrix Spike (CR00161-MS1)		Source: CRA0204-22		Prepared: 01/08/08 Analyzed: 01/09/08						
Antimony	8.26	2.5	mg/kg	25.0	ND	33.0	75-125			QM-5
Barium	144	1.0	"	100	137	6.50	75-125			QM-5
Beryllium	2.36	0.50	"	2.50	0.294	82.6	75-125			
Cadmium	2.53	0.50	"	2.50	0.250	91.2	75-125			
Cobalt	25.8	1.0	"	25.0	8.08	70.7	75-125			QM-5
Chromium	14.9	1.0	"	10.0	12.7	22.0	75-125			QM-5
Copper	17.3	1.0	"	12.5	12.4	39.4	75-125			QM-5
Lead	24.3	2.5	"	25.0	3.34	83.9	75-125			

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

CAM 17 Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00161 - EPA 3050B										
Matrix Spike (CR00161-MS1)		**Source: CRA0204-22**		Prepared: 01/08/08		Analyzed: 01/09/08				
Molybdenum	22.7	1.0	mg/kg	25.0	0.360	89.3	75-125			
Nickel	25.0	1.0	"	25.0	10.2	59.3	75-125			QM-5
Silver	2.12	0.50	"	2.50	ND	84.8	75-125			
Vanadium	47.4	1.0	"	25.0	43.7	14.6	75-125			QM-5
Zinc	37.3	1.0	"	25.0	48.1	NR	75-125			QM-5
Matrix Spike Dup (CR00161-MSD1)		**Source: CRA0204-22**		Prepared: 01/08/08		Analyzed: 01/09/08				
Antimony	10.2	2.5	mg/kg	25.0	ND	40.9	75-125	21.3	30	QM-5
Barium	145	1.0	"	100	137	7.50	75-125	0.692	30	QM-5
Beryllium	2.67	0.50	"	2.50	0.294	95.1	75-125	12.4	30	
Cadmium	2.84	0.50	"	2.50	0.250	104	75-125	11.7	30	
Cobalt	28.4	1.0	"	25.0	8.08	81.3	75-125	9.71	30	
Chromium	16.1	1.0	"	10.0	12.7	34.1	75-125	7.86	30	QM-5
Copper	17.2	1.0	"	12.5	12.4	38.2	75-125	0.899	30	QM-5
Lead	25.4	2.5	"	25.0	3.34	88.1	75-125	4.23	30	
Molybdenum	24.7	1.0	"	25.0	0.360	97.3	75-125	8.51	30	
Nickel	27.4	1.0	"	25.0	10.2	69.0	75-125	9.23	30	QM-5
Silver	2.20	0.50	"	2.50	ND	88.0	75-125	3.70	30	
Vanadium	47.8	1.0	"	25.0	43.7	16.5	75-125	0.998	30	QM-5
Zinc	41.7	1.0	"	25.0	48.1	NR	75-125	11.1	30	QM-5

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00160 - EPA 3050B										
Blank (CR00160-BLK1)				Prepared & Analyzed: 01/08/08						
Arsenic	ND	0.10	mg/kg							
LCS (CR00160-BS1)				Prepared & Analyzed: 01/08/08						
Arsenic	4.50	0.10	mg/kg	5.00		89.9	75-125			
LCS Dup (CR00160-BSD1)				Prepared & Analyzed: 01/08/08						
Arsenic	4.40	0.10	mg/kg	5.00		88.0	75-125	2.16	25	
Matrix Spike (CR00160-MS1)		**Source: CRA0203-22**		Prepared & Analyzed: 01/08/08						
Arsenic	5.88	1.0	mg/kg	5.00	1.04	96.8	75-125			
Matrix Spike Dup (CR00160-MSD1)		**Source: CRA0203-22**		Prepared & Analyzed: 01/08/08						
Arsenic	5.54	1.0	mg/kg	5.00	1.04	90.1	75-125	5.87	30	
Batch CR00161 - EPA 3050B										
Blank (CR00161-BLK1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Lead	ND	2.5	mg/kg							
LCS (CR00161-BS1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Lead	24.6	2.5	mg/kg	25.0		98.4	75-125			
LCS Dup (CR00161-BSD1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Lead	24.6	2.5	mg/kg	25.0		98.6	75-125	0.183	25	
Matrix Spike (CR00161-MS1)		**Source: CRA0204-22**		Prepared: 01/08/08 Analyzed: 01/09/08						
Lead	24.3	2.5	mg/kg	25.0	3.34	83.9	75-125			

Kleinfelder (Stockton)	Project: Crystal Bay	
2825 East Myrtle St.	Project Number: 35623	**CLS Work Order #: CRA0204**
Stockton, CA 95205	Project Manager: Francis Bean	COC #:

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00161 - EPA 3050B										
Matrix Spike Dup (CR00161-MSD1)		**Source: CRA0204-22**		Prepared: 01/08/08		Analyzed: 01/09/08				
Lead	25.4	2.5	mg/kg	25.0	3.34	88.1	75-125	4.23	30	

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00158 - LUFT-DHS GCNV										
Blank (CR00158-BLK1)				Prepared & Analyzed: 01/08/08						
Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	2.0	"							
beta-BHC	ND	10	"							
delta-BHC	ND	10	"							
gamma-BHC (Lindane)	ND	10	"							
Chlordane	ND	20	"							
4,4'-DDD	ND	15	"							
4,4'-DDE	ND	15	"							
4,4'-DDT	ND	15	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	15	"							
Endosulfan II	ND	15	"							
Endosulfan sulfate	ND	15	"							
Endrin	ND	15	"							
Endrin aldehyde	ND	15	"							
Heptachlor	ND	5.0	"							
Heptachlor epoxide	ND	2.0	"							
Methoxychlor	ND	15	"							
Mirex	ND	10	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	*9.82*		"	*8.33*		*118*	*46-139*			
Surrogate: Decachlorobiphenyl	*9.60*		"	*8.33*		*115*	*52-141*			
LCS (CR00158-BS1)				Prepared & Analyzed: 01/08/08						
Aldrin	20.6	1.0	µg/kg	16.7		124	47-132			
gamma-BHC (Lindane)	20.6	10	"	16.7		124	56-133			
4,4'-DDT	21.1	15	"	16.7		127	46-137			
Dieldrin	18.7	1.0	"	16.7		112	44-143			
Endrin	19.6	15	"	16.7		118	30-147			
Heptachlor	19.0	5.0	"	16.7		114	33-148			
Surrogate: Tetrachloro-meta-xylene	*11.2*		"	*8.33*		*134*	*46-139*			

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00158 - LUFT-DHS GCNV										
LCS (CR00158-BS1)				Prepared & Analyzed: 01/08/08						
Surrogate: Decachlorobiphenyl	*10.1*		*µg/kg*	*8.33*		*121*	*52-141*			
LCS Dup (CR00158-BSD1)				Prepared & Analyzed: 01/08/08						
Aldrin	20.7	1.0	µg/kg	16.7		124	47-132	0.249	30	
gamma-BHC (Lindane)	20.8	10	"	16.7		125	56-133	0.550	30	
4,4'-DDT	22.4	15	"	16.7		134	46-137	5.67	30	
Dieldrin	18.7	1.0	"	16.7		112	44-143	0.00	30	
Endrin	20.2	15	"	16.7		121	30-147	2.98	30	
Heptachlor	19.2	5.0	"	16.7		115	33-148	0.655	30	
Surrogate: Tetrachloro-meta-xylene	*11.2*		"	*8.33*		*135*	*46-139*			
Surrogate: Decachlorobiphenyl	*10.2*		"	*8.33*		*123*	*52-141*			
Matrix Spike (CR00158-MS1)		**Source: CRA0203-20**		Prepared & Analyzed: 01/08/08						
Aldrin	14.4	5.0	µg/kg	16.7	ND	86.3	47-138			
gamma-BHC (Lindane)	14.2	50	"	16.7	ND	85.1	38-144			
4,4'-DDT	19.3	75	"	16.7	ND	116	41-157			
Dieldrin	13.9	5.0	"	16.7	ND	83.5	46-155			
Endrin	15.7	75	"	16.7	ND	94.0	34-149			
Heptachlor	13.1	25	"	16.7	ND	78.9	36-155			
Surrogate: Tetrachloro-meta-xylene	*20.8*		"	*20.8*		*99.7*	*46-139*			
Surrogate: Decachlorobiphenyl	*24.6*		"	*20.8*		*118*	*52-141*			
Matrix Spike Dup (CR00158-MSD1)		**Source: CRA0203-20**		Prepared & Analyzed: 01/08/08						
Aldrin	15.9	5.0	µg/kg	16.7	ND	95.2	47-138	9.76	35	
gamma-BHC (Lindane)	16.1	50	"	16.7	ND	96.8	38-144	12.8	35	
4,4'-DDT	19.7	75	"	16.7	ND	118	41-157	2.08	35	
Dieldrin	14.8	5.0	"	16.7	ND	88.6	46-155	5.93	35	
Endrin	16.7	75	"	16.7	ND	100	34-149	6.11	35	
Heptachlor	14.6	25	"	16.7	ND	87.3	36-155	10.2	35	
Surrogate: Tetrachloro-meta-xylene	*24.0*		"	*20.8*		*115*	*46-139*			
Surrogate: Decachlorobiphenyl	*25.1*		"	*20.8*		*120*	*52-141*			

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00169 - LUFT-DHS GCNV										
Blank (CR00169-BLK1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	2.0	"							
beta-BHC	ND	10	"							
delta-BHC	ND	10	"							
gamma-BHC (Lindane)	ND	10	"							
Chlordane	ND	20	"							
4,4'-DDD	ND	15	"							
4,4'-DDE	ND	15	"							
4,4'-DDT	ND	15	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	15	"							
Endosulfan II	ND	15	"							
Endosulfan sulfate	ND	15	"							
Endrin	ND	15	"							
Endrin aldehyde	ND	15	"							
Heptachlor	ND	5.0	"							
Heptachlor epoxide	ND	2.0	"							
Methoxychlor	ND	15	"							
Mirex	ND	10	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	*7.93*		"	*8.33*		*95.2*	*46-139*			
Surrogate: Decachlorobiphenyl	*7.83*		"	*8.33*		*93.9*	*52-141*			
LCS (CR00169-BS1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Aldrin	17.8	1.0	µg/kg	16.7		107	47-132			
gamma-BHC (Lindane)	17.4	10	"	16.7		105	56-133			
4,4'-DDT	16.9	15	"	16.7		101	46-137			
Dieldrin	16.7	1.0	"	16.7		100	44-143			
Endrin	17.4	15	"	16.7		104	30-147			
Heptachlor	16.7	5.0	"	16.7		100	33-148			
Surrogate: Tetrachloro-meta-xylene	*9.35*		"	*8.33*		*112*	*46-139*			

Kleinfelder (Stockton)
2825 East Myrtle St.
Stockton, CA 95205

Project: Crystal Bay
Project Number: 35623
Project Manager: Francis Bean

CLS Work Order #: CRA0204
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CR00169 - LUFT-DHS GCNV										
LCS (CR00169-BS1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Surrogate: Decachlorobiphenyl	*9.20*		*µg/kg*	*8.33*		*110*	*52-141*			
LCS Dup (CR00169-BSD1)				Prepared: 01/08/08 Analyzed: 01/09/08						
Aldrin	17.1	1.0	µg/kg	16.7		103	47-132	3.85	30	
gamma-BHC (Lindane)	17.0	10	"	16.7		102	56-133	2.45	30	
4,4'-DDT	15.8	15	"	16.7		94.6	46-137	6.99	30	
Dieldrin	15.7	1.0	"	16.7		94.1	44-143	6.23	30	
Endrin	16.3	15	"	16.7		97.7	30-147	6.61	30	
Heptachlor	16.0	5.0	"	16.7		95.7	33-148	4.63	30	
Surrogate: Tetrachloro-meta-xylene	*9.32*		*"*	*8.33*		*112*	*46-139*			
Surrogate: Decachlorobiphenyl	*8.63*		*"*	*8.33*		*104*	*52-141*			
Matrix Spike (CR00169-MS1)		**Source: CRA0201-17**		Prepared: 01/08/08 Analyzed: 01/09/08						
Aldrin	39.3	5.0	µg/kg	16.7	ND	236	47-138			QM-5
gamma-BHC (Lindane)	30.9	50	"	16.7	ND	185	38-144			QM-5
4,4'-DDT	114	75	"	16.7	77.3	218	41-157			QM-5
Dieldrin	23.6	5.0	"	16.7	ND	142	46-155			
Endrin	21.7	75	"	16.7	ND	130	34-149			
Heptachlor	17.4	25	"	16.7	ND	104	36-155			
Surrogate: Tetrachloro-meta-xylene	*21.5*		*"*	*20.8*		*103*	*46-139*			
Surrogate: Decachlorobiphenyl	*24.6*		*"*	*20.8*		*118*	*52-141*			
Matrix Spike Dup (CR00169-MSD1)		**Source: CRA0201-17**		Prepared: 01/08/08 Analyzed: 01/09/08						
Aldrin	29.9	5.0	µg/kg	16.7	ND	180	47-138	27.0	35	QM-5
gamma-BHC (Lindane)	23.2	50	"	16.7	ND	139	38-144	28.5	35	
4,4'-DDT	88.8	75	"	16.7	77.3	68.9	41-157	24.6	35	QM-5
Dieldrin	17.0	5.0	"	16.7	ND	102	46-155	32.9	35	
Endrin	14.4	75	"	16.7	ND	86.4	34-149	40.6	35	QR-2
Heptachlor	13.4	25	"	16.7	ND	80.4	36-155	25.9	35	
Surrogate: Tetrachloro-meta-xylene	*16.0*		*"*	*20.8*		*77.0*	*46-139*			
Surrogate: Decachlorobiphenyl	*15.9*		*"*	*20.8*		*76.1*	*52-141*			

Kleinfelder (Stockton)	Project: Crystal Bay	
2825 East Myrtle St.	Project Number: 35623	**CLS Work Order #: CRA0204**
Stockton, CA 95205	Project Manager: Francis Bean	COC #:

Notes and Definitions

QR-2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-5	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

ATTACHMENT 3

CONSTRUCTION EMISSION MODEL OUTPUT

3/15/2008 12:43:04 PM

Urbemis 2007 Version 9.2.2

Summary Report for Annual Emissions (Tons/Year)

File Name:

Project Name: 2011 Crystal Bay Construction

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
011 TOTALS (tons/year unmitigated)	5.20	4.23	6.68	0.01	9.65	0.26	9.91	2.02	0.23	2.25	880.26

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.64	1.24	26.35	0.08	4.02	3.87	1,649.73

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.46	10.37	64.14	0.05	4.36	1.05	5,136.93

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	11.10	11.61	90.49	0.13	8.38	4.92	6,786.66

3/15/2008 12:52:48 PM

Urbemis 2007 Version 9.2.2

Summary Report for Annual Emissions (Tons/Year)

File Name:

Project Name: 2013 Crystal Bay Construction

Project Location: San Joaquin County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
013 TOTALS (tons/year unmitigated)	6.03	3.88	6.95	0.01	8.98	0.22	9.20	1.88	0.20	2.08	1,039.54

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	7.01	1.56	32.97	0.10	5.03	4.84	2,064.66

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.49	9.03	65.03	0.06	5.35	1.22	6,155.64

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	12.50	10.59	98.00	0.16	10.38	6.06	8,220.30

3/15/2008 12:58:13 PM

Urbemis 2007 Version 9.2.2

Summary Report for Annual Emissions (Tons/Year)

File Name:

Project Name: 2014 Crystal Bay

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
014 TOTALS (tons/year unmitigated)	2.93	2.30	3.64	0.00	2.04	0.13	2.17	0.43	0.12	0.55	600.03

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.46	0.64	5.62	0.02	0.86	0.82	835.68

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.51	7.64	64.71	0.04	3.65	0.83	4,076.93

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	8.97	8.28	70.33	0.06	4.51	1.65	4,912.61

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Urbemis 2007 Version 9.2.2

Summary Report for Annual Emissions (Tons/Year)

File Name:

Project Name: Crystal Bay Year 2010

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
009 TOTALS (tons/year unmitigated)	0.27	1.85	0.99	0.00	8.53	0.11	8.64	1.78	0.10	1.88	162.95
010 TOTALS (tons/year unmitigated)	4.90	2.77	5.82	0.00	0.02	0.18	0.20	0.01	0.16	0.17	670.36

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.64	1.24	26.35	0.08	4.02	3.87	1,649.73

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.95	11.40	70.06	0.05	4.38	1.07	5,138.33

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	11.59	12.64	96.41	0.13	8.40	4.94	6,788.06

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Summary Report for Annual Emissions (Tons/Year)

File Name:

Project Name: 2011 Crystal Bay Construction

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
011 TOTALS (tons/year unmitigated)	5.20	4.23	6.68	0.01	9.65	0.26	9.91	2.02	0.23	2.25	880.26

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.64	1.24	26.35	0.08	4.02	3.87	1,649.73

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.46	10.37	64.14	0.05	4.36	1.05	5,136.93

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	11.10	11.61	90.49	0.13	8.38	4.92	6,786.66