FINAL
SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

FOR THE
INLAND EMPIRE UTILITIES AGENCY
PEACE II PROJECT

Prepared for:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, California 91708

Prepared by:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405

September 25, 2010

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COMMENT LETTERS / RESPONSES TO COMMENTS TO DRAFT SEIR

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MEMORANDUM

September 25, 2010

From: Tom Dodson

To: Thomas Love, General Manager

Subj: Completion of the Final Environmental Impact Report for the Peace II Agreement Program Environmental Impact Report (SCH #2000041047)

The Inland Empire Utilities Agency (IEUA or Agency) distributed the Peace II Agreement Subsequent Program Environmental Impact Report (SDEIR) for pubic review with the review starting on May 10, 2010 and ending on June 23, 2010. The Agency received seven comment letters on this project and these letters are attached along with responses to each of the comments raised. The contents of a final EIR are defined in Section 15132 of the State California Environmental Quality Act (CEQA) Guidelines and include the following requirements: the Draft EIR; comments and recommendations received on the Draft; a list of parties commenting of the Draft EIR; responses to comments by the CEQA Lead Agency (IEUA); a mitigation monitoring and reporting program; a set of facts, findings and statement of overriding considerations (SOOC, where required); and any other information added by the Lead Agency as part of its decision-making process for a project. Because this SDEIR identified potential significant air quality impacts, a SOOC will be required as part of the decision-making package before the Final SDEIR can be certified. This memorandum and the attached responses to comments contained herein constitute a portion of the Final SDEIR for the Peace II Agreement Program.

The following agencies and parties submitted written comments, which are addressed in the attached responses to comments attachment.

1. California Department of Toxic Substances Control, June 17, 2010 Letter
2. San Bernardino County Public Works Department, Flood Control District
3. Chino Basin Desalter Authority
4. Orange County Water District
5. California Department of Fish and Game
6. City of Chino
7. Governor's Office of Planning and Research, State Clearinghouse and Planning Unit
8. California Department of Toxic Substances Control, June 24, 2010 Letter

This memorandum, combined with the Draft SDEIR, the above list of commentors, the attached comment letters and responses, the Mitigation Monitoring and Reporting Program, and the "Facts, Findings and Statement of Overriding Considerations (bound separately) and other staff materials in the final administrative record constitute the Final SDEIR for the Peace II Agreement Program for the Chino Basin.

After review and response to all of the comments, the Final SDEIR identifies the same potential significant adverse impacts as were forecast in the Draft SDEIR. After taking into consideration the comments submitted by the above parties, the data and analysis continue to indicate that a single significant impact to the environment, cumulative air quality impacts, may result from implementing the proposed project. The data in the Final SDEIR support a finding that all other potential adverse impacts are either less than significant without mitigation, or are less than significant with implementation of the mitigation measures as modified in response to comments. This finding is consistent with the identified in the Draft SDEIR. No recirculation of the Draft SDEIR will be necessary. The Final SDEIR package is now ready for consideration and certification by the Inland Empire Utilities Agency Board of Directors.

Do not hesitate to give me a call if you have any questions regarding the enclosed material.

Tom Dodson

Tom Dodson
Attachments

Department of Toxic Substances Control

Maziar Movassaghi
Acting Director
5796 Corporate Avenue
Cypress, California 90630

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

June 17, 2010

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STATE CLEARING HOUSE

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Mr. Ryan Shaw
Inland Empire Utilities Agency
6075 Kimball Avenue
P.O. Box 9020
Chino, California 91709

NOTICE OF COMPLETION & ENVIRONMENTAL IMPACT REPORT (EIR) FOR PEACE II PROJECT (SCH# 2000041047)

Dear Mr. Shaw:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Availability of the Environmental Impact Report for the above-mentioned project. The following project description is stated in your document: "The proposed project has two main features: the expansion of the desalter program such that the groundwater pumping for the desalters will reach 40,000 afy and that the pumping will occur in amounts and at locations (southwestern Chino Basin) that contribute to the achievement of hydraulic control; and the strategic reduction in groundwater storage (Re-Operation) by an additional 400,000 acre-feet (cumulative total overdraft of 600,000 through 2030) that, along with the expanded desalter program, substantially achieves hydraulic control for the Chino Groundwater Basin."

Based on the review of the submitted document DTSC has the following comments:

1) The EIR should evaluate whether conditions within the project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies: 1-1

   - National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
   - Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).

RESPONSES TO COMMENTS
LETTER #1
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

1-1 The Peace II Project does not include specific projects for implementation. It is a program environmental document that focuses on the continued implementation of a program to manage water resources within the Chino Basin, the Optimum Basin Management Program. Therefore, no site specific evaluations for contamination were conducted. However, as part of the program documentation, the known regional contaminated plumes were identified and mitigation measures were established that require site specific examinations for future projects and field investigations. The measures identified in the project Initial Study that apply include VII-1 through VII-11.

- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- GeoTracker: A List that is maintained by Regional Water Quality Control Boards.
- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

1-1 cont.

2) The EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.

1-2

3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the EIR.

1-3

4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

1-4

1-2 Please refer to response to comment 1-1. After conducting a Phase 1 investigation for future site specific projects, further investigations, including involvement of government agencies, will be carried out if appropriate.

1-3 If contamination is encountered when future Peace II project are considered, a Workplan would be developed if necessary. Any sampling, analysis and findings would be coordinated with the appropriate agency and in accordance with an approved Workplan.

1-4 If any structures or other facilities are demolished, appropriate investigations into the potential for asbestos, lead or other typical contaminated building materials will be evaluated, and if present, such materials will be properly managed.

1-5 5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.

1-6 6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.

1-7 7) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA.

1-8 8) If the subject property was previously used for agriculture, or if weed abatement occurred, onsite soils could contain pesticide or herbicide residues. Proper investigation and remedial action may be necessary to ensure the site does not pose a risk to the future residents.

1-9 9) DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489.

1-10 10) For future CEQA documents, please provide the name and email address of the person to whom comments should be sent.

1-5 If any contaminated soil material (discoloration or odor) is encountered during construction it will be sampled and if contamination exists, it will be properly treated and/or disposed of in accordance with existing regulations, including observance of Land Disposal Regulations. For areas requiring import of soil, it will be verified not to be contaminated.

1-6 Your comment is noted and the information will be provided to the Agency prior to making a final decision on the project. If any contamination is encountered at the project site, a determination will be made regarding any actions required to protect health of any adjacent sensitive receptors. If necessary, an appropriate government agency will be contacted to participate in the management actions to control exposure from any accidentally exposed contamination. It is impossible to pre-determine whether any contamination may be encountered or what appropriate remedial measures should be implemented at any specific location. If contamination is encountered at the project site, the general procedures outlined above will be implemented and specific measures to properly carry out the remediation will be implemented by the Company.

1-7 Based on the treatment required for water facilities, hazardous materials may be generated, but all procedures for handling and disposing of any such material will be implemented in accordance with the referenced regulations.

1-8 If agricultural sites are used for future Peace II facilities, appropriate sampling will be conducted in accordance with Phase I or II investigations and the data will be utilized to manage any grading activities or disposal of cut material.

1-9 Your comment is noted and the information will be provided to the Agency prior to making a final decision on the project. If oversight is required, the local CUP and DTSC will be notified.

1-10 The information requested will be provided if and when Tier 2 documents are prepared as a follow-up to the Program EIR.

If you have any questions regarding this letter, please contact me at aelsami@dtsc.ca.gov, or by phone at (714) 484-5472.

Sincerely,

Al Shami
Project Manager
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
state.clearinghouse@opr.ca.gov.

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
Sacramento, California 95812
ADelacr1@dtsc.ca.gov

CEQA#2924

COMMENT LETTER #2

INTEROFFICE MEMO

DATE: June 21, 2009

PHONE: 78213

FROM: MIKE FOX, P.E., Chief
Water Resources Division

MAIL CODE: 0835

Final Draft

TO: Naresh P. VARMA, P.E. Chief
Environmental Management Division

File: 1-000/1.00; 2-000/1.00; 3-000/1.00
(CEQA) -4.01

SUBJECT: **ZONES 3,2, and 3 GENERAL / YARDS 1,3,5E – DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT (DSEIR) FOR THE CHINO GROUNDWATER BASIN PEACE II AGREEMENT-SAN ANTONIO CREEK SYSTEM; WEST CUCAMONGA CREEK SYSTEM; CUCAMONGA CREEK SYSTEM; ALTA LOMA SYSTEM; DEER CREEK SYSTEM; DAY CREEK SYSTEM; ETIWANDA CREEK SYSTEM; SAN SEVAINE CREEK SYSTEM; ONTARIO-CHINO SYSTEMS; FONTANA-RIALTO DRAINAGE**

Reference is made to your June 10, 2010, Interoffice Memo, together with accompanying documents, requesting our review and recommendations for the subject Draft DSEIR for the Chino groundwater Basin Peace II Agreement. The site covers the Chino Ground Water Basin which may affect the above mentioned Flood Control District facilities.

Our comments are as follows:

2-1 1. In general, it appears that the draft has addressed concerns of the Flood Control District. However, the flood Control District's recommendations are most often made for specific conditions. Consequently, the recommendations made here are general in nature until such time as more detailed plans become available.

2-2 2. Prior to any activity on Flood Control District right-of-way, a permit shall be obtained from the District's Flood Control Division, Permit Section. Improvements may be required which cannot be determined at this time.

2-3 3. Other Federal or State approvals may also be required. Information regarding this can be obtained from the Flood Control District's Operations Division, Permit Section.

2-4 4. We recommend that the local jurisdictions enforce the most current FEMA regulations for development within floodplains and/or Regulatory Floodways.

If you have any questions, or if you need additional information, please call Mary Lou Merrifield at 909 387 8213.

MJF:MLM:DB ID 561320

6/23/10 Verbal ok per MJF

RESPONSES TO COMMENTS
LETTER #2
SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS, FLOOD CONTROL DISTRICT

2-1 Your comment is noted and the information will be provided to the Agency prior to making a final decision on the project.

2-2 Prior to any activities on County Flood Control District right-of-way, the District will be contacted and permit applications will be submitted for processing and permits acquired for the proposed activities.

2-3 Where other federal or state approvals may be required, the agency implementing the project will be acquire such approvals and coordinate them with the Operations Division Permit Section.

2-4 The Subsequent Program EIR includes all of the FEMA panels for the whole project area and all FEMA regulations will be observed in accordance with the type of project that will be implemented. For example, many pipelines may cross stream channels and not pose a conflict with flood control or flood hazard issues. Regardless, FEMA regulations and respect for flood hazard areas are required through the mitigation measures outlined in Section VIII of the Program EIR.

Chino Basin Desalter Authority

June 22, 2010

Mr. Ryan Shaw
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

SUBJECT: Comments on the Draft Subsequent Environmental Impact Report (DSEIR) for the PEACE II Project (SCH# 2000041047)

Dear Mr. Shaw:

The Chino Basin Desalter Authority (CDA) has reviewed the PEACE II Project Draft Subsequent Environmental Impact Report (DSEIR), and appreciates the opportunity to provide its response to this important document. As you know, CDA is responsible for the Chino I and Chino II desalters, is collaborating with the Chino Basin Watermaster and CDA members on continued desalter expansion consistent with the Optimum Basin Management Plan (OBMP), and is currently pursuing various desalter improvements
3-1 including the Chino Creek Wellfields noted in the PEACE II DSEIR. As such, the CDA's comments are primarily focused on aspects of the PEACE II DSEIR related to existing or potential future CDA facilities and operations.

Given the timing of the DSEIR public comment period, closing before the next CDA Board of Directors meeting on July 1, please be advised that the CDA may submit additional comments on the PEACE II DSEIR after consultation with the CDA Board. To the extent possible, any additional comments will be provided to IEUA prior to the close of public review.

The following DSEIR comments are based on CDA's review of the DSEIR, and our understanding of the issues based on several meetings and conference calls with IEUA staff.

Primary Concerns

1) For all mitigation measures, particularly those dealing with desalter operations, please clarify the responsible party for mitigation implementation, monitoring, and financing of associated facilities, monitoring systems, and potential remedial
3-2 mitigation where noted. This response should address the PEACE II EIR mitigation in the context of the "Desalter Expansion Project: Principles for Completion", recently adopted by the Chino Basin Watermaster. The response should also

RESPONSES TO COMMENTS
LETTER #3
CHINO BASIN DESALTER AUTHORITY

One of the questions raised in the following comments is to define the agency or party responsible for implementing mitigation measures. To address this issue, IEUA has generally identified those mitigation measures as "local" or "regional." Measures identified as being local are to be implemented by the "stakeholder" implementing a specific project. Measures that are to be implemented by regional authorities, such as Watermaster or IEUA, are identified as "regional." The following definitions apply.

Stakeholder refers to all agencies or parties (including Watermaster, CDA and IEUA) that are implementing specific projects or taking specific actions in direct support of the Optimum Basin Management Program and the Peace II Agreement Program.

Regional mitigation refers to mitigation measures that are implemented by regional agencies to address regional issues. Such measures can be implemented by agencies with regional authority (Watermaster or IEUA) or when multiple stakeholders carry out a future action that requires mitigation to prevent a significant adverse environmental impact.

The Mitigation Monitoring and Reporting Program (MMRP) identifies whether a measure is a regional or local responsibility, and in some cases the responsibility of both the local and regional agency.

3-1 Your comment is noted and the information will be provided to the Agency prior to making a final decision on the project. Based on our previous discussion with the Chino Basin Desalter Authority (CDA) staff, IEUA will accommodate any additional comments as the objective in finalizing this SDEIR is to ensure that all the information necessary is provided to the Agency decision-makers and the Chino Basin stakeholders through this environmental review process.

3-2 Please refer to the Mitigation Monitoring and Reporting Program (MMRP) which addresses the specific issues raised in this comment. At a more general level, the party or agency implementing a project is the entity that is responsible for ensuring mitigation is implemented in accordance with the SDEIR requirements. Based on meetings and discussions between IEUA, Watermaster and CDA prior to and since closure of the comment period for the SDEIR, the CDA has expressed concern over funding of some of the mitigation measures contained in the SDEIR. From the CEQA perspective, the method of funding the mitigation is not the prime concern; the issue is whether the mitigation is required to be implemented to reduce an impact or control it to a less than significant impact level.

However, in the referenced discussions, the Watermaster has indicated that certain Peace II Agreement program expenses should be borne by a broader subset of stakeholders, i.e., a collective or global approach to responsible implementation of mitigation. Another way of distinguishing the responsible party for mitigation is to identify those measures that are a "local" responsibility versus a "regional" responsibility. An example of regional mitigation responsibility would be groundwater extractions from the wells designed to achieve hydraulic control at the Chino Creek Well Field and associated regional physical impacts. This can be compared to the local mitigation responsibility associated with a local drawdown cone caused by an individual well elsewhere in the Chino Basin. Watermaster has made a commitment to provide support

to implement mitigation associated with actions considered to be a regional responsibility. The MMRP has been prepared by clarifying which measures have "regional" or "local" responsibility. However, note that certain measures have both "regional" and "local" mitigation effects.

Regardless of how the responsibility for funding is assigned or established, specific mitigation measures must be implemented in accordance with the schedule outlined in the MMRP. It is still essential that the measure(s) be implemented when an actual impact occurs to ensure that significant adverse environmental impacts do not occur, or are reduced to the lowest feasible/achievable level. The party carrying out the action or project may share implementation responsibility with others (IEUA, Watermaster or other Chino Basin stakeholder) but it is the party implementing the project that must ensure require mitigation measures are implemented.

3-2 cont. consider all "contributors" to mitigation within the context of PEACE II, including Watermaster, CDA, individual member agencies and non-CDA members of the Watermaster Appropriative Pool.

3-3 2) The current groundwater model in the DSEIR assumes pumping in the Chino Creek Well Field ("CCWF") solely from the shallow aquifer. In contrast, the Preliminary Design Report, on page 2-9, states "In order to achieve hydraulic control the CCWF wells will have to draw *primarily* (emphasis added) from layer 1 even though this will likely adversely affect the well water quality". Since the DSEIR only models the effects of pumping from the shallow aquifer, the potential impacts of pumping from the deep aquifer have not been evaluated by the DSEIR. The CDA requests that an additional groundwater level model be prepared that anticipates the CCWF pumping from the lower aquifer and that this model, and identified impacts, be incorporated into the DSEIR.

3-4 3) For all mitigation measures, specify whether the impact being mitigated is a result of operation of the desalters or other activities. Similarly, please distinguish between mitigation measures relating to impacts caused by activities aimed to achieve hydraulic control, on one hand, and reoperation, on the other hand.

4) The following comments pertain to the DSEIR's mitigation measures:

a) **Mitigation Measure 4.2-1 to 4.2-22**

3-5 a. CDA requests that the Final EIR clarify which of these mitigation measures are currently required by local, state or federal agencies, which measures are required in order to reduce potentially significant impacts, and which measures are suggested as potential additional measures to be implemented where feasible.

3-6 b. As noted below, CDA requests that, where possible, mitigation that exceeds current regulatory requirements be framed in a "menu approach" giving future PEACE II facility agencies the flexibility to implement measures that are feasible, practical, and would achieve meaningful environmental benefit in comparison to the cost or other considerations.

3-7 c. Please clarify the relationship between PEACE II mitigation and conformity with the SIP and Clean Air Act, and how future projects would be evaluated in terms of PEACE II mitigation.

3-8 d. Please clarify whether or not the DSEIR's air quality impact conclusions considered the potential direct and indirect energy savings associated with use of recycled water and reduced dependence on imported water (due to allowing use of recycled water, and considering the additional water provided through desalter expansions which could otherwise require more energy intensive imported water).

3-3 The CDA is correct in its observation that the groundwater modeling work used to evaluate the Peace II Alternative assumed that the new Chino Creek Well Field (CCWF) would be constructed to pump groundwater solely from the shallow groundwater system. Watermaster was asked numerous times to comment on the PDR as it was developed, and each time Watermaster opined on the CDA well designs, the CDA indicated that it intended to perforate the CCWF test wells below the shallow zone. Watermaster's concern is that depressurization of the lower aquifers could result in land subsidence. The OBMP implementation plan (Peace Agreement, Exhibit B, page 26) states "The occurrence of subsidence in Management Zone 1 (MZ1) is not acceptable and should be reduced to tolerable levels or abated. The OBMP calls for a management plan to reduce subsidence or abate subsidence and fissuring problems to the extent that it may be caused by production in MZ1." Watermaster cannot develop a groundwater management plan that conflicts with the OBMP and the Peace Agreement. Based on the most recent discussion with CDA representatives, the proposed new wells in the CCWF will be screened to extract groundwater from the shallow groundwater system, which is consistent with the modeling.

3-4 Please refer to the MMRP. In accordance with this request, the impact being mitigated is identified in the MMRP text. As can be seen in the text, many aspects of the Peace II Agreement Program, such as pipeline installation in support of a variety of projects, are covered by many mitigation measures, whereas certain mitigation measures apply only to a specific activity, such as hydraulic control.

3-5 A discussion of the source of or basis for each mitigation measure or group of measures has been added to text of the Final SDEIR. Attachment 1 to these responses to comments provides copies of the text modifications for each of the mitigation measures, including those contained in Appendix 8-1 of the Draft SDEIR, which contains the Initial Study compiled for the Peace II Agreement Program.

3-6 IEUA has concluded that mitigation cannot be feasibly framed in a menu approach within a program EIR. The mitigation measures contained in the SDEIR do not all apply to every Peace II Agreement program second-tier project that will be implemented in the future. Because of this differential applicability of mitigation measures, it is very difficult to assign measures in some ranking method. The reason for this is that the mitigation measures, such as those identified for air pollutant emissions, represent a collective set of measures required to address cumulative air quality impacts of Peace II Agreement Program facilities at full buildout. As each individual second-tier project is implemented in the future, the second-tier environmental review process would be required to identify the cumulative context of such project and then select the mitigation measures required to control emissions. If cumulative Peace II project emissions at the time of the project already exceed SCAQMD thresholds, then all construction and/or operational mitigation measures must be implemented, if feasible. If cumulative Peace II project emissions do not exceed SCAQMD thresholds, then only those measures required to control construction emissions below SCAQMD or federal conformity thresholds would be required and these would be selected based on the project specific air quality study. IEUA and Watermaster will create an accounting record of Peace II projects on an annual basis so that cumulative Peace II project impacts can be monitored and used in the next year's second tier project evaluations.

3-7 Evaluation of conformity is required solely for projects seeking federal funding or funds from the State Revolving Fund. Federal funds cannot be granted or made available unless conformity can be demonstrated, either because a project has *de minimis emissions or mitigation measures control emissions to below a level that violates conformity*.. Determination of conformity is based on the activity meeting the requirements of State Implementation Plan, which incorporates the South Coast Air Quality Management District's (SCAQMD) most current Air Quality Management Plan. The SDEIR indicates that project specific and cumulative emissions should not exceed conformity *de minimis* values (pages 4-22 and 4-26). However, the emissions used to estimate conformity are based on unmitigated emissions for Peace II projects, so for the purposes of federal conformity, none of the mitigation measures are required to be implemented. As future Peace II Agreement projects are considered for funding, the data in the SDEIR and the Air Quality appendix can be cited to verify that such projects conform with the SIP/SCAQMD AQMP. Of course, if the AQMP is revised and incorporated into the SIP then this is a changed condition that would have to be revisited at that point in the future when a proposed project is meant to be implemented.

3-9 Please refer to pages 4-27 through 4-37 of the SDEIR. The evaluation for Greenhouse Gas (GHG) emissions did consider the reduction in energy consumption in order to ascertain how much energy consumption would be reduced through mitigation. Refer specifically to page 4-30 which discusses the balance of emission reductions and energy consumption. Fundamentally, the long-term energy consumption under the Peace II Agreement is associated with all new wells and pumping water from place to place to support hydraulic control and reoperation, as well as all remaining OBMP facilities and activities. Based on the cumulative impact, NOx emissions are forecast to be significant even with referenced energy savings, but GHG emissions are not forecast to be significant.

b) **Mitigation Measure 4.2-25:** Given that the EIR already identifies NOx as a significant impact, please clarify the need for mitigation that exceeds current regulatory requirements. In particular, requiring construction phases to occur in separate calendar years, while "reducing" emissions in any one year, does not reduce overall emissions, may result in reduced construction efficiencies and increased construction costs, and may in fact not avoid significant Project or cumulative air quality impacts. Overlapping construction phases are a common practice and, due to the localized nature of the construction, may not exceed relevant criteria pollutant thresholds. CDA requests that this and other measures that exceed current regulatory requirements be identified in a "menu approach", providing PEACE II facility agencies with more flexibility. Finally, please clarify the purpose, nature, and implementing responsibility for the identified "monitoring program". 3-9

c) **Mitigation Measure 4.3-1:** Please clarify the responsible party(ies) for this mitigation financing, implementation, monitoring, and potential future subsequent remedial mitigation, if needed. 3-10

d) **Mitigation Measure 4.3-9-12:** Please clarify the basis for using six inches as a threshold for "inelastic subsidence", and please define the term. Please clarify responsible party(ies) for this mitigation financing, implementation, monitoring, and potential future subsequent remedial mitigation, if needed. 3-11

e) **Mitigation Measure 4.4-2:** Please clarify responsibility for this mitigation measure. 3-12

f) **Mitigation Measure 4.4-15:** Please clarify responsible party(ies) for this mitigation financing, implementation, monitoring, and potential future subsequent remedial mitigation, if needed. 3-13

g) **Mitigation Measure VI-12:** Please clarify responsible party(ies) for this mitigation financing, implementation, monitoring, and potential future subsequent remedial mitigation, if needed. 3-14

5) The following represent important DSEIR text concerns:

a) Page 4-58, paragraph 5: Please provide the technical basis for the statement: "It is likely that this was due to changes in local production – especially at some of the nearby Chino I Desalter wells,..." 3-15

b) Page 4-60, paragraph 8: Please provide the technical basis for the statement: "This decline is likely due to the onset of pumping at nearby Chino II Desalter wells". 3-16

3-9 Please refer to response 3-6. When a significant impact is identified, as in the case of cumulative NOx emissions, CEQA, Sections 15002 (h) and 15003 (f) establish the general requirements for mitigating significant impact and Section 15126.4 (a), requires the implementation of feasible mitigation to reduce emissions to the lowest achievable level. The mitigation measures identified in the SDEIR represent those identified by the SDEIR technical specialists and author that are considered available and feasible to control air pollutant emissions to either a less than significant impact level or to the lowest achievable level. Actually, if sufficient cumulative projects are in progress (more than analyzed in the SDEIR), constructing components during different calendar years can result in a project achieving conformity, which is calculated annually, not daily. Very simply, spreading out construction activity is one of the measures identified by SCAQMD to keep construction projects below significance thresholds. The alternative is to conclude that a project has a potential for significant impact and prepare another EIR. Failure to implement available and feasible mitigation measures for an identified significant adverse environmental impact, such as NOx emissions, could be considered to be a fatal flaw in the environmental document.

Regarding the menu of measures, IEUA does not believe that it is possible to establish a menu of measures at the program level of evaluation. The reason for this is that different measures apply to different kinds of projects, i.e., pipeline construction versus reservoir construction. The way it is envisioned in the SDEIR is that as individual future projects are proposed for implementation under Peace II, the project air quality analyst would select measures up to the point that construction emissions are reduced to a level below the threshold (for example, for fugitive dust) and the lowest achievable where a significant impact cannot be avoided (such as cumulative NOx emissions). In essence, the program document identifies the full range of air pollutant mitigation measures that can be applied to a specific future second-tier project. The second-tier project specific evaluation will determine which of the SDEIR measures are required, in essence working out a project specific menu.

Finally, each future proponent of a Peace II Agreement second-tier project is responsible for identifying the applicable mitigation measures from the full range of measures identified in the SDEIR. The purpose of the MMRP is to ensure that those applicable measures are effectively implemented. There is no special "nature" to the monitoring program. It is simply an accounting procedure used as information in the process of reviewing, approving and implementing a second-tier project. And the responsibility for implementation is to be assumed by the party or stakeholder implementing the second-tier project for all local impacts. Where regional impacts are identified, mitigation may be assigned to a collective group or entity, where other arrangements have been made as outlined in the next response.

3-10 This comment needs to be considered in the context of the potential impacts identified in the SDEIR. The potential impact addressed by measure 4.3-1 is the installation of a new well that mobilizes a nearby contaminant plume and begins to extract groundwater that contaminated by the plume. The measure's purpose is to ensure the quality of the extracted contaminated water delivered to the public will meet potable water quality standards. So the direct party responsible for mitigation financing is the party the installs the well as part of the Peace II Agreement program and then makes a decision to pump the contaminated water that requires treatment. This same party is responsible for implementing and monitoring the mitigation. And finally, this same party is responsible for any subsequent mitigation. This is the only way of holding a party that decides to produce a contaminated well accountable for such a decision. That said, where a regional benefit is to be obtained through an action, such as hydraulic control in

the Chino Creek Well Field, another party or entity could assume or share in the responsibility for implementing the mitigation, assuming a mechanism is place for this responsibility to be shared or assumed by the other party or entity.

Based on previous discussions with the CDA, it became apparent that, if such wells are being implemented as part of the Peace II Agreement programs (hydraulic control), the stakeholders are of the opinion that the Watermaster should participate in the funding of any required mitigation associated with implementing hydraulic control. IEUA believes that it is beyond the scope of this SDEIR to define such funding and implementation mechanisms because the focus of the SDEIR is on impacts and required mitigation, not specifically on funding. However, IEUA supports the implementation of an adaptive management implementation plan that would allow regional impacts to be addressed by the Watermaster and stakeholders due to the regional benefits that are the purpose of the Peace II Agreement. An agreement with the Watermaster or other stakeholders seems a reasonable approach to share the regional responsibilities for selection of well location; a regional decision to produce a well that draws in contaminated groundwater; and the regional funding of the mitigation. However, aside from identifying potential regional mitigation measures, IEUA believes the assumption of these responsibilities is not within the scope of the SDEIR process, but should be implemented directly by the Watermaster and stakeholders in conjunction with implementation of the Peace II Agreement program.

3-11 IEUA chose the six inch threshold of subsidence for this mitigation measure in order to establish a measurable quantitative threshold of subsidence. The six-inch threshold was a very conservative threshold based on historical subsidence data, which suggested elastic subsidence occurs up to two-inches in many parts of the Basin. This significance threshold (six inches of measure inelastic subsidence) received a number of comments and IEUA has agreed to modify the relevant mitigation measures. Watermaster's performance requirement is stated in the Peace Agreement as cited above and states: "The occurrence of subsidence in Management Zone 1 (MZ1) is not acceptable and should be reduced to tolerable levels or abated. The OBMP calls for a management plan to reduce subsidence or abate subsidence and fissuring problems to the extent that it may be caused by production in MZ1."

Measure 4.3-9 will be revised based on the following analysis: The OBMP Implementaton Plan (Peace Agreement, Exhibit B, page 26) states "The occurrence of subsidence in Management Zone 1 is not acceptable and should be reduced to tolerable levels or abated." Watermaster has developed and implemented an adaptive management program of pumping and recharge in MZ1 to identify subsidence-related hazards and mitigate them to "tolerable levels." This adaptive management program is described in the MZ1 Subsidence Management Plan (MZ1 Plan). The Court approved the MZ-1 Plan in November 2007 and ordered its implementation. Watermaster plans to expand this program as a mitigation measure for subsidence-related hazards that could occur as a result of the Peace II project. This expanded program will include changes to Watermaster's existing subsidence monitoring program and the procedures for making adaptive management decisions.

Monitoring. Currently, Watermaster conducts a comprehensive land-subsidence monitoring program in Chino Basin as required by the Peace Agreement. This monitoring program is depicted in Figure 4.3-8, and includes the monitoring of groundwater production and water levels at wells, the monitoring of vertical ground motion by leveling surveys and remote-sensing (InSAR), the monitoring of horizontal ground motion through electronic distance measurements between survey monuments

that span the historical zone of ground fissuring, and the monitoring of aquifer-system compaction at four borehole extensometers located adjacent to the historical zone of ground fissuring.

A primary area of concern for subsidence related to the Peace II project is where new Chino Desalter wells will be installed—the so-called Chino Creek Well Field (CCWF). Pumping from these wells will cause drawdown of groundwater levels, which could lead to differential subsidence and ground fissuring. Differential subsidence and ground fissuring are the primary subsidence-related hazards for overlying infrastructure. Currently, the only subsidence monitoring that is being implemented in the vicinity of the CCWF is annual InSAR data collection and analysis. The quality of the InSAR data in this area has not been good enough to recognize the occurrence of differential subsidence, and is not adequate to support an adaptive management program. Therefore, Watermaster's subsidence monitoring program will be expanded to include additional monitoring wells, additional leveling monuments, annual leveling surveys, and a borehole extensometer facility located within the CCWF. The general location of expanded monitoring is also depicted in Figure 4.3-8. The expanded monitoring program will be implemented prior to startup of the CCWF.

Subsidence Committee. Currently, Watermaster convenes an MZ1 Technical Committee to oversee the implementation of the MZ1 Plan. This committee consists of representatives of Judgment parties that pump groundwater from MZ1 and are directly impacted by land subsidence that occurs in this area. The committee meets at least annually to review the results of the monitoring program, to recommend changes to the monitoring program or the MZ1 Plan if necessary, and to develop a scope of work for Watermaster's next fiscal year. This committee will be expanded to include representatives from all interested Judgment parties and the CDA. The committee will be renamed the Subsidence Committee, since Watermaster's concern for subsidence-related hazards now extends outside of MZ1.

Adaptive Management Program. Similar to current practice, Watermaster will collect, compile, review, and report annually on the monitoring program data. The annual reports will include recommendations for adaptive management to mitigate any measured subsidence that the committee identifies as "intolerable." Adaptive management may come in the form of the establishment of threshold water levels at index wells, reduced pumping at specific wells, sealing of well screens at specific depth intervals at specific wells, adjustment of pumping schedules, cessation of pumping at certain wells, installation of additional wells in alternate locations, and other appropriate measures. No new authority is granted to the Watermaster through this Program that is not currently authorized under Peace I and II and any proposed pumping restrictions or other remedies would be voluntary on the part of CDA.

Measure 4.3-10 will be revised based on the following analysis.

Implementation of the Peace II Measures (a series of related agreements and an amendment to the OBMP Implementation Plan) will result in a general lowering of groundwater elevation throughout the Chino Basin. This was known and documented in the Peace II engineering work which was referenced initially in *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description* (WEI, 2007). This report was submitted to the Court in November 2007 along with the final version of the Peace II Agreement and supporting documents. The Court received direct testimony regarding the report and it was reviewed in detail by the Court and was the subject to analysis by the Special Referee and consulting engineer.

The general lowering of the water table was a known physical condition for which there would be corresponding and off-setting water supply reliability, water quality and economic benefits. As well owners, the parties to the Judgment knowingly accepted the responsibility for redressing their individual impacts attributed to regional draw-down.

The Peace II Measures were approved by each of the three Pools, the Advisory Committee and the Watermaster Board prior to being transmitted to the Court. There was no opposition by the Judgment parties, and the Court subsequently approved the Peace II Measures and ordered Watermaster and the parties to proceed in accordance with the Peace II Measures on December 21, 2007. Since that time there were other investigations related to the Peace II Measures [e.g., *Analysis of Material Physical Injury from the Proposed Expansion of the Dry-Year Yield Program* (WEI, 2008)] that were reported to the Judgment parties, the Watermaster, and the IEUA in a transparent process that included several public meetings and the distribution of reports via email and website postings. The most recent report completed during 2009 was entitled *2009 Production Optimization and Evaluation of the Peace II Project Description* (WEI, 2009) This latest report has been incorporated into the Peace II SEIR. All these subsequent reports projected a general lowering of the groundwater elevation across the Chino Basin.

The projected groundwater elevation change with the implementation of the Peace II Measures is not uniform across the basin, and therefore some water purveyors and private well owners may experience greater lift and related energy expenses, or other mechanical or other damages from the Re-operation component of the Peace II Agreement and the expansion of the Chino Desalter Program. However, as noted above the corresponding and off-setting benefits received (e.g. water quality, recycled water, yield enhancement, salt management) were consensually and voluntarily exchanged for the projected increase in energy expenses with the expectation of other financial gains and certainties made possible by implementing the Peace II Measures. Therefore, no unmitigated Material Physical Injury is projected to occur from the decline in groundwater elevation caused by implementing the Peace II Agreement.

There are two sources of groundwater elevation changes that are projected to occur with the implementation of the Peace II Agreement: (1) groundwater elevation changes from Re-operation and (2) groundwater elevation changes from the expansion of the Chino Desalter Program, which includes the installation and operation of the new Chino Creek Well Field (CCWF) and changes in groundwater production at other wells that provide raw groundwater to the Desalters.

Mitigation Requirements for Changes in Groundwater Elevation Due to Re-operation

The parties to the Judgment have previously voluntarily accepted the changes in groundwater elevation due to the Re-operation element of the Peace II Measures in exchange for the individual and collective benefits received and therefore no mitigation is required to offset those changes.

Mitigation Requirements for Changes in Groundwater Elevation Due to the Expansion of the Chino Desalter Program

Figures 4.3-57 through 4.3-67b shows the expected change in groundwater elevation due to the expansion of the Chino Desalter Program (WEI, 2010). The area where mitigation of groundwater-elevation changes caused by the expansion of the desalter

program will be limited to where the lowering of groundwater elevation is greater than 20 feet as shown in Figure 4.3-67a. Hereafter, this area is referred to as the Mitigation Area.

Mitigation will be provided to well owners/operators within the Mitigation Area when the well owner/operator cannot produce enough groundwater to meet their needs and the cause of reduced production can be demonstrated to be the expansion of the desalter program. The mitigation will either restore enough of the lost production capacity to ensure that the well owner/operator can produce enough groundwater to meet their needs or provide an alternate source of water to replace the lost production capacity. The method of mitigation will be determined at the discretion of the CDA taking into account the historical fluctuations in the water table, the depth to water, the pump and well efficiency and the reasonableness of the well owner's expectation that the existing well configuration (pump, well and water table) should be partially or fully protected. As a pre-requisite to receiving mitigation, every well owner will be expected to engage in reasonable self-help measures to address inefficient groundwater withdrawal practices. For example, a well owner/operator would not be entitled to claim mitigation based on more groundwater than some appropriate historic measure of groundwater pumped from the respective well.

During the implementation of the desalter expansion program, Watermaster will survey all the private wells in the Mitigation Area to determine their production capacities, historical water use, motor and pump characteristics, depth of pump bowls, depth to groundwater, depth of well, depth interval of well screens, and other information. The Watermaster will either manually monitor the groundwater elevation monthly or will install an integrated pressure transducer/data logger into the wells with the goal of obtaining at least one year of groundwater-elevation data for all the wells in the Mitigation Area prior to the start up of the desalter expansion. The Watermaster will also obtain monthly groundwater production estimates for these wells. The Watermaster will provide these data to the CDA and the private well owners. These data will be used as a baseline to assess the impact on the private wells.

There are a number of wells in the mitigation area. Prior to start up of the desalter expansion, the CDA will prepare a contingency response plan that describes how the CDA would mitigate lost production for each private well in the Mitigation Area.

The Watermaster will collect groundwater-elevation data and production estimates monthly for the private wells in the Mitigation Area for five years after start up of the desalter expansion. These data will be provided to the CDA and the private well owners monthly. After this five-year start up period, the Watermaster will collect groundwater-elevation data at the private wells in the Mitigation Area at its discretion, and will obtain groundwater-production estimates at least quarterly.

Well owners/operators with wells outside the Mitigation Area that experience production problems after the desalter expansion start up will not receive mitigation from the CDA, the IEUA or the Watermaster. The sources of production problems for groundwater-level declines of less than 20 feet include interference from nearby non-desalter wells, climate variability, poor construction and poor maintenance. These well may be constructed too shallow, their pump intakes too shallow, or the wells screens clogged, any of which could cause production problems of groundwater-elevation changes of less than 20 feet from the desalter expansion. Well owners/operators with wells outside the Mitigation Area will need to engage in reasonable self-help to maintain production after the desalter expansion startup.

Measure 4.3-11 will be deleted.

3-12 This comment also needs to be considered in the context of the potential impact identified in the SDEIR. As a programmatic issue, IEUA has found specific instances where discharge of fill into waters of the United States or State of California is unavoidable (for example, pipeline crossings of stream channels). When specific projects are proposed for implementation in the future under the SDEIR, measure 4.4-2 establishes a protocol under which CEQA compliance can be obtained and impacts to waters, wetlands or riperian area is established. This will permit applications for the referenced permits to the referenced agencies without having to conduct additional documentation to comply with CEQA, but permit applications directly to the agencies. The party responsible for submitting applications and acquiring the requisite permits is the party responsible for the discharge of fill. The term "project proponent" in the measure refers to the party or stakeholder carrying out the project. This is a local measure from an implementation standpoint.

However, as outlined in response 3-10, if the party implementing a project is carrying it out on behalf of a larger or broader Peace II Agreement program element, the responsibility may be shared with other agencies as a regional benefit from the project. As noted above, the mitigation is appropriate and required in the context of the SDEIR, but the implementing mechanisms may require additional agreements among the Peace II Agreement stakeholders as described in response 3-10.

3-13 Mitigation measure 4.4-15 is designed to ensure that pumping from future desalter wells will not cause significant adverse impacts due to direct lowering the groundwater table or indirect subsidence effects from such lowering of the groundwater table. This is a contingency measure when additional extraction of groundwater in accordance with the Peace II proposed project is implemented. Based on the model data, it is anticipated that this measure will seldom be used. Regardless, when required, this measure would be the responsibility of the regional and local parties carrying out the future Peace II project. However, assuming an agreement is reached among the Watermaster and stakeholders for collective or regional responsibility for such projects, this measure should be implemented under such an agreement.

3-14 Measure VI-12 is also a contingency mitigation measure to protect the Chino Basin from artificially induced liquefaction. As noted in response to comment 3-13, the model runs do not indicate that a significant liquefaction hazard may be created by any of the conjunctive use programs that have been approved for the Chino Basin. Regardless, the responsibility for implementing this measure resides with the Watermaster as the party responsible for monitoring groundwater elevation in the Basin and for oversight of changes in the Basin. Although an unusual case, the artificial creation of a liquefaction hazard is assumed to be a Basin-wide management issue that would rely on data collected by Watermaster and subject to Watermaster oversight.

3-15 This comment requests a technical explanation for the statement that there is a cause-and-effect relationship between piezometric fluctuations at HCMP monitoring wells and pumping at nearby production wells.

The southern portion of Chino Basin is intensively monitored as part of the Chino Basin Maximum Benefit Monitoring Program (sometimes called the Hydraulic Control Monitoring program or HCMP). This monitoring program includes groundwater-production measurements and high-frequency groundwater-level measurements at production and monitoring wells across the area. These data are studied annually to

assess the state of hydraulic control, which is documented in annual reports – the most recent being the *Chino Basin Maximum Benefit Monitoring Program 2009 Annual Report*.

Please see Figure 3-1 in this report which shows the HCMP monitoring wells in close proximity to the Chino 1 Desalter wells. In addition, the HCMP monitoring wells are screened across depths of the aquifer system that are pumped by the Desalter wells. These two facts (proximity and common well screen depths) suggest that Chino 1 Desalter pumping will affect piezometric levels at the HCMP wells.

Close examination of the production data and the piezometric data, which is performed annually by Watermaster for the Maximum Benefit Monitoring Program, demonstrates the cause-and-effect relationship between piezometric fluctuations at HCMP monitoring wells and pumping at nearby Chino 1 Desalter wells. See Figure 3-2 in the above referenced report, which shows the piezometric time-series for the HCMP wells, and Figure 3-6, which shows how groundwater pumping has changed in this region since 2000. These maps and charts show that much of the agricultural pumping has declined since 2000, and that the main pumping stresses in this region of the Basin are associated with the Chino 1 Desalter wells.

3-16 The southern portion of Chino Basin is intensively monitored as part of the Chino Basin Maximum Benefit Monitoring Program (sometimes called the Hydraulic Control Monitoring Program or HCMP). This monitoring program includes groundwater-production measurements and high-frequency groundwater-level measurements at production and monitoring wells across the area. These data are studied annually to assess the state of hydraulic control, which is documented in annual reports—the most recent being the *Chino Basin Maximum Benefit Monitoring Program 2009 Annual Report*. Please see Figure 3-6 in this report, and the associated text that describes this figure, for the technical basis behind the statement.

3-17 c) Page 4-85, paragraphs 2 and 7: Please provide the technical basis for references suggesting a direct causal link between Chino I Desalters and subsidence.

General DSEIR Comments

3-18 1) If possible, please provide relevant public notices and other PEACE II documents on the IEUA website to facilitate public review and comment.

3-19 2) As noted below, based on discussions with IEUA staff, CDA respectfully requests the opportunity to review proposed Responses to Comments prior to public release of the proposed Final EIR.

3-20 3) For all mitigation measures noted below, please clarify where appropriate the definition of key terms such as "sensitive", "buffer zones", and "maximize", and who determines consistency with these terms.

3-21 4) Throughout the DSEIR, please change "Chino Desalter Authority" to "Chino Basin Desalter Authority."

Additional DSEIR Text Comments

3-22 Page 3-22, paragraph 4: Please insert "by Watermaster" after "The general location of the Chino Creek Wellfield proposed as part of PEACE II has been selected..."

3-23 Page 3-22, paragraph 4, last sentence: Please reword this sentence, and remove "yet to be determined" with a more accurate and up to date discussion reflecting the recently adopted Principles for Completion noted above.

3-24 Page 3-31, paragraph 5, first sentence: Please revise as follows: "The construction of a new desalter well field will be sized and located as directed by the Chino Basin Watermaster to achieve hydraulic control as substantiated by poziomotric data. The expanded desalter program is expected by Wakermaster to will produce..."

3-25 Page 4-54, last paragraph: Please delete the sentence "The desalter facilities belong to the Appropriative Pool", or reword to better explain the meaning, ie, that desalter pumping is accounted for by Watermaster as Appropriative Pool pumping.

DSEIR Mitigation Measure Comments

3-26 4.2-12: This mitigation measure appears redundant with mitigation 4.2-17 and 4.2-18. In addition, use of aqueous diesel fuel may be difficult to obtain depending on the construction vehicle fleet, and may have limited overall air quality benefit.

3-27 4.2-26: Please clarify the applicability of this mitigation measure to PEACE II facilities such as CDA's desalters, wellfields, and related conveyance and pumping

3-17 Pumping-induced land subsidence occurs when groundwater pumping causes drawdown in the coarse-grained aquifers which, in turn, causes the interbedded fine-grained aquitards to drain into the aquifers to equilibrate the head differential between the pumped aquifer and the interbedded aquitards. This is a well-documented phenomenon in the scientific literature termed the *Aquitard-Drainage Model*.

Chino I Desalter Well 3 is screened across and pumps from the deep, confined aquifer system in this area (as are Wells 1, 2, and 4). Water-level monitoring at these wells since mid-2000 has shown that this pumping has caused about 200 ft of drawdown in the deep aquifer. From 2003-2008, there were 10 leveling surveys performed at established survey benchmarks near Well 3 that indicated about 0.25 ft of subsidence. Currently, there is not enough data to indicate whether this 0.25 ft of subsidence is permanent, elastic, or a combination of both, but the water-level drawdown and the land subsidence appear to be directly related. High-frequency measurement of piezometric head and land subsidence in this area, such as measurements every 15 minutes at an extensometer/piezometer facility, would confirm/refute the relationship between pumping and subsidence.

3-18 IEUA has assembled the requested information and has reorganized the website and made the requested data more accessible. Please refer to the revised Agency website to access the data requested in this comment.

3-19 IEUA concurs with this suggestion and has provided CBA with an opportunity to review responses to comments prior to release of the Final SDEIR.

3-20 The information requested is provided in the responses below. However, as a general rule it is the party implementing a specific project under the Peace II Agreement that would rely upon professional staff or consultants to interpret these terms on a project specific basis. This approach is consistent with a program document that cannot evaluate all, or even most, of the field circumstances that may be encountered when specific second-tier projects are brought forward for implementation. As discussed in previous responses, where regional effects and mitigation are required and agreed upon by stakeholders, a regional entity or a group of stakeholders may assume responsibility for implementing mitigation measures.

3-21 This request will be implemented when the Final SDEIR is edited, i.e., all references to "Chino Desalter Authority" will be changed to "Chino Basin Desalter Authority." The acronym CDA will be retained based on discussions with the Authority.

3-22 This request will be implemented. The following text addition will be provided in the Final SDEIR: "Watermaster staff and consultants evaluated alternative alignments for the CCWF that would achieve hydraulic control. The alignment discussed in the SEIR was set forth in the 2007 court order which directed Watermaster and stakeholders to proceed with implementation of the Chino Desalter 3 project."

3-23 Regarding responsibility for addressing induced potential plume contamination migration, Watermaster will work with the parties to address additional costs, including incremental, capital and operations and maintenance costs. Based on recent discussions with the County, Watermaster assumes that the County must fund these incremental costs at the CCWF. The Regional Board's order regarding the Chino Airport contaminant plume identifies the County as the responsible party.

3-24 The following text modification will be incorporated in the Final SDEIR: "The construction of a new desalter well field (CCWF) will be sized and located as shown on Figures 4.3-57 and 4.3-64 and in accordance with the technical studies and approved by court in 2007 and subsequently authorized by Watermaster based on these technical studies.

3-25 You are correct. The sentence has been rewritten as follows: "Desalter pumping is accounted for by Watermaster as Appropriative Pool pumping. It is the individual partners of CDA that are members of the Appropriative Pool."

3-26 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. Measures 4.2-12, -17 and -18 will be replaced by the following mitigation measure: "4.2-12 Construction activities that require off-road equipment shall utilize Tier III, Tier IV or the most current commercially available version of off-road equipment certified by the SCAQMD over the life of the Peace II Agreement Program."

3-27 This is a Basin-wide (regional) monitoring effort that includes an objective, not a mandatory performance standard, of reducing or offsetting GHG emissions by 50%. It is intended to apply to all future Peace II Agreement Program facilities. The purpose is to document and demonstrate Peace II Agreement Program efforts to reduce GHG emissions in accordance with AB 32 and the Air Resource Board's emission reduction objectives, i.e., reduce the Program's carbon footprint. Monitoring of GHG emissions would be carried out by IEUA/Watermaster on behalf of the Chino Basin stakeholders. An example is the recently completed installation of solar photovoltaic systems at four locations by IEUA, which generate about three megawatts of power. All stakeholders involved in water and wastewater management within the Chino Basin should be able to take credit for the GHG emission reductions achieved by such facilities.

3-27 cont. facilities. Please clarify the purpose, nature, and implementing responsibility for the "monitoring program". Please clarify the regulatory basis for this measure, and whether or not it is required, or is recommended where appropriate and feasible.

3-28 4.2-27: Considering the relatively small area of landscaping for many PEACE II facilities, and certainly for CDA's PEACE II related facilities, CDA suggests that this measure be deleted, or included as part of a broader menu approach noted above. As with other measures, please clarify if this measure is a current regulatory requirement.

3-29 4.4-6: Please clarify the term "wildlife corridors", how restoration of corridor values is provided, and who determines adequacy of mitigation.

3-30 4.4-11a: Please change "prohibit" to "avoid to the extent practical".

3-31 4.4-11c: Please reword this measure to clarify to say "avoid through facility siting, to the extent practical, and mitigated pursuant to regulatory agency requirements where significant impacts cannot be avoided".

3-32 V-3: Please clarify the nature and extent of archaeological monitoring.

3-33 XI-1,3,5,11,13: Please revise these mitigation measures to use existing applicable local agency noise standards as the appropriate thresholds.

3-34 XV-1: Please change "applicable jurisdiction" to respective OBMP/PEACE II facility proponent", and add at the end "This TMP shall be prepared and submitted for review and comment by the applicable local jurisdiction(s)."

3-35 XV-2: Please change "applicable jurisdiction" to respective OBMP/PEACE II facility proponent", and add at the end "These improvements shall be coordinated with the applicable local jurisdiction(s) as part of the encroachment permit process."

3-36 XV-4,5: Please change "applicable jurisdiction" to respective OBMP/PEACE II facility proponent", and add at the end "These improvements shall be coordinated with the applicable local jurisdiction(s) as part of the encroachment permit process."

3-37 XV-6: Please change "appropriate school district" to respective OBMP/PEACE II facility proponent", and add at the end "These improvements shall be coordinated with the applicable local school district(s) as part of the local land use agency's encroachment permit process."

3-38 On behalf of the Chino Basin Desalter Authority, we again extend our appreciation to IEUA staff and its consultants in preparing the DSEIR, and respectfully request your careful consideration and complete response to the issues identified in this comment letter. In addition, as discussed at our June 15 meeting, the CDA looks forward to

3-28 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. This is a Basin-wide monitoring effort that includes an objective, not a mandatory performance standard, of reducing or offsetting GHG emissions by 50%. It is intended to apply only to those future facilities with sufficient space for landscaping, as indicated in the measure. This is not a mandatory measure, but it is deemed to be a contributing element to meet the State's objective of reducing GHG emissions (carbon footprint) and overall reduction of the State's cumulative contribution to climate change as discussed in the SDEIR. For these reasons, and because it is not mandatory for all future Peace II Agreement projects, this measure will be retained.

3-29 The only wildlife corridors identified within the Chino Basin are associated with stream channels, such as the Santa Ana River, Mill Creek or Chino Creek. These corridors are formally defined or identified in the County General Plans, the Western Riverside Multiple Species Habitat Conservation Plan and local City General Plans. The restoration of corridor values would include replacing temporary disturbed areas or offsetting habitat losses within a defined corridor to maintain corridor movement values. The party implementing a future Peace II Agreement project would make the determination of mitigation adequacy, but if a regulatory permit is required for the disturbance, any of the regulatory agencies (Corps, Regional Board, Department of Fish and Game or the U. S. Fish and Wildlife Service could also have a role in determining adequacy.

3-30 The text of mitigation measure 4.4-11a will be revised to read as follows: "To the extent feasible habitat areas that support rare, threatened or endangered species shall be avoided; where avoidance of such habitat is not feasible, habitat loss shall be compensated for by habitat acquisition or creation at a minimum 2:1 ratio, or a ratio established through consultation with agencies the issue incidental take permits or manage such habitat."

3-31 There are no specific regulatory requirements for plants of special concern and IEUA believes that mitigation "pursuant to regulatory agency requirements is "defense" of required mitigation. However, some of the suggested text modification can be incorporated as follows: "Within habitat of plants listed by the CNDDB or CNPS as "special" or "of concern" all feasible attempts to avoid such habitat through facility siting shall be implemented, and where significant habitat impacts to such species cannot be, no net reduction in the number of plant or plant habitat shall occur. This may require habitat creation for such plants or acquisition of habitat at a ratio of 1:1."

3-32 Measures V-3 and V-7 of Appendix 8-1 (the Initial Study published for the Peace II Agreement) define the circumstances under which monitoring is required. When a future site specific Peace II Agreement second-tier project is reviewed for implementation and cultural resources are identified within or immediately adjacent to the project APE, monitoring for cultural resources is required. In addition, construction activities deeper than 10 feet (a nominal depth defining the boundary between young and old alluvium) are required to be monitored during initial construction activities to determine whether the older alluvium should be considered of high sensitivity paleontological value. If determined to be of such value, paleontological monitoring must continue.

3-33 The text of mitigation measures XI-1, XI-3, XI-5 XI-11, and XI13 will be modified as follows: "Applicable local agency noise standards maybe used instead of the threshold(s) identified in this measure if they provide equal or greater noise mitigation/attenuation."

3-34 Measure XV-1 will be modified as suggested in the Final SDEIR.

3-35 Measure XV-2 will be modified as suggested in the Final SDEIR.

3-36 Measures XV-4 and XV-5 will be modified as suggested in the Final SDEIR.

3-37 Measure XV-6 will be modified as suggested in the Final SDEIR.

3-38 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. IEUA has attempted to provide good faith, reasoned responses as required by CEQA (Section 15088). As indicated in previous responses, IEUA shared the draft responses to this comment letter with CDA in accordance with previous verbal commitments.

3-38 cont. reviewing the proposed Final EIR prior to public release, as it is important these issues are satisfactorily resolved in order for CDA to support the adequacy of the Final EIR.

If you have any questions, please call me at (909) 395-2662. Thank you in advance for your timely and thorough response to the issues and comments identified in this letter.

Sincerely,

Scott Burton, PE
CDA Coordinator

Cc: CDA Board of Directors
CDA Technical Advisory Committee
Doug Brown, Stradling Yocca Carlson & Rauth, CDA General Counsel
Tom Dodson, Tom Dodson & Associates
Ken Manning, Chino Basin Watermaster
Kevin Thomas, RBF Consulting

COMMENT LETTER #4

ORANGE COUNTY WATER DISTRICT

June 23 2010

Ryan Shaw
Inland Empire Utilities Agency
PO Box 9020
Chino Hills, CA 91709

Dear Mr. Shaw:

RE: Draft Subsequent Environmental Impact Report dated May 2010 for Peace II Project

Please accept the following comments of the Orange County Water District on the Draft Subsequent Environmental Impact Report (SEIR) for the Peace II Project dated May 2010 (State Clearinghouse Number 2000041047). OCWD appreciates the opportunity to review the Draft SEIR which was prepared for the Inland Empire Utilities Agency (IEUA) by Tom Dodson & Associates.

The Orange County Water District (OCWD) is a special district formed in 1933 by an act of the California Legislature. The District manages the groundwater basin that underlies north and central Orange County. Water produced from the basin is the primary water supply for approximately 2.4 million resident living within the District's boundaries. OCWD also owns more than 2,000 acres of land in the Prado Basin and is keenly interested in projects that may affect the Prado Basin.

4-1 By virtue of its statutory authority and its extensive Prado Basin activities, OCWD is particularly sensitive to environmental values and the damage that can be done to those values from failing to fully analyze and mitigate all potential adverse impacts. As a result, OCWD is concerned that the Draft SEIR, in its current state, fail to identify, analyze and propose appropriate mitigation with respect to a number of potential and actual significant environmental impacts, and that the Draft SEIR consequently fails to comply with the requirements of the California Environmental Quality Act (CEQA) and its implementing State CEQA Guidelines.

OCWD provides the following specific comments regarding the Draft SEIR:

4-2 1. As described in the Draft SEIR, the Prado Basin contains sensitive environmental habitat for threatened and endangered species. Page 4-216 of

RESPONSES TO COMMENTS
LETTER #4
ORANGE COUNTY WATER DISTRICT

4-1 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR.

4-2 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR.

4-2 cont.

the Draft SEIR states "In particular, significant biological resources within the project area are associated with the Prado Basin (the largest remaining wetland in southern California)..." Essentially all of the Prado Basin is designated as critical habitat for the least Bell's vireo. OCWD works together with the state and federal government to manage habitat in the Prado Basin. In 1995, OCWD executed a cooperative agreement with the U. S. Fish and Wildlife Service and the Army Corps of Engineers to cooperatively manage biological resources in the Prado Basin.

4-3

2. Potential impacts to riparian habitat, the least Bell's vireo, and other biological resources in the Prado Basin can negatively impact OCWD's water conservation program. In cooperation with the Army Corps of Engineers, stormwater is temporarily stored in Prado Basin for subsequent release and recharge into the Orange County Groundwater Basin. This longstanding water conservation program is contingent upon the continued health of biological resources in Prado Basin. Negative impacts to biological resources in the Prado Basin could reduce OCWD's ability to implement the existing water conservation program. Accordingly, OCWD has a keen interest in potential projects that could negatively impact natural resources such as riparian habitat in Prado Basin.

4-4

3. The proposed project involves altering the surface water hydrology and reducing groundwater elevations in an area of sensitive environmental habitat. If the surface water hydrology or groundwater elevations are modified to the degree that biological resources in Prado Basin are negatively impacted, this will have severe detrimental impacts upon a vital natural resource area and to OCWD.

4-5

4. OCWD has dedicated 650 acres of managed riparian habitat as mitigation to offset impacts associated with water conservation at Prado Dam and other projects in the vicinity of Prado Basin. OCWD has made direct payments of $3,715,000 to achieve the desired development of riparian woodland on lands in Prado Basin and continues to spend in excess of $140,000 annually for maintenance and restoration of biological resources. Additionally, the Santa Ana Watershed Association (SAWA), of which OCWD is a member, has invested several million dollars in riparian habitat restoration within the project area and its vicinity.

4-6

5. In partnership with SAWA, U S. Fish and Wildlife Service, and the Army Corps of Engineers, OCWD is responsible for recovering and sustaining the largest population of endangered least Bell's vireos in existence since 2004. Approximately one-half of that population occurs in the Prado Basin on lands that will be subject to and potentially threatened by altered hydrology as a result of the proposed Peace II Project. If the proposed project is to be implemented, IEUA should take on a much greater role in partnership with OCWD and SAWA

4-3 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR.

4-4 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. The proposed project actually consists of continued implementation of the adopted OBMP and an expansion of groundwater extraction under the Peace II Agreement. The comment states, "The proposed project involves the altering the surface water hydrology and reducing groundwater elevations in an area of sensitive environmental habitat." This is a misleading statement. The project involves a slight change in groundwater levels at the CCWF and has the effect of reducing surface water discharge due to the elimination of rising groundwater that occurs at Prado Dam. The proposed project in the Peace II Agreement consists of decreasing the storage in the Basin, primarily in the upper half of the Basin and negligibly so in the lower half of the Basin. The groundwater level changes from implementing the Peace II Alternative are predicted to be very small in most of the Prado Basin, and the predicted change in surface water discharge that occurs in response to the change in groundwater storage is also small, less than five percent relative to the discharge in the River. The interception of poor quality groundwater that would otherwise discharge to the Santa Ana River will benefit water quality in the River and subsequently water users in Orange County.

4-5 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR.

4-6 Please keep in mind that the Peace II Agreement encompasses Watermaster and other stakeholders in the Chino Basin groundwater resources, as well as IEUA. Based on the groundwater model findings, implementation of the Peace II Agreement is not forecast to cause a significant adverse impact on biological resources. Thus, at this time the Peace II Agreement program participants (IEUA, Watermaster and stakeholders) do not concur that it is necessary to assume a greater role in managing biological resources of the Basin, primarily in the Prado area. This conclusion is not solely based on the model findings, but also includes the implementation of groundwater level contingency mitigation contained in measure 4.3-8. The adaptive management program required in this measure is designed to protect future groundwater levels so they will be consistent with future groundwater levels forecast in the model. The envisioned adaptive management program will be supported in real time by ongoing monitoring of groundwater levels and modifications in groundwater extractions as well as purchase and recharge of the regional aquifer provide a backup plan that can prevent harm to biological resources found in the Prado Basin area. Regardless, should future implementation of the Peace II Agreement programs result in greater effects on the Prado Basin than forecast or adaptively managed, the program participants can assume a greater role in managing biological resources of the Basin.

for ongoing biological resource management efforts to ensure maintenance of riparian resources and sensitive wildlife in the affected area. 4-6 cont.

6. In the last approximately two to four years, vegetation along Temescal Creek in the eastern portion of Prado Basin has been negatively impacted by declining water availability. From 2001 to 2009, there was a 21 percent increase in the overall Prado Basin vireo population, while along Temescal Creek there has been a 16 percent decline in vireos due to habitat deterioration brought on by dewatering of Temescal Creek (see Pike et al. 2009, Least Bell's Vireos and Southwestern Willow Flycatchers in Prado Basin of Santa Ana River Watershed, CA.). 4-7

7. The Draft SEIR provides an evaluation of potential impacts to biological resources that relies heavily on a groundwater model that has been developed for the Chino Groundwater Basin. A model is a tool to represent a simplified version of the groundwater basin. The validity of the model's predictions depends on how successfully the model approximates actual conditions in the groundwater basin. Adequate field data are necessary to develop a model that can be used successfully for predictive purposes. In general terms, the groundwater model used in the Draft SEIR predicts that changes in the groundwater elevation in the Prado Basin will be relatively small and significant impacts to riparian habitat will not occur. If the model's predictions concerning the change in groundwater elevation in the Prado Basin are not correct and impacts occur to biological resources, the mitigation measures in the draft EIR will be inadequate. Riparian vegetation is dependent on shallow groundwater and/or surface water flows. Increased depth to groundwater or reductions in surface water flow rates can negatively impact riparian vegetation, in particular the recruitment of new vegetation. 4-8

8. The final SEIR should confirm the validity and accuracy of the groundwater model conclusions in the Prado Basin and define actions that would be implemented in the event that the groundwater elevation declines faster than identified in the Draft SEIR or the groundwater elevation declines by a larger amount than identified in the Draft SEIR. 4-9

9. IEUA has conducted vegetation surveys in Prado Basin in cooperation with the United States Bureau of Reclamation (see for example, the report included as Attachment One). The vegetation surveys are relevant data to define biological resources in the Prado Basin and should be included in the SEIR. The SEIR should include as a specific mitigation measure that similar vegetation surveys will be conducted once every two years to monitor the health of vegetation in Prado Basin. 4-10

10. The SEIR should also include contingency mitigation measures in the event that the groundwater elevations decline in a manner different or more severe than projected in the groundwater model. In this regard, the SEIR should state 4-11

4-7 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR.

4-8 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. The comment contains misstatements that need to be clarified before they can be addressed. The sentence that reads, "In general terms, the groundwater model used in the Draft SEIR predicts that changes in the groundwater elevation in the Prado Basin will be relatively small and significant impacts to riparian habitat will not occur," is not an accurate statement. The model predicts changes in groundwater elevation. The conclusion that impacts on riparian habitat will not occur is a biological opinion that is independent of the groundwater model: the model does not make biological findings.

The next sentence in the comment, which reads, "If the model's predictions concerning the change in groundwater elevation in the Prado Basin are not correct and impacts occur to biological resource, the mitigation measures in the draft EIR will be inadequate." is an incorrect interpretation of the SDEIR text. The groundwater model predicts groundwater elevations based on model calibration and on assumptions of the future magnitude and location of groundwater production and the location and magnitude of replenishment. A great deal of work was completed and reported in *2009 Production Optimization and Evaluation of the Peace II Project Description* (WEI, 2009). This work indicated that the groundwater elevations under the Prado Basin were not sensitive to the range of groundwater production and replenishment that occurs upstream of the Prado Basin. The model-predicted groundwater elevations are indicative of the future and could differ slightly from what actually occurs. That said, if there are slight differences does that mean the model predictions were incorrect? The answer is no. Actual groundwater elevation changes could be slightly different, and changes in habitat could occur that are unrelated to the implementation of the Peace II Alternative.

There are other activities that could impact riparian habitat in Prado Basin. These activities are unrelated to the implementation of the Peace II Alternative. The preparers of the DSDEIR concluded that the predicted changes in groundwater elevations were too small to significantly impact the riparian habitat. That said, the IEUA identified mitigation measure 4.4-2 to address impacts to riparian habitat in the Prado Basin that could be associated with implementing the Peace II Alternative. Monitoring of the riparian vegetation and <u>all</u> of the stressors on this vegetation is the key to assigning responsibility and mitigation requirements, and this is the responsibility of all water management entities that impact the Santa Ana River, including the OCWD.

4-9 The groundwater model was developed during 2007 by Wildermuth Environmental, Inc. in a very public process. The model is thoroughly documented in *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description* (WEI, 2007), which is listed as a reference in the SDEIR and in *2009 Production Optimization and Evaluation of the Peace II Project Description* (WEI, 2009). The 2007 report is posted on Watermaster's website and has been since December 2007. The calibration results in the southern part of the basin are included in the 2007 report. The quality of the calibration is excellent. The text in the SDEIR will be modified to include a reference to the 2007 report and statements on the quality of the calibration over the Basin, and specifically the area of the Prado Basin. The 2007 report will be included as an appendix of the final SEIR.

Watermaster and the IEUA have used this groundwater model extensively since its development to evaluate the Dry-Year Yield expansion in *Analysis of Material Physical Injury from the Proposed Expansion of the Dry-Year Yield Program* (WEI, 2008), to evaluate recycled water recharge projects and the CEQA evaluation of the Peace II Agreement (WEI, 2009), and for *Draft Subsequent Environmental Impact Report for the Inland Empire Utilities Agency Peace II Project* (TDA, 2010). The Chino Basin stakeholders are confident in the model's accuracy. Watermaster will update and recalibrate the groundwater model periodically as the CCWF is constructed and tested and periodically thereafter as necessary to address future in-basin management issues and Santa Ana River management issues. The recalibration process will be transparent, and the results of these investigations will be publicly available, as is current Watermaster practice. Watermaster conducts this and all of its technical investigations in a transparent, court-supervised process, and the results of this work are posted on Watermaster's website. The text in the SDEIR will be modified to include this information.

Watermaster runs extensive monitoring programs in the Chino Basin and reports changes in groundwater elevation every spring for the prior fiscal year. The southern portion of Chino Basin between the desalter well fields and the Santa Ana River is intensively monitored as part of the Chino Basin Maximum Benefit Monitoring Program (sometimes called the Hydraulic Control Monitoring Program or HCMP). This monitoring program includes groundwater-production measurements and high-frequency groundwater-level measurements at production and monitoring wells across the area. These data are studied annually to assess the state of hydraulic control, which is documented in annual reports—the most recent being the *Chino Basin Maximum Benefit Monitoring Program 2009 Annual Report* (April 2010). As noted above, Watermaster conducts this work in a transparent, court-supervised process, and the results of this work are posted on the Watermaster's website and submitted to the Regional Board for review.

4-10 Please refer to response to comment 4-6. Vegetation and habitat surveys already conducted by OCWD, based on consistent and scientifically sound methods, appear to be sufficient to determine the current state of riparian habitat and changes in habitat. Equally important is the development a causal link of changes in habitat to environmental stressors and the monitoring of these stresses. The IEUA will commit to working with the OCWD and other Santa Ana River stakeholders in reviewing the vegetation surveys and related investigations that can identify the key stressors on riparian habitat in the Prado Basin.

4-11 The mitigation measures in the SDEIR that have bearing on this concern are measures 4.3-8 and 4.4-2. The former measure requires adaptive water resource management to control adverse impacts from lowering the groundwater table, and latter would only apply if the stakeholders were going to seeking a permit to alter streambeds. As part of the adaptive management program identified in measure 4.3-8, OCWD could consider purchasing recycled water that it has relied upon historically to maintain the habitat they created as their mitigation for conservation behind Prado Dam.

The five-percent criterion mentioned by the OCWD is technically arbitrary when applied to the Peace II Alternative. There are other causes of habitat loss that must be considered along with slight changes in groundwater elevation. Habitat change due to drought is a natural phenomenon. Vegetation surveys would have to be done biennually for several years to determine the variation in areal vegetation coverage and density of riparian vegetation and as noted above, the relationship of this variability to

environmental stressors would have to be established such that appropriate mitigation measures could be determined.

Thus based on the available data which is quite extensive, the mitigation concepts suggested by the OCWD are premature and lack a nexus as to how the OCWD's proposed mitigation measures relate to the cause of any future adverse change in habitat. Precise metrics that describe the health and state of the riparian habitat in the Prado Basin need to be defined and measurable. The relationship of the change in riparian vegetation and all potential stressors needs to be understood. Appropriate mitigation actions and the assignment of responsibility for mitigation can be made only after the vegetation surveys and stressor monitoring are implemented, as described in the response to comment 4-10.

that, if the vegetation surveys indicate that five percent or more of the vegetation has been negatively impacted or died off, then additional actions should be taken to remediate the negative impacts to vegetation. These actions would include, at a minimum, the following actions:

4-11 cont.

- Restoring the annual amount of surface water flow discharged to Cucamonga/Mill Creek and Chino Creek from IEUA wastewater treatment facilities to the amount historically discharged over the last twenty years, and,
- Restoring the groundwater elevation in Prado Basin to the groundwater elevation observed over the last twenty years.

11. Mitigation Measure 4.4-3, which specifies that discharges from IEUA wastewater treatment plants will exceed 20,000 acre-feet during the period May 1 through October 1 of each calendar year, is vitally important because it provides an indication that adequate surface water flow will be available to sustain habitat in Prado Basin in areas where the riparian habitat is supported by surface water flow. It is also important to note that some areas of Prado Basin are more than 1,000 feet from the surface water bodies like Chino Creek and Mill Creek and riparian habitat in these areas is dependent on shallow groundwater. The continued health of riparian habitat in Prado Basin is dependent upon sufficient surface water flow and the occurrence of shallow groundwater.

4-12

12. The Draft SEIR fails to clearly define the starting baseline physical condition against which both the Baseline alternative and Peace II (Re-Operation) alternative future conditions are compared. The Draft SEIR states, "'Re-Operation' means the increase in controlled overdraft, as defined in the Judgment, from 200,000 acre-ft over the period of 1976 through 2017 to 600,000 acre-ft through 2030 with the 400,000 acre-ft increase allocated specifically to the (sic) meet the replenishment obligation of the desalters." (p. 3-6). Specifically, what current overdraft quantity and corresponding groundwater elevation condition are being used to quantify and project future overdraft and groundwater elevation changes and evaluate potential impacts associated with each of the alternatives? Without a clear definition of the baseline condition, these alternatives in the Draft SEIR cannot meaningfully be evaluated, and the potential impacts from each alternative cannot accurately be assessed.

4-13

13. The baseline condition in the EIR must be defined based on the physical condition existing at the time of the analysis. This is required to be consistent with the standards for analysis under the California Environmental Quality Act.

4-14

14. The Draft SEIR fails to set forth the basis or rationale for selecting 400,000 acre-ft as the target incremental increased overdraft for the Re-Operation

4-15

4-12 Following the release of the SDEIR IEUA initiated an examination of stream flows in the Mill Creek and Chino Creek streams in order to determine whether mitigation measure 4.4-3 is required. The analysis in the biology section of the SDEIR indicates more than sufficient surface water flowing through Prado Basin. The text discussion on pages 4-232 through 4-241 indicates that if there is any existing adverse impact on riparian habitat, it is too much surface flow into the Basin. The best estimate (provided in the referenced SDEIR text) is that the riparian-wetland habitat in Prado Basin requires approximately 25,000 acre-feet per year to support plant evapotranspiration. Excessive flows can induce habitat change, from riparian or wetland habitat to aquatic habitat. The data provided in Attachment 2 (Figure) shows the total volume of flows upstream of Prado Dam from 2000 through 2020, including the percentage of recycled water. In addition, the historic flows in Mill and Chino Creeks have been evaluated and are provided in Attachment 2 (Tables), and the stream flow data at USGS gauges in both creeks indicate a more than adequate volume of flow for the short distance into the Basin.

Based on this re-evaluation of the potential for significant impact, IEUA is now concerned with the potential habitat damage due to excessive water in Prado Basin. Therefore, mitigation measure 4.4-3 is being revised to focus on monitoring and assessing the need for any continued commitment of recycled water flows to these creek channels. The revised measure will read: *4.4-3 IEUA shall monitor flows into the riparian portions of Chino and Mill Creeks over the life of the Peace II Agreement. For that portion of the riparian habitat upstream of Prado Basin, IEUA shall conduct a study to determine the required water balance to support this habitat. A scientific report of findings shall be published, and this publication shall be used to prepare a management plan to assure an adequate supply* of water is available to support this riparian habitat. This management plan shall be implemented by IEUA, Watermaster and stakeholders to ensure an adequate supply of surface water to Mill Creek and Chino Creek to retain the existing habitat.

4-13 IEUA believes that the starting baseline condition is clearly defined. The Baseline Alternative includes 200,000 acre-ft of controlled overdraft for the period 1978 through 2017, an allowed overproduction of 5,000 acre-ft/yr. After 2017, overproduction in the Baseline Alternative requires replenishment. The controlled overdraft in the Baseline Alternative is provided for in the 1978 Judgment.

The Baseline Alternative was simulated with the Watermaster's groundwater model. The baseline groundwater elevation is the time series of groundwater elevations at each model cell, starting with the initial condition in October 1, 2006 and continuing through September 30, 2030. The groundwater elevations for the Baseline Alternative are the expected groundwater elevations throughout the entire model domain through the entire projection period in the absence of the Peace II Alternative.

The Peace II Alternative is identical to the Baseline Alternative, except the Peace II Alternative includes reoperation. A comparison of the groundwater elevations of the Peace II and Baseline Alternatives provides the change in groundwater elevations expected from implementing the Peace II Alternative. The SDEIR and *2009 Production Optimization and Evaluation of the Peace II Project Description* (WEI, 2009), which is included as an appendix to the SDEIR, clearly describes the Baseline and Peace II Alternatives and the hydrologic impacts of the Peace II Alternative.

4-14 Please refer to the response to 4-13 above. As to the hydrologic impacts, the Watermaster groundwater model was calibrated for the period October 1, 1959 through September 30, 2006. The projection period started on October 1, 2006 and ran through September 30, 2030. The starting groundwater elevations used in the model matched observed groundwater elevations very closely, as documented in *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description* (WEI, 2007). The baseline groundwater elevation is the time series of groundwater elevations at each model cell starting with the initial condition in October 1, 2006 and continuing through September 30, 2030. The groundwater elevations for the Baseline Alternative are the expected groundwater elevations throughout the entire model domain through the entire projection period in the absence of the Peace II Alternative. Biology resource baseline physical conditions are shown at an appropriate level of detail for the Peace II Agreement Program in the graphics for the project area, Figures 4.4-1 through 4.4-10. Further, Table 4.4-1 lists all sensitive species that occur within the Chino Basin. This information is sufficient to characterize the baseline condition and from which to monitor future changes in the biology resources of the Chino Basin.

4-15 The 400,000 acre-ft limit for reoperation was established through about three years of investigation that culminated in the report entitled *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description* (WEI, 2007). The project description will be modified to include a similar statement and the reference cited above.

4-15 cont. alternative. Please provide that information in the SEIR, together with the evidence to support it.

4-16 15. As a property owner in the Prado Basin, OCWD is concerned that subsidence could impact OCWD facilities in the Prado Basin. OCWD facilities that could be impacted include pipelines, wells, levees, and wetlands.

4-17 16. Page 1-18 (mitigation measure 4.3-10) of the Draft SEIR indicates that a subsequent environmental document will be prepared if modeling indicates that expanded CDA desalter pumping will contribute to inelastic subsidence in the MZ1 Managed Area. The preparation of a subsequent study to determine impacts is improper deferral of analysis under CEQA. Also, the Draft SEIR fails to identify whether there is a threshold (e.g., six inches) below which subsidence is considered less than significant in the context of this mitigation measure?

4-18 17. Page 1-19 (mitigation measure 4-3-11b) of the Draft SEIR indicates that pumping patterns for the desalters will be modified to reduce impacts if desalter well fields are demonstrated to cause new inelastic subsidence impacts within the MZ1 Managed Area by a decline of over six inches. It is not clear how this mitigation measure fits with mitigation measure 4.3-10. Will the subsequent environmental document discussed in mitigation measure 4.3-10 include the environmental evaluation associated with the modified pumping patterns? In addition, we are concerned that mitigation measure 4-3-11b fails to mitigate the impact until the impact has occurred.

4-19 18. Page 3-8 (Table 3-1) of the Draft SEIR lists "SAR Inflow" in the title of the table, yet no column heading includes this. Presumably, "New Yield" is synonymous with "SAR Inflow," but this should be clarified.

4-20 19. Page 3-9 of the Draft SEIR discussed the 150,000 acre-feet Dry Year Yield Program, yet it is not clear if this volume is included within the 600,000 acre-feet of overdraft under the Re-Operation plan. In other words, can any or all of the 150,000 acre-feet that could be stored and pumped under the Dry Year Yield Program cause the accumulated overdraft to exceed 600,000 acre-feet and, if so, where have these impacts been evaluated in the Draft SEIR? The cumulative effect of the Dry Year Yield Program and the Re-Operation Plan need to be evaluated in the SEIR.

4-21 20. Page 4-53 (Table 3-1, footnote 6) of the Draft SEIR indicates that half of desalter pumping has been assumed to be replenished by induced recharge in the Santa Ana River through 2004-05 and that 30 percent of desalter pumping have been replenished by induced recharge in 2005-06 (and apparently in 2006-07 and 2007-08). What was the basis for these assumptions, and were these quantities used as groundwater model inputs for recharge, or was the model used to calculate induced recharge from the river? If the latter was true,

4-16 The OCWD's concerns about land subsidence impacts are noted. The OBMP implementation plan (Peace Agreement, Exhibit B, page 28) states "The occurrence of subsidence in Management Zone 1 is not acceptable and should be reduced to tolerable levels or abated. The OBMP calls for a management plan to reduce subsidence or abate subsidence and fissuring problems to the extent that it may be caused by production in MZ1." Watermaster cannot develop a groundwater management plan that conflicts with the OBMP and/or the Peace Agreement. Please refer to response to comment 3-11 for a more detailed discussion of this issue.

Watermaster's groundwater modeling (WEI, 2009) suggests that subsidence associated with the Peace II project will be insignificant in the Prado Basin. This is because drawdown of piezometric levels is predicted to be minimal in Prado Basin. Watermaster has three nested monitoring wells (HCMP-4, HCMP-5, and HCMP-6) that are located within or just up gradient of the Prado Basin which will be used to monitor piezometric levels before and after construction and startup of the CCWF.

4-17 Please refer to response to comment 3-11. Mitigation Measure 4.3-10 pertains to the MZ1 Managed Area only. The modeling work performed to evaluate the Peace II Alternative did not estimate drawdown in the deep aquifer system in the MZ1 Managed Area to exceed the so-called Guidance Level, which is the threshold where the aquifer-system deformation transitions from purely elastic to inelastic (*i.e.* permanent land subsidence). Therefore, this mitigation measure is not applicable. The SDEIR text will be modified accordingly.

Permanent (inelastic) compaction of aquifer sediments, which results in permanent subsidence of the land surface, and in some cases causes ground fissuring, is the main concern. Elastic subsidence and rebound of the ground surface as groundwater levels fluctuate is not a concern because the magnitude of elastic subsidence and rebound is small (less than 2 inches anywhere in the Chino Basin) and has never been associated with damage to overlying infrastructure. Conversely, as much as 4-5 feet of permanent subsidence has occurred in some areas of the Chino Basin since about 1933. Where this permanent subsidence was *differential* in its spatial occurrence, the ground surface cracked (ground fissuring), damaging overlying infrastructure in the southwestern portion of the Chino Basin in the early 1990s. Ground fissuring is the primary subsidence-related hazard in the Chino Basin, and groundwater pumping and recharge should be managed to minimize the potential for the occurrence of ground fissuring.

4-18 The detailed modeling data support the finding in the SDEIR that substantial inelastic subsidence is not forecast to occur from implementing the Peace II Agreement Program. As indicated in response to comment 3-11, the mitigation language will be revised to reflect the requirements of the OBMP, which will require additional monitoring and adaptive management of pumping to control potential for subsidence. IEUA believes that monitoring and adaptive management of desalter pumping, based on the analysis of monitoring data, is the appropriate method to identify and mitigate subsidence-related hazards in a timely manner. If new wells are required in the future to address a greater impact from pumping (as envisioned in measure 4.3-8), additional environmental documentation may be required prior to implementing the new wells and their location. This is consistent with the implementation of a broad program such as the Peace II Agreement.

4-19 In the Peace Agreement, "New Yield" is defined as "proven increases in yield in quantities greater than historical amounts form sources of supply including, but not limited to, capture of rising water, capture of available storm flow, operation of desalters (including the Chino I Desalter), induced recharge and other management activities implemented and operational after June 1, 2000." The new yield referred to Table 3-1 is new Santa Ana River recharge that is induced through Reoperation. The text and table will be revised to make this clear.

4-20 The 150,000 acre-ft/yr DYY Program operates on put and take cycles such that takes from the program can only occur if the DYY program has water in storage, and the cumulative takes cannot exceed the cumulative puts. The DYY Program will not cause the approved overdraft to exceed 600,000 acre-ft envisioned in the Peace II Agreement. Recent takes from the DYY program, through 2009/10, were included in the groundwater simulations of the Baseline and Peace II Alternatives. The water in DYY storage was completely pumped out of the Basin in these simulations in 2009/10. After 2009/10, it was assumed in the simulations that there would be no new puts or takes from the DYY program (1) because the DYY program impacts have been demonstrated to be very small; (2) because the DYY program increases the volume of water in storage it would partially mask the drawdown impacts of Reoperation (a conservative assumption as to drawdown); and (3) due to changes in surplus water availability in the Sacramento Delta, it is likely that there will be limited or no puts into the DYY program for the foreseeable future.

4-21 Table 3-1 on page 3-53 comes from Watermaster accounting through fiscal 2007/08. The term "Desalter Induced Inflow" and the footnote refer to specific assumptions for accounting purposes. This table was abstracted from the 2008 State of the Basin Report and is used to characterize Watermaster operations. The induced Santa Ana River inflow values included in this table were not used as input to the Watermaster groundwater model. The projected induced Santa Ana River recharge for impact analysis was determined from an iterative process using the Watermaster groundwater model.

4-21 cont. how did the assumed values compare with the model values? If the former is true, then what model parameters needed to be adjusted during the calibration process to use these assumed values as input data?

4-22 21. Page 4-110 of the Draft SEIR states that "increased recharge into the Chino Basin from the Santa Ana River and the decrease in discharge to the Santa Ana River and evapotranspiration total about 63,000 acre-feet over the planning period." The Draft SEIR does not state clearly how this value was derived. Please clarify how this value was derived.

4-23 22. Figures 3-1 and 3-3 of the Draft SEIR illustrate a paucity of well locations in the Prado Basin from which hydrogeologic and groundwater level data could be used for model construction and calibration. The Draft SEIR did not include any historical groundwater elevation data at wells in the Prado Basin. Given the sensitive riparian habitat in this area, sufficient baseline data are necessary to develop a representative and accurate base condition from which projected future conditions can be compared. In the apparent absence of hydrogeologic and water level data in the Prado Basin area, what analyses were done to develop the conceptual hydrogeologic understanding of: (1) hydraulic interaction between surface water and groundwater, and (2) hydraulic interaction between near-surface groundwater (i.e., within the zone of riparian vegetation utilization) and model Layer 1, and 3) hydraulic interaction between model Layer 1 and Layer 2?

4-24 23. Given the apparent lack of hydrogeologic and water level data in the Prado Basin area, what level of confidence can be placed on the groundwater elevation contours in this area (Figures 3-16 through 3-18 of the Draft SEIR) and estimated change in groundwater storage in this area (Figures 3-20 through 3-22 of the Draft SEIR), both of which form the basis of the conditions against which future alternative conditions are compared? To serve as an informational document for governmental decision-makers and the public, the confidence level of the data should be stated clearly in the SEIR.

4-25 24. Given the apparent lack of hydrogeologic and water level data in the Prado Basin area, what level of confidence can be placed on the calibration of hydraulic parameters (i.e., hydraulic conductivity, storage coefficient, surface water-groundwater hydraulic connectivity, and inter-aquifer hydraulic connectivity) used in the numerical groundwater model which was used to project future conditions for the Baseline and Peace II alternatives? What analyses were performed to assess the sensitivity of these hydraulic parameters in affecting the model projections? Please include this information in the SEIR, as it is needed to assess the SEIR's conclusions regarding potential impacts in the Prado Basin and the surrounding area.

4-26 25. Since the underlying conceptual hydrogeologic understanding in the Prado Basin area forms the basis of the numerical model used to project future

4-22 The 63,000 acre-ft increase in recharge over the planning period is based on the "totals" row in Table 4-7 on page 4-107 and Table 5-1 on page 4-111. The total increase in streambed recharge over the planning period is 47,155 acre-ft (equal to 942,320 minus 895,165). The decrease in rising groundwater over the planning period is 12,233 acre-ft (equal to 287,541 minus 275,308). The decrease in evapotranspiration over the planning period is 3,649 acre-ft (equal to 337,198 minus 333,549). The total increase in recharge to the Basin over the planning period is 63,037 (equal to 47,155 plus 12,233 plus 3,649).

4-23 Figures 3-1 and 3-3 in the SDEIR are generalized figures of the Chino Basin and the Fall 2006 groundwater-level elevation contours, respectively. Neither figure illustrates the wells and data used to construct and calibrate Watermaster's groundwater model. The groundwater model was developed during 2006 and 2007 by Wildermuth Environmental, Inc. in a very public process. The model is thoroughly documented in *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description* (WEI, 2007). This report documents the wells and data used to construct and calibrate the groundwater model. More than 10 wells that are located within or around Prado Basin—each with geophysical logs, lithologic descriptions of borehole sediments, water-level data, water-quality data, and/or other well information—were used to construct the model layering and geometry. More than 30 wells that are located within or around Prado Basin—each with lithologic descriptions of borehole sediments—were used to estimate initial aquifer properties and their heterogeneities prior to calibration. Some wells (in particular, HCMP-6) were constructed for the very reason of characterizing the hydrogeology beneath Prado Basin. HCMP-6 is a borehole that was drilled within Prado Basin to more than 600 ft deep, and was completed as a nested set of three monitoring wells, which are individually screened across Layer 1, Layer 2, and Layer 3 of the aquifer system. Water-level data are collected at each monitoring well by pressure-transducers/data-loggers once every 15 minutes to help characterize piezometric levels and the vertical hydraulic gradients between aquifer layers. The piezometric levels are used to construct groundwater-level elevation maps for the various monitoring programs being conducted by Watermaster and IEUA. Measurements of groundwater quality, vertical hydraulic gradients, and changes in those gradients in response to pumping or other stresses characterize the interaction of groundwater flow between aquifer layers.

The intensity and comprehensive nature of the monitoring described above is common for over 100 wells in the southern Chino Basin, as required by the Chino Basin Maximum Benefit Monitoring Program. All of these data were analyzed and used to assist in the construction and calibration of Watermaster's groundwater model.

4-24 The figure numbers referenced in the comment do not match the figures we believe the OCWD is referencing in the SDEIR. We believe the OCWD is referencing Figures 4.3-21 through 4.3-24, which depict 2000, 2003, 2006, and 2008 groundwater-elevation contours; and Figures 4.3-25 through 4.3-27, which are change in groundwater storage maps. These are generalized groundwater-elevation and change in storage maps that were extracted from Watermaster's biannual State of the Basin Report. The maps do not illustrate the wells and data that were used to generate the groundwater-elevation contours or the change in storage estimates.

We interpret that the OCWD's main concern in this comment is the level of confidence in the groundwater-elevation contours that have been (or will be) drawn in the Prado Basin area. Mapping groundwater elevations is an exercise in interpolation between known points (e.g. wells). More data is always better. We acknowledge that the Prado

Basin has fewer wells for groundwater-elevation monitoring compared to some other areas of the Chino Basin; that said, wells and data are not all together lacking in the Prado Basin. Watermaster and the IEUA have been proactive in locating all existing wells and monitoring for groundwater levels at a high frequency. Furthermore, three nested monitoring wells (HCMP-4, HCMP-5, and HCMP-6) were constructed in 2005 for the purpose of characterizing the hydrogeology and for monitoring groundwater levels and quality within and immediately up gradient of Prado Basin. The groundwater elevation data suggest that groundwater in Layer 1 is rising to become surface water in the southern portion of the Prado Basin—where existing wells are especially scarce. In these areas, the ground surface itself can be used as an estimate of the groundwater elevation in Layer 1. Watermaster and the IEUA have acquired and use a high-resolution (1-meter pixel) digital elevation model to estimate Layer 1 groundwater elevations in the southern portion of Prado Basin. The DEM and all measuring points at wells have been referenced to a common elevation datum (the Ayala Park Extensometer), which is a steel pipe that rests on a concrete pad at 1,400 ft-below-ground-surface. These data and information are used to draw equal-elevation contours of groundwater levels in the Prado Basin, which are reported in the Annual Report of the Chino Basin Maximum Benefit Monitoring Program. In other words, Watermaster and the IEUA have maximized the use of existing wells and information to draw groundwater-elevation contours with a high level of confidence in the Prado Basin area, and they analyze and report on these data and interpretations annually to the Court and the Regional Board. The OCWD has the opportunity to review and comment on the data and annual reports.

4-25 Again, we refer the OCWD to the *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description* (WEI, 2007) for documentation of the model calibration process and results.

Two points are important here, which were derived from a comprehensive sensitivity analysis performed during model calibration: (1) WEI chose not to include any wells located in Prado Basin for model calibration because groundwater elevation changes in Prado Basin are relatively insensitive to aquifer properties. We believe this to be true because Prado Basin is far away from the main sources of aquifer stresses (pumping and replenishment) and because Prado Basin is an area of discharge as rising groundwater. (2) Groundwater elevations elsewhere in Chino Basin are relatively sensitive to aquifer properties in Prado Basin, so these aquifer properties were calibrated using nearby calibration wells. In short, we are confident in the calibrated aquifer properties in the Prado Basin area.

4-26 The groundwater model was developed during 2007 by Wildermuth Environmental, Inc. in a very public process. The model is thoroughly documented in *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description*. (WEI, 2007), which is listed as a reference in the SDEIR and in the *2009 Production Optimization and Evaluation of the Peace II Project Description* (WEI 2009). The 2007 report is posted on the Watermaster's website and has been since December 2007.

This report documents the wells and data used to construct and calibrate the groundwater model. More than ten wells that are located within or around Prado Basin – each with geophysical logs, lithologic descriptions of borehole sediments, water-level data, water-quality data, and/or other well information – were used to construct the model layering and geometry. More than 30 wells that are located within or around Prado Basin – each with lithologic descriptions of borehole sediments – were used to

estimate initial aquifer properties and their heterogeneities prior to calibration. Some wells (in particular, HCMP-6) were constructed for the very reason of characterizing the hydrogeology beneath Prado Basin. HCMP-6 is a borehole that was drilled within Prado Basin to more than 600 feet deep, and was completed as a nested set of three monitoring wells, which are individually screened across Layer 1, Layer 2, and Layer 3 of the aquifer system. Water-level data are collected at each monitoring well by pressure-transducers/data-loggers once every 15 minutes to help characterize piezometric levels and the vertical hydraulic gradients between aquifer layers. The piezometric levels are used to construct groundwater-level elevation maps for the various monitoring programs being conducted by Watermaster and IEUA. Measurements of groundwater quality, vertical hydraulic gradients, and changes in those gradients in response to pumping or other stresses characterize the interaction of groundwater flow between aquifer layers.

The intensity and comprehensive nature of the monitoring described above is common for over 100 wells in the southern Chino Basin, as required by the Chino Basin Maximum Benefit Monitoring Program. All of these data were analyzed and used to assist in the construction and calibration of Watermaster's groundwater model.

The calibration results in the southern part of the Basin are included in the 2007 report. The quality of the calibration is excellent, and we have a high level of confidence in its predictive capabilities. The text in the SDEIR will be modified to include a reference to the 2007 report and statements on the quality of the calibration over the Basin, and specifically the area of the Prado Basin. The 2007 report will be included as an appendix of the final SEIR.

4-26 cont. conditions of the Baseline and Peace II alternatives in this sensitive habitat area, what level of confidence can be placed on the results of the model in predicting future conditions such as the model-projected groundwater elevation and change contours for this area shown on Figures 4-10a through 4-12b of the Draft SEIR?

4-27 26. Tables 4-7 and 5-1 of the Draft SEIR indicate that rising water is still projected to occur in 2030 in the Prado Basin area even though hydraulic containment is reportedly achieved. If so, what is the source and mechanism by which groundwater can continue to rise and become surface water in this area?

4-28 27. Page 4-234 of the Draft SEIR states that "As a five year moving average, baseflow at Prado has ranged from approximately 250,000 to 410,000 acre-feet/year since 1992. These figures are clearly not baseflow and may represent total flow. This sentence should be corrected.

4-29 28. These comments were prepared with assistance from OCWD staff, including Roy Herndon, Richard Zembal, and Greg Woodside. These three OCWD staff members have over 20 years of experience in their technical fields. Roy Herndon and Greg Woodside are both Professional Geologists and Certified Hydrogeologists in the State of California. Roy Herndon is the Director of Hydrogeology at OCWD. Greg Woodside is the Director of Planning and Watershed Management at OCWD. Before working for OCWD, Richard Zembal was employed at the U.S. Fish and Wildlife Service from 1980 to 1997, and served as the Deputy Field Supervisor, Supervisory Fish and Wildlife Biologist. Since 2000, Richard Zembal has been the Director of Natural Resources at OCWD.

Thank you for the opportunity to submit these comments.

Michael R. Markus, P.E.
General Manager

Attachment One (Bureau of Reclamation report on replenishment reliability)

4-27 The main sources of rising groundwater in the Prado Basin management zone include deep percolation of precipitation and applied water, streambed recharge that occurs in the Prado Basin management zone itself, and streambed recharge in the Santa Ana River that occurs up-gradient of the Prado Basin management zone that subsequently flows into the Prado Basin management zone as subsurface inflow.

4-28 This comment is correct, it represents total flow and the text in the Final SDEIR will be corrected.

4-29 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR.

Attachment One

Hydraulic Control Monitoring Plan Task 5.2: Aerial Photographs (2003) and Vegetation Mapping into Cover Types October 2008 Final Report, prepared by Bureau of Reclamation

Inland Empire Utilities Agency

Hydraulic Control Monitoring Plan Task 5.2: Aerial Photographs (2003) and Vegetation Mapping into Cover Types October 2008 Final Report

Hydraulic Control Monitoring Plan
Task 5.2: Aerial Photographs (2003) and vegetation mapping into cover types

Prepared for Inland Empire Utilities Agency October 2006

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Introduction

In 2003, the Bureau of Reclamation's Lower Colorado Regional Office (Reclamation) was given the task of monitoring the vegetation at the Prado Reservoir as hydraulic control in the Chino Groundwater Basin was initiated. This report details the aerial photographs that were taken in 2003 and the delineation of the aerial photographs into cover types. Aerial photographs will be taken and delineated again in 2015 and acreage will be compared to the 2003 results in a final report.

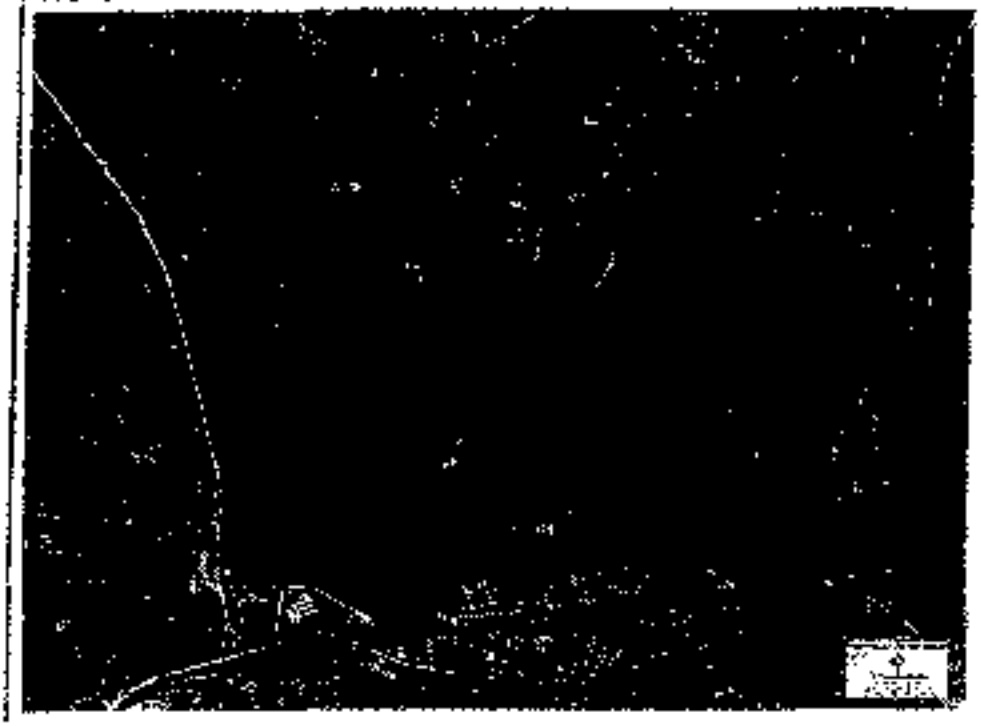
As increased urbanization occurs and a larger volume of water is recycled in the Chino Basin, the Inland Empire Utilities Agency and Orange County Water District are concerned about the quality of the water as it flows into the Santa Ana River. Groundwater pumping was proposed in the Optimum Basin Management Program to intercept the Chino Basin groundwater before it reaches the Santa Ana River. This will insure that downstream users are not impaired by management activities in the Chino North Management zone (Wildermuth Environmental, Inc. June 2003).

The decrease in groundwater level in Prado Reservoir as a result of groundwater pumping to achieve hydraulic control of the Chino Basin may affect the riparian habitat at Prado Reservoir (Wildermuth Environmental, Inc. June 2003). Riparian habitats are an ecologically important part of the landscape, containing higher values of species richness and composition than other habitats, which are essential to maintain regional biodiversity (Corbacho, Sanchez and Costillo 2002). Conservation of the riparian habitat of the Prado Reservoir is important to the Inland Empire Utilities Agency, Orange County Water District, Reclamation and other entities involved in water and habitat conservation.

Study Area

Approximately 2429 ha (6000 ac) of riparian habitat lie upstream of Prado Dam, creating the largest riparian habitat in Southern California (Figure 1). The Prado Reservoir hosts more that 311 species of vascular plants, 7 species of amphibians, 13 species of reptiles, 47 species of breeding birds, 11 species of raptors and 23 species of mammals. Two drainages flow into the Prado Reservoir from the north: Chino Creek and Mill Creek. The riparian habitat of Prado Reservoir, Mill Creek, Chino Creek, Santa Ana River and Temescal creek is dominated by native plants, including Goodding's willow (*Salix gooddingii*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), sandbar willow (*Salix hindsiana*), Fremont cottonwood (*Populus fremontii*), black cottonwood (*Populus trichocarpa*), mulefat (*Baccharis* spp.), stinging nettle (*Urtica holsericeus*) and castor bean (*Ricinus communis*). Non-native plants such as giant reed (*Arundo donax*), common olive trees (*Olea europaea*), saltcedar (*Tamarix* spp.) and eucalyptus species (*Eucalyptus* spp.) have invaded the Prado Reservoir (USFWS 1985).

Figure 1. Aerial view of Prado Reservoir, Mill Creek, Chino Creek, Santa Ana River and Temescal Creek.



Methods

In November 2003, aerial photographs were taken of the entire Prado Reservoir, and riparian areas along Mill Creek, Chino Creek, Santa Ana River and Temescal Creek. Aerial photographs were taken at a scale of 1:6000 and orthorectified.

Methods for typing out the aerial photographs were taken from the United States Fish and Wildlife Service (USFWS) system for mapping riparian areas in the Western United States and the National Wetlands Inventory (Cowardin et al. 1979, USFWS 1995, 1998). Every effort was made to identify all observable areas, if not by polygon, then by either point or single line features.

Areas were classified as either riparian, wetland, or deepwater habitats. The USFWS definitions were used for riparian, wetland, and deepwater habitats (Cowardin et al. 1979, USFWS 1995, 1998). "Riparian habitats are plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (rivers, streams, lakes or drainage ways). Riparian habitats have one or both of the following characteristics: 1) distinctively different vegetative species than adjacent areas and 2) species similar to adjacent areas but exhibiting more vigorous or robust growth forms. Riparian

habitats are usually transitional between wetland and upland. They lack the amount or duration of water usually present in wetlands, yet are "wetter" than adjacent uplands" (USFWS 1998). "Wetland habitats are land transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetland habitats must have one or more of the following three attributes: 1) at least periodically, the land supports predominantly hydrophytes; 2) the substrate is predominantly undrained hydric soil and 3) the substrate is nonsoil; and is saturated with water or covered by shallow water at some time during the growing season of each year" (Cowardin et al. 1979, USFWS 1995). "Deepwater habitats are permanently flooded lands lying below the deepwater boundary of wetlands" (Cowardin et al. 1979, USFWS 1995).

Riparian habitats were mapped according to the USFWS system for mapping riparian areas in the Western United States (USFWS 1998). Every polygon, point and line were assigned to a cover type and given a code that included system, subsystem, class, subclass, dominance type and percent cover. Cover types used followed the USFWS hierarchical classification system for riparian areas with some modifications (Table 1) (USFWS 1998). For example, a monotypic stand of willow (*Salix* spp.) with 85% cover was coded as RpIFO6WI5 (USFWS 1998).

The minimum mapping unit used was 1.0 ha (2.5 ac). The following rules were used in mapping: 1) the tallest life form, making up at least 30% cover, defined the class; 2) the mixed subclass was a mix of woody evergreen and deciduous vegetation. Each comprised at least 30% of the vegetative cover; 3) other than number 2 above, the only mixing was of dominance types (each at least 30%). No more than 2 dominance types were mixed and 4) a line showing wetland and riparian codes were used when both wetland and riparian units comprised an area less than a pen width. This was done when the wetland and riparian areas were so narrow that mapping as a distinct polygon could not be done. Therefore, labels for both were applied to a single linear feature (USFWS 1998).

The main purpose of this project was to delineate riparian habitats into cover types. However, the mapping area included wetland and deepwater habitats. Wetland and deepwater habitats were classified according to the USFWS wetland hierarchical classification system (Cowardin et al. 1979, USFWS 1995) (Table 2 and Table 3). All wetland and deepwater habitats were classified to system, subsystem, and class. The emergent, scrub-shrub, and forested classes were classified to subclass and dominance type when possible (Cowardin et al. 1979, USFWS 1995). The minimum mapping unit used was 1.0 ha (2.5 ac).

Table 1. Riparian Cover Types (USFWS 1998).

Classification	Cover types and Definitions
System	A single unit category-riparian vegetation (Rp)
Subsystem	Defines two categories reflecting the water source for the riparian area lotic (1) and lentic (2)
Class	Describes the dominant aquatic life form of riparian vegetation. For these conventions, classes are: forested (FO) woody vegetation usually greater than 6 m (20 ft) in height; scrub/shrub (SS) woody vegetation usually less than 6 m (20 ft) in height and emergent (EM) erect, rooted vegetation with herbaceous stems.
Subclass	further describes the Class as either deciduous (6), evergreen (7) or mixed deciduous/evergreen (8)
Dominance Type	Dominant species. WI=willow species (*Salix* spp.), EU=Eucalyptus species, Ar=Arundo, CO=common olive, MF=mulefat;
Percent Cover	dense (80-100 % cover), medium (50-80 % cover) and sparse (30-50 % cover)

Table 2. Wetland and Deepwater Cover Types according to the USFWS Wetland Hierarchical Classification System (Cowardin et al. 1979, USFWS 1995).

Classifications	Cover Types
System	Marine, Estuarine, Riverine, Lacustrine, Palustrine
Subsystem	Subtidal, Intertidal, Tidal, Lower Perennial, Upper Perennial, Intermittent, Unknown Perennial, Limnetic, Littoral
Class	Rock Bottom, Unconsolidated Bottom, Aquatic Bed, Reef, Streambed, Rocky Shore, Unconsolidated Shore, Emergent Wetland, Scrub-Shrub Wetland, Forested Wetland, Reef, Moss/Lichen,
Subclass	Bedrock, Rubble, Cobble-Gravel, Sand, Mud, Organic, Algal, Aquatic Moss, Rooted Vascular, Floating Vascular, Unknown Submergent, Unknown Surface, Coral, Mollusk, Worm. Vegetated, Moss, Lichen, Persistent, Non Persistent, Broad-leaved Deciduous, Needle-leaved Deciduous, Broad-leaved Evergreen, Needle-leaved Evergreen, Dead, Deciduous, Evergreen

Table 3. Definition of Wetland and Deepwater Cover Types used in the mapping of the Prado Reservoir, Santa Ana River, Mill Creek, Chino Creek and Temescal Creek (Cowardin et al. 1979, USFWS 1995).

Riverine (System) Code-R	All wetland and deepwater habitats contained within a channel except those dominated by trees, shrubs, emergents, mosses or lichens and habitats with a salt content of greater than 0.5 ‰. The channel periodically or continuously contains flowing water or forms a connecting link between two bodies of standing water.
Lacustrine (System) Code-L	All wetland and deepwater habitats situated in a topographic depression or dammed river channel, lacking trees, shrubs, persistent emergents, mosses or lichens with greater than 30 % areal coverage. Total area greater than 8 ha (20 ac). May be tidal or non-tidal, but ocean-derived salinity is always less than 0.5 ‰. Total area may be less than 8 ha (20 ac) if the water depth is greater than 2.0 m (6.6 ft) or wetland contains a wave formed or bedrock shoreline boundary.
Palustrine (System) Code-P	Non-tidal wetland habitats dominated by trees, shrubs, persistent emergents, emergent mosses or lichens and all such wetlands that occur in tidal areas where salinity is below 0.5 ‰. Wetland habitats lacking vegetation are included if they are less than 8 ha (20 ac), do not contain a wave-formed or bedrock shoreline and have a water depth less than 2.0 m (6.6 ft) or water depth is unknown.
Unknown Perennial (Riverine Subsystem) Code-5	This cover type was used because the distinction between lower perennial, upper perennial and tidal could not be made.
Limnetic (Lacustrine Subsystem) Code-1	All deepwater habitats within the Lacustrine System.
Unconsolidated Bottom (Class) Code-UB	All wetland and deepwater habitats with at least 25% cover of particles less than stones and a vegetative cover less than 30%. Water regimes are restricted to subtidal, permanently flooded tidal and non-tidal, intermittently exposed and semi permanently flooded tidal and non-tidal.
Forested Wetland (Palustrine Class) Code-FO	Areas dominated by woody vegetation that is greater than 6 m (20 ft). This cover type occurs in all water regimes except subtidal.
Broad-leaved Deciduous (Forested Subclass) Code-1	Deciduous broad-leaved trees.

Digital pictures of the aerial photographs were downloaded into ArcView Geographic Information Systems version 3.3. Polygons were delineated into cover types in ArcView at a scale of 1:4000. Each cover type was assigned a different color and unique number (1 to 32). Area in hectares and acres were calculated for each polygon. The area of polygons of similar cover types were added together to calculate hectare and acres per cover type. A shape layer was made of the different cover types, each cover type having a unique color and number (Appendix 1).

A thematic accuracy assessment was not conducted for the following reasons: 1) the area was very monotypic with 1 cover type accounting for 60 % of the area and 5 cover types accounting for almost 90 % of the area; 2) on the ground measurements were collected for two years so Reclamation biologists had previous knowledge of the vegetation in the area; 3) the water districts in the area employ field biologists that have extensive knowledge of the vegetation in the area and 4) some of the area especially the southern section close to the dam would have been inaccessible due to water levels. The extensive knowledge of vegetation in the area between Reclamation and water district employees combined with the monotypic nature of the area gave Reclamation biologists confidence in the accuracy of the delineated cover types.

Results

Riparian habitats were mapped within the Prado Reservoir, and all riparian areas along Mill Creek, Chino Creek, Santa Ana River, and Temescal Creek using aerial photographs taken in November 2003. Total riparian habitat mapped encompassed 1814 ha (4481 ac). Twenty-five cover types and 103 separate polygons of riparian habitat were mapped (Appendix 1). The cover type willow species dense cover was the most abundant, comprising 58 % of all riparian habitat (Table 4, Appendix 1). The five most abundant cover types comprised 89 % of all riparian habitat (Table 4, Appendix 1).

Wetland and deepwater habitats were mapped within the Prado Reservoir, and all riparian areas along Mill Creek, Chino Creek, Santa Ana River, and Temescal Creek from aerial photographs taken in November of 2003. Total wetland and deepwater habitat mapped encompassed 315 ha (779 ac). Six cover types and 19 separate polygons of wetland and deepwater habitat were mapped (Appendix 1). The water treatment ponds encompassed the greatest area, comprising 59 % of all wetland and deepwater habitat (Table 5, Appendix 1).

Table 4. Riparian Habitat Classification. Number of Hectares per Cover Type.

Classification Code	Classification Description	Number of Hectares	Number of Acres	Map Number*
Rp1FO6WID	Willow species dense cover	1055.6	2607.3	21
Rp1FO6WI/ARD	Willow species and arundo dense cover	202.0	498.9	17
Rp1FO6WIS	Willow species sparse cover	163.5	403.8	23
Rp1SS6ARD	Arundo dense cover	95.8	236.7	26
Rp1FO6WIM	Willow species medium cover	90.5	223.5	22
Rp1FO6WI/ARS	Willow species and arundo sparse cover	56.2	138.8	19
Open area	Clearing in middle of vegetation	30.2	74.7	31
Rp1FO6COS	Common olive sparse cover	19.3	47.8	10
Rp1SS6D	Unknown shrub species dense cover	16.4	40.6	29
Rp1FO6WI (dead)D	Dead willow species dense cover	16.0	39.5	14
Rp1FO6COM	Common olive medium cover	15.0	37.0	9
Rp1FO6COD	Common olive dense cover	7.0	17.3	8
Rp1SS6S	Unknown shrub species sparse cover	6.2	15.3	30
Rp1FO6WI (dead)S	Dead willow species sparse cover	6.0	14.8	16
Rp1SS6ARS	Arundo sparse cover	5.7	14.1	28
Rp1SS6AR(dead)M	Dead arundo medium cover	4.7	11.5	24
Rp1FO6WI/EUS	Willow species eucalyptus species sparse cover	4.1	10.1	20
Rp1SS6ARM	Arundo medium cover	4.0	9.9	27
Rp1FO6EUS	Eucalyptus species sparse cover	3.4	8.4	13
Rp1FO6EUM	Eucalyptus species medium cover	2.9	7.2	12
Rp1FO6EUD	Eucalyptus species dense cover	2.7	6.7	11
Rp1FO6WI/ARM	Willow species and arundo medium cover	2.5	6.2	18
Paint ball	Development (paintball)	2.3	5.7	31
Rp1FO6WI (dead)M	Dead willow species medium cover	2.0	4.8	15
Rp1SS6AR/BAM	Arundo and baccharis species medium cover	0.3	0.7	25

*Map number refers to number the classification is given on the map in Appendix 1.

Table 5. Wetland and Deepwater Classification: Number of Hectares per Cover Type.

Classification Code	Classification Description	Number of Hectares	Number of Acres	Map Number*
Palustrine	Water treatment wetlands	186.7	461.4	5
LIUB	Lentic open water greater than 3 ha (8 ac)	46.1	113.9	1
RSUH	River unknown perennial	38.0	93.9	6
PFO1WT	Willow species dominated wetland	27.6	68.2	2
PUB/FO1WT	Willow species and open water wetland	10.4	25.8	4
PUB	Lentic open water less than 3 ha (8 ac)	6.4	15.8	3

*Map number refers to number the classification is given on the map in Appendix 1.

Discussion

Hydraulic Control Monitoring Plan Task 5.2 in the work plan calls for five years of on the ground vegetation monitoring to take place (Wildermuth Environmental, Inc. June 2003) in 2003, 2007, 2009, 2012, and 2015. Vegetation monitoring will occur during all five years identified in the plan while aerial photographs will be acquired and delineated in 2003 and 2015.

This report details results from the first year of aerial photograph delineation. The work went as expected and no problems or issues arose. Photographs of Prado Reservoir, Mill Creek, Chino Creek, Santa Ana River, and Temescal Creek were successfully acquired and orthorectified. The corresponding area was also successfully mapped into cover types and saved into a file in ArcView Geographic Information Systems version 3.3. The cover type that comprised the largest portion of the system by far was willow species dense cover.

The following three products arose from this task: 1) a final report of the 2003 aerial photographs and vegetation mapping into cover types; 2) a orthorectified digital version of the aerial photographs and 3) a shape file of the cover types with each cover type having a unique color or design.

Aerial photographs may be taken again in 2015 and the data in 2003 can be compared to the data in 2015 to see if there are any large scale changes across the system. A t test can be used to compare differences in the area of each cover type between years.

Aerial photographs were designed to detect large scale change over the entire system. Vegetation monitoring was designed to detect smaller scale change in areas that would be most

effected by hydraulic control. These two monitoring techniques in combination will detect change in riparian vegetation that occurs as a result of hydraulic control.

Recommendations

Acquire aerial photographs in 2015, map the area of each cover type, and conduct a t test to see if there are any changes in the area of the cover types between years.

Acknowledgements

The Bureau of Reclamation would like to thank the Inland Empire Utilities Agency and the Orange County Water District for their generous support in the vegetation monitoring Project at the Prado Reservoir. Reclamation would like to thank Barry Kehl, Inland Empire Utilities Agency, and Richard Zembal, Orange County Water District, for support in project design, logistics, and final product. Reclamation would also like to thank David McMichael, Susan Hoffman, Bonnie Nash, Allyson Beckman, Talula Barbee and Nicole Peltier of the Orange County Water Distric for support in field assistance, knowledge of vegetation in area and logistics.

Literature Cited

Cerbarko, C., J. M Sanchez, and E. Costillo. 2003. Patterns of structural complexity and human disturbance of riparian vegetation in agricultural landscapes of a Mediterranean area. Agricultural, Ecosystems and Environment 95:495-507.

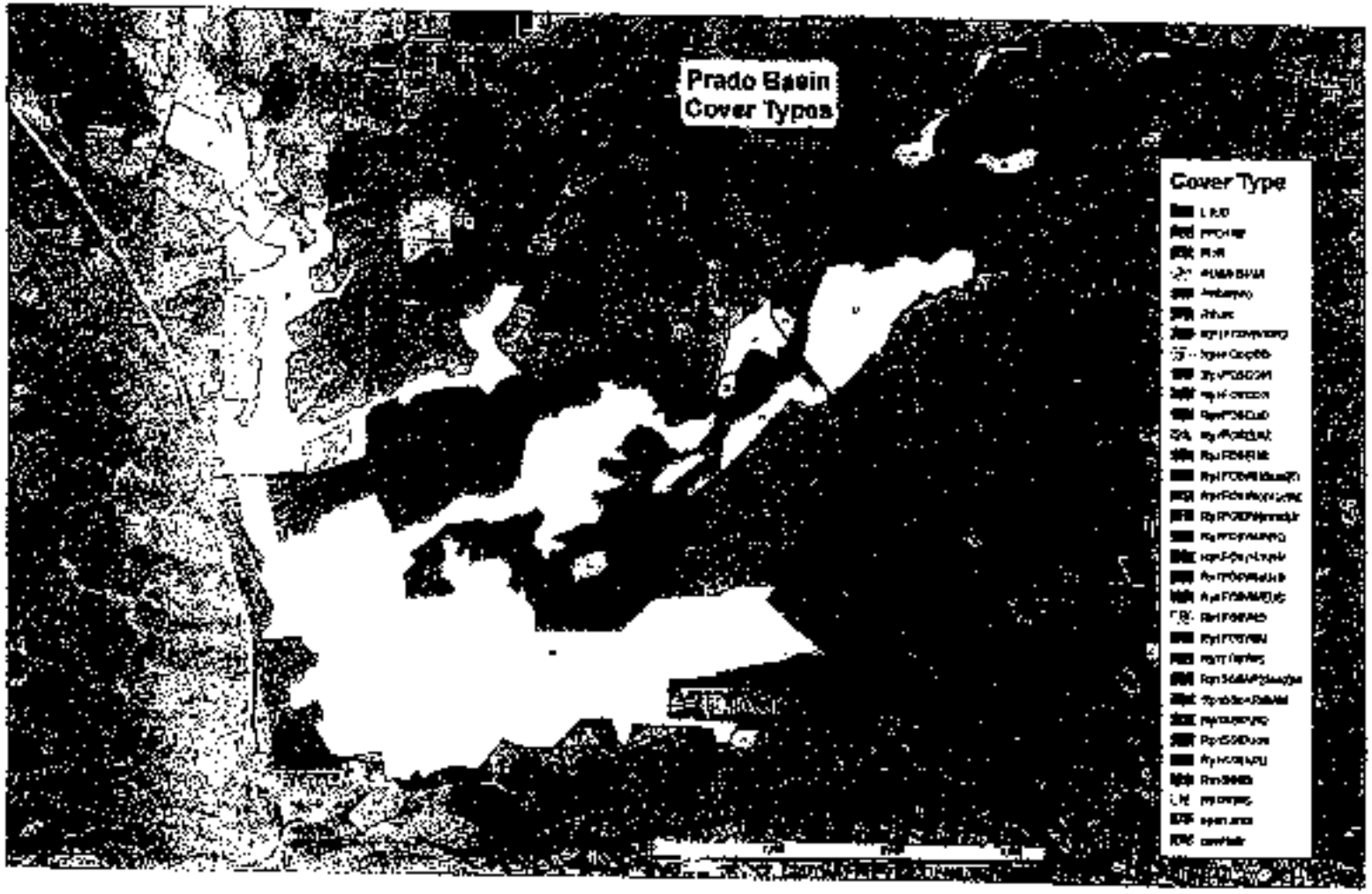
Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC. FWS/OBS-79/31.

U.S Fish and Wildlife Service. 1995. Photointerpretation conventions for the National Wetlands Inventory. U.S. Fish and Wildlife Service. St. Petersburg, FL. 60 pp.

U.S. Fish and Wildlife Service. 1998. A system for mapping riparian areas in the western United States. U.S. Department of the Interior, Fish and Wildlife Service, Lakewood, CO. 15 p.

Wildermuth Environmental, Inc. (Wildermuth). 2003. Hydraulic Control Monitoring Program Draft Work Plan. Prepared to Chino Basin Watermaster, June 2003.

Appendix L Vegetation Cover Types of the Prado Reservoir 2003 Aerial Photographs



COMMENT LETTER #5

California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-200
Ontario, CA 91764
(909) 484-0167

ARNOLD SCHWARZENEGGER, Governor
JOHN MCMANNAN, Director

June 23, 2010

Mr. Ryan Shaw
Inland Empire Utilities Agency
P.O. Box 9020
Chino Hills, CA 91709

Re: Draft Subsequent Environmental Impact Report, SCH 2000041047
Peace II Project – Chino Groundwater Basin

Dear Mr. Shaw:

The Department of Fish and Game (Department) appreciates this opportunity to comment on the Draft Subsequent Environmental Impact Report (DSEIR) for the Peace II Project Chino Ground Water Basin improvements. The Department is responding as a Trustee Agency for fish and wildlife resources (Fish and Game Code sections 711.7 and 1802 and the California Environmental Quality Act Guidelines (CEQA) section 15386) and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines section 15381), such as a Lake and Streambed Alteration Agreement (Section 1600 *et seq.*) or a California Endangered Species Incidental Take Permit (Fish and Game Code Sections 2080 and 2080.1).

5-1

For this project the Department will be acting as both a Responsible and Trustee Agency. As per section 15096 of the California Environmental Quality Act statute, as a Responsible Agency the Department is obligated to focus its comments on any shortcomings in the CEQA document, the appropriateness of using a negative declaration or DEIR, and additional alternatives or mitigation measures which the CEQA document should include.

The project consists of three main features: the expansion of the desalter program from 27,000 acre-ft/yr to 40,000 acre-ft/yr in a manner that contributes to the achievement of hydraulic control of the Chino Groundwater Basin, the reduction in groundwater storage, and, the continued installation of infrastructure (pipelines, wells, booster pumps, reservoirs) at locations throughout the Chino Basin. A new well field (Chino Creek Well Field) will be installed and produced to meet the increased production of groundwater for the desalters. The treatment capacity of Desalter II will be increased from 10,400 acre-ft/yr to 21,000 acre-ft/yr.

5-2

The Peace II program is a modification of the Optimum Basin Management Program adopted by the Chino Basin Watermaster and stakeholders in 2000. The Inland Empire Utilities Agency (IEUA) was the CEQA Lead Agency for the Optimum Basin Management Program EIR (PEIR, SCH#2000041047) that was certified in 2000. The IEUA decided that the appropriate process was to update the 2000 document. However, this is still a program EIR in the sense that future individual infrastructure projects will require CEQA review, impact analysis and mitigation.

RESPONSES TO COMMENTS
LETTER #5
CALIFORNIA DEPARTMENT OF FISH AND GAME
INLAND DESERTS REGION

5-1 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR.

5-2 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. The comment about "trend in water conservation" is really more appropriately termed "water management" of the collective surface and groundwater resources of the Chino Basin. The type of holistic water balance recommended in this comment for the Chino Basin goes beyond the scope of this SDEIR and the Department may want to present this suggestion as a proposal to the proposed Prado Basin Habitat Sustainability Committee which is proposed in the revised mitigation measure 4.4-3, a contingency mitigation measure to address protection of riparian habitat in Prado Basin. This measure is intended to create a future management tool (a total water balance, input and output, for water within the Chino Basin) that could include Department participation and support to define natural resource demands for water within the Basin and means of sustaining riparian habitat in Prado Basin. IEUA/Watermaster water conservation efforts within the Chino Basin are outlined on pages 3-18 and 3-19 of the SDEIR. Individual water purveyors also have water conservation programs that are reducing overall demand for water on a per person basis within each water district.

There are two essential components of this project: attainment of hydraulic control and Re-operation. Attainment of hydraulic control for the Chino Groundwater Basin means the reduction of groundwater discharge from the Chino North Management Zone to the Santa Ana River to "*de minimis*" quantities. Re-operation means the increase in controlled overdraft of the Chino Basin from: 200,000 acre-ft. over the period of 1978 through 2017 to 600,000 acre-ft through 2030

Although wastewater discharges will increase by 68,000 acre-ft/year there will be a net increase of 28,000 acre-ft/year to Prado Dam. As a result of the Re-operation, net inflow to
5-2 cont. Prado Basin is expected to decline from 426,001 acre-ft/yr to 401,410 acre-ft/yr.

It is expected that base flow will increase because of increased urban runoff and an increase in the total amount of wastewater. The trend toward urbanization is usually accompanied by an increase in channelization of existing drainages and a reduction in the amount of tributary surface flows. Two other factors that are not mentioned are the gains in surface water flow through the elimination of arundo donax and water conservation measures. The Department recommends preparation of a comprehensive analysis of water input and output, and water conservation efforts that will lead to less demand to divert surface flows. The trend in water conservation today in the Inland Empire is to increase the amount of groundwater recharge, capture storm water flows and use recycled water where feasible.

Biological Resources

No focused surveys for sensitive biological resources were conducted. However the species that could potentially be impacted include: the Santa Ana sucker, arroyo chub, Delhi sands flower-loving fly, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo, burrowing owl, San Bernardino kangaroo rat and Santa Ana woolly star. It is expected that most of the project impacts that occur from implementation of
5-3 infrastructure improvements will occur within existing roadways and water district properties in urban areas and will not impact sensitive species. Specific impacts from future projects will be identified and mitigation provided in subsequent environmental documents. However, the Department recommends that the potential overall impacts, such as lowering the water table, potential habitat conversion from reduction in water and subsequent impacts on species be identified and mitigation measures be included in the FEIR.

Department Comments

The Department has the following recommendations that should be addressed in the Final Environmental Impact Report.

5-4 1. The document's cumulative impact analysis should include a description of other groundwater and surface flow diversion projects that affect the Santa Ana River;

5-5 2. The document should include an assessment of how this project contributes to the cumulative impacts of the overall water groundwater and surface flow situation in the project area;

5-6 3. The document should include a baseline analysis of existing riparian and other fish and wildlife resources in the area and the current and proposed habitat mitigation efforts within the Chino-Prado Basin that may be impacted by reduction in groundwater and surface flows;

5-3 This summary of resource issues is only partially correct. First, detailed information on sensitive species (including listed species, critical habitat and species of special concern) is presented in Subchapter 4.4 of the SDEIR. All sensitive species within the Chino Basin are identified and discussed. Potential program impacts to biological resources are fully discussed based on the types of future projects and fairly detailed mitigation measures are identified in the SDEIR. These measures are designed to address all of the potential significant impacts, such as measure 4.4-2, which addresses acceptable mitigation for projects that may disturb waters of the United States or State of California and associated riparian or wetland habitat. The objective is to provide a suite of mitigation measures that can be applied to future projects where biological resource impacts may occur. There is no deferral of mitigation for biological resource impacts based on the 14 measures contained in Subchapter 4.4. Regarding the potential impacts associated with lowering of the water table in the Prado area, detailed modeling as outlined in Subchapter 4.3 indicates that it may be lowered up to three feet over the next 20 years with implementation of the Peace II Agreement programs. Based on the analysis of these model data (please refer to responses to comments in the OCWD comments, Letter #4, which address the high degree of confidence in the modeling), this level of change is unlikely to cause a significant adverse impact on the riparian and wetland resources of the Prado Basin. Therefore, IEUA believes the issues raised in this comment have been fully addressed in the SDEIR.

5-4 &
5-5 The groundwater modeling used to analyze the hydrologic impacts of implementation of the Peace II Agreement and its associated project description considered the cumulative surface and groundwater management activities that are anticipated in the Chino Basin area, and known surface water diversions upstream of the project area. The model domain of the Chino Basin Watermaster groundwater model includes the Santa Ana River between the Riverside Narrows and the discharge at Prado Dam. The Santa Ana River inflow to the model domain at the Riverside Narrows is based on the projected future discharges of recycled water and stormwater discharges as projected for the 2004 Basin Plan Amendment (http://www.swrcb.ca.gov/santaana/tpcard_decisions/adopted_orders/orders/2004/04_001.pdf) and as reported in the wasteload allocation investigation prepared for the Regional Board entitled TIN/TDS Study Phase 2B Wasteload Allocation Investigation Final Technical Memorandum (WEI, 2002). This includes planned increases in recycled water production, planned recycled water reuse, and stormwater management at Seven Oaks Dam.

The wasteload allocation was updated in 2010 as reported in the Addendum to the 2008 Santa Ana River Wasteload Allocation Model Report – Scenario 7 (WEI, 2010), and is currently being incorporated into a Basin Plan amendment that will be adopted in late 2010 or early 2011. This 2010 report includes updated recycled water production, planned reuse and discharge projections, and new stormwater conservation activities at Seven Oaks Dam. The volumes of recycled water reuse assumed in the 2010 wasteload allocation analysis are greater than those assumed in the 2004 Basin Plan; nevertheless, the average flow in the Santa Ana River at the Riverside Narrows is projected to increase by about 28,000 acre-ft/yr from 2010 to 2020. That is, the projected cumulative future change in Santa Ana River flow from all known upstream diversions and recycled water discharges to the River is an increase at the Riverside Narrows of about 28,000 acre-ft/yr. The Peace II project is projected to decrease the flow in the Santa Ana River downstream of the Riverside Narrows by about 6,000 acre-ft/yr. In other words, the projected increase in Santa Ana River flow at the Riverside Narrows will more than offset the projected reduction in flow caused by implementation of the Peace II Agreement.

5-6 Please refer to response to comment 5-3. An overview of the fish and wildlife resources in the Chino Basin is contained in the SDEIR, as is a description of the local and regional policies for managing such resources, including the Western Riverside Multiple Species Habitat Conservation Plan. Orange County Water District (OCWD) comments that summarize habitat mitigation efforts are provided in comments 4-5 and 4-6. Obviously, the Corps of Engineers also owns substantial habitat that it protects within the Prado Basin. Please refer to responses to the OCWD comments which further address the potential impacts due to reductions in the groundwater table within the Chino Basin. The proposed project is not forecast to directly reduce surface flows within the Basin, only downstream flows to Orange County from rising groundwater.

5-7 4. The document should include a long term monitoring program to assess whether the overall project is impacting riparian resources, sensitive species and other types of aquatic habitat in the project area;

5-8 5. The document should include adaptive management measures to be implemented in the event that there is a correlation between the project and adverse impacts to riparian vegetation and sensitive species;

5-9 6. The reduction of surface water and groundwater flows to the Santa Ana River will require submittal of a 1602 Lake or Streambed Alteration Agreement and potentially a California Endangered Species Act Permit.

5-10 The Department has several concerns regarding projects involving changes in the use of groundwater and surface water. The primary goal of many of the utilities and water agencies, particularly in times of drought, is to ensure that the human population has an adequate supply of potable water. Therefore, the focus of these agencies has been on recycling wastewater, increasing extraction of groundwater, diverting stormwater and improving the quality of groundwater. Under the present drought conditions and with a decrease in the supply of imported State water, more storm water is being diverted to recharge basins, more groundwater is being pumped and more recycled wastewater is being diverted from surface flow. The cumulative impact of all the different water agencies conducting these activities is not known.

5-11 The major problem facing the Department is trying to maintain ecological integrity in a fragmented and heavily impacted riparian system that is dependent both upon groundwater and surface water flows. Past agricultural use, urban development and attendant flood control have severely impacted or eliminated altogether the suite of native riparian species in many Santa Ana River tributaries. It is no longer adequate to simply conserve a riparian reach, active human intervention to eliminate threats such as exotic and invasive species and reintroduce native plants and animals is required. Increasing urbanization results in an increase of urban runoff outside of the rainy season. Although this increase may favor riparian habitat, it can be detrimental to native species because year-round water favors the establishment of non-native, exotic and invasive species that can outcompete native species. The primary concern of the Department for Santa Ana sucker and other riparian endangered and threatened species is the conservation, restoration and expansion of Santa Ana River tributaries. It is not clear how this project will impact these tributaries.

5-12 Native riparian species, with some exceptions, continue to decline both in overall numbers and numbers of populations. The emphasis in this document is on maintaining the minimum legal amount of flow to the Prado Basin and conservation of biological resources in the Prado Basin. The Department and other agencies have allowed significant mitigation efforts for offsite impacts (temporal and permanent loss of streambed habitat) to be placed within the Prado Basin, and the Department requests an analysis of the potential cumulative impacts to the existing mitigation sites. The Department is concerned about conserving the fish and wildlife resources in the Prado Basin and is also concerned about potential impacts of this project on wildlife migration from the Prado Basin to the upper Santa Ana River and tributaries.

5-13 It is difficult to assess how a program of this scale can affect biological resources because it is based on unproven assumptions and conclusions. The mitigation measures proposed in this document are project specific, i.e., protection of birds nests, and other avoidance and minimization measures involved in construction. They do not address what the potential adverse impacts of the overall project would be particularly since the impacts may occur incrementally over time.

5-7 Please refer to response to OCWD Comment 4-10, plus other responses to comments (4-23, 4-24 and 4-25) that address the existing monitoring data collection system and findings. IEUA supports additional monitoring, in conjunction with all other stakeholders in the Basin. However, given the fairly extensive existing level of ongoing monitoring, it will be necessary meet with stakeholders and define what additional information is required to achieve collective monitoring goals; the costs of accomplishing monitoring goals; and the sources of funding to carry out the additional monitoring. To address the contingency that Peace II Agreement programs may adversely impact riparian habitat in Prado Basin, mitigation measure 4.4-3 has been revised and establishes an adaptive management program that includes a commitment to continue monitoring and begin establishing a baseline of data regarding riparian habitat. This may include adaptive management actions on behalf of Chino Basin water producers that will enhance the sustainability of the existing riparian habitat in Prado Basin.

5-8 Please refer to OCWD response to comment 4-11. IEUA, Watermaster and stakeholders have indicated that an adaptive management program should be implemented to address potential unforeseen groundwater impacts (direct effect of Peace II) and indirect effects on biology resources of the Chino Basin. This is embodied in mitigation measures 4.3-8 and 4.4-3. The text of several mitigation measures has been revised and the reviewer should examine the attached MMRP for inclusion of adaptive management.

5-9 The model data utilized in the SDEIR supports the finding that no significant adverse biological resource impacts will result from implementing the proposed Peace II Agreement Program. IEUA does not concur that there is a nexus such as physical disturbance of a lake or streambed that would require the acquisition of a 1602 Lake or Streambed Alteration Agreement. Requiring the acquisition of such an Agreement would be unprecedented and would have to rely on the demonstration of a physical nexus between, for example, the installation and pumping of a well and alteration of a streambed. The existing data base does not support such a finding.

5-10 Please refer to response to comments 5-4/5-5 and the discussion of cumulative impact in the Chino Basin beginning at the bottom of page 4-233 and continuing to the bottom of page 4-241. The cumulative water management activities for both surface water and groundwater are discussed in this text. The groundwater and surface water balances described in the text indicate that sufficient water will be available in the Chino Basin to meet future demands by riparian vegetation, including more than sufficient discharges to Orange County to meet the Court mandated volume of surface water flows downstream of Prado Dam. Based on these data, the water management problem behind Prado Dam appears to be too much water, not too little. As noted above in response to comment 5-2, a holistic or integrated system approach to water management in the Chino Basin that would include natural resource requirements should be discussed with the Chino Basin Watermaster. IEUA and Watermaster believe sufficient data on cumulative surface water and groundwater issues have been provided in the SDEIR to substantiate a finding that implementing the Peace II Agreement program will not cause significant or cumulative considerable impacts to the Basin's remaining riparian and wetland resources.

The groundwater simulations used in the SDEIR include the stormwater and recycled water plans of Watermaster and the IEUA and the planned water conservation activites at Seven Oaks Dam. No other definitive stormwater diversion or recycled water projects were considered in the analysis. Watermaster periodically updates its planning assumptions and reruns its models. Watermaster will do this every two to three years to

assess groundwater conditions in the Chino Basin, to evaluate new management alternatives, and to evaluate the impact of proposed projects in and outside of the Chino Basin. Watermaster conducts this work in a transparent, court supervised process, and the results of this work are posted on the Watermaster's website.

Watermaster runs extensive monitoring programs in the Chino Basin and reports changes in groundwater elevation every spring for the prior fiscal year. The southern portion of Chino Basin between the desalter well fields and the Santa Ana River are intensively monitored as part of the Chino Basin Maximum Benefit Monitoring Program (sometimes called the Hydraulic Control Monitoring Program or HCMP). This monitoring program includes groundwater-production measurements and high-frequency groundwater-level measurements at production and monitoring wells across the area. These data are studied annually to assess the state of hydraulic control, which is documented in annual reports—the most recent being the *Chino Basin Maximum Benefit Monitoring Program 2009 Annual Report* (released in April 2010). Watermaster conducts this work in a transparent, court supervised process, and the results of this work are posted on the Watermaster's website.

Watermaster periodically reviews groundwater and surface water management plans with its models and recalibrates its models every five years or so. And, Watermaster intensively monitors and reports groundwater-level conditions in the southern part of the basin near the Santa Ana River. Watermaster uses these tools to assess the groundwater basin and river responses to the management activities in and outside of the Chino Basin. In this process, Watermaster and the IEUA will be able to assess the cumulative impact of upstream water management activities on the surface water and groundwater resources near the Santa Ana River in the Chino Basin. Further, IEUA and Watermaster have committed to implement measure 4.4-3 as a method of maintaining an ongoing interaction with other interested parties/agencies to ensure the sustainability of the Prado Basin riparian habitat.

5-11 Please refer to response to comment 5-10. At the same time that it is difficult to maintain ecological integrity due to the factors mentioned, the habitat in Prado Basin has been expanded and the least Bell's vireo population has grown rather dramatically over the past decade. Similarly, the Santa Ana sucker is apparently expanding its area of occupancy and due to development, funding has become available for removal of invasive species in stream channels. IEUA has been funding work on Chino Creek enhancement and OCWD has been supporting expansion of habitat in the lower Mill Creek. Based on the groundwater modeling, the proposed project is not forecast to substantially alter the existing water supply to the existing habitat along the two stream channels in the Basin (Chino Creek and Mill Creek) nor in Prado Basin. However, please refer to revised mitigation measure 4.4-3, which includes a commitment to investigating Prado Basin habitat requirements to define the adaptive management actions required to sustain this habitat.

5-12 Please refer to responses to comments 5-10 and 5-11 and to the modeling discussion in Subchapter 4.3. The modeling data indicate that the whole of the Prado Basin will not incur significant adverse cumulative impacts from the implementation of the Peace II Agreement programs, which includes all of the groundwater extraction activities within the Chino Basin. IEUA, Watermaster and stakeholders in the water resources of the Basin support conserving and enhancing the fish and wildlife resources in the Basin, as indicated in revised mitigation measure 4.4-3. Using the best available groundwater modeling techniques, the data indicate that existing habitat within the Basin will not incur significant adverse impact from implementation of the proposed project. Based on the

available data, this project will have no direct or indirect significant adverse impact on wildlife movement. Mitigation to address wildlife movement corridors is provided through measures 4.3-8 and 4.4-6.

5-13 Actually the analysis in this document is based on highly calibrated models that have more than ten years of evolution. The model has been ground-truthed on actual past pumping activities and found to be accurate. With no significant adverse impacts forecast to occur from the cumulative implementation of the Peace II Agreement programs, there was no requirement to implement program-wide mitigation requirements. Regardless, the Watermaster, on behalf of the Basin stakeholders, has been monitoring groundwater levels over the long term and will continue to monitor groundwater levels into the future. Any major deviations from the model forecast would result in the Watermaster and stakeholders re-evaluating the Peace II Agreement programs (refer to mitigation measures 4.3-8 and 4.4-3) and adjusting them to prevent significant adverse impacts of any kind, including to biological resources.

The mitigation measures proposed in the CEQA document at this level should include more global mitigation measures. For instance, the Department recommends a monitoring and adaptive management plan that would maintain the integrity of riparian biological resources and also allow provide water for the restoration and expansion of riparian habitat. In areas where groundwater would be lowered, a riparian vegetation baseline could be established through aerials and ground-truthing and monitoring could detect whether the trend indicates
5-14 an increase or decrease in riparian vegetation. If the withdrawal of groundwater is accompanied by impacts to riparian vegetation, then the Department recommends that measures be taken to reverse the trend. Areas where arundo have been removed can be monitored to establish whether surface flow is increased or groundwater levels have risen. Specific areas could be identified that are suitable for restoration of biological resources, particularly the Santa Ana sucker.

Multiple Species Habitat Conservation Plan (MSHCP)

The project is partially located within the boundary of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) and is subject to the provisions and policies of that plan. The MSHCP is a Natural Communities Conservation Plan that provides coverage for 146 species and up to 510,000 acres. Participants in the MSHCP are issued take authorization for covered species and do not require Federal or State Endangered Species Act Permits. The City of Riverside is a signatory to the MSHCP Implementing Agreement

5-15 Although the proposed project is within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) and could be subject to Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, a Lake and Streambed Alteration Agreement Notification is still required by the Department should the site contain jurisdictional waters. Additionally, the Department's criteria for determining the presence of jurisdictional waters are more comprehensive than the MSHCP criteria in Section 6.1.2. Any mitigation measures required by the resource protection policies of the MSHCP should be included in the CEQA document.

Streambed Alteration Agreements and CEQA

The Department is concerned about the continuing loss of jurisdictional waters of the State and the encroachment of development into areas with native habitat values. The CEQA document should contain sufficient, specific and current biological information on the existing habitat and species at the project site; measures to minimize and avoid sensitive biological resources; and mitigation measures to offset the loss of native flora and fauna and State waters.

5-16 If the CEQA documents do not fully identify potential impacts to lakes, streams, and associated resources and provide adequate avoidance, mitigation, monitoring, funding sources, a habitat management plan and reporting commitments, additional CEQA documentation may be required prior to execution (signing) of the Agreement. In order to avoid delays or repetition of the CEQA process, potential impacts to a stream or lake, as well as avoidance and mitigation measures need to be discussed within this CEQA document.

The Department opposes the elimination of drainages, lakes and their associated habitats. The Department recommends avoiding the stream and riparian habitat to the greatest extent possible. Any unavoidable impacts need to be compensated with the creation and/or

5-14 Please refer to responses to comments 4-6, 4-10 and 4-11. Based on the modeled data, the implementation of additional habitat or vegetation monitoring will be carried out under revised mitigation measure 4.4-3. CDFG is an agency with interest in the Prado Basin habitat and should participate in the proposed committee to define existing resources and management actions required to support sustainability of this habitat.

5-15 IEUA, Watermaster and stakeholders in the Basin understand that different policies exist in the MSHCP and in the Department regarding a variety of resource issues, including regulation and mitigation of stream bed alteration. As individual projects are implemented in the future, the biology mitigation measures in the SDEIR require the consistency and compliance with both the MSHCP requirements and the Department's requirements. As the Department implements State laws and regulations, it is understood that these requirements must be fulfilled. Specific measures that may be required to be implemented would be determined through consultation and application for permits or agreements with both the Department and Riverside County.

5-16 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. Specific mitigation (measure 4.4-2) has been identified to require acquisition of Streambed Alteration Agreements for future Peace II Agreement specific projects. Where appropriate, applications will be submitted immediately following completion of subsequent environmental reviews in accordance with CEQA, and the requested information will be submitted to the Department on a case-by-case basis.

restoration of in-kind habitat either on-site or off-site at a minimum 3:1 replacement-to-impact ratio, depending on the impacts and proposed mitigation. Additional mitigation requirements through the Department's Streambed Alteration Agreement process may be required depending on the quality of habitat impacted, proposed mitigation, project design, and other factors.

We recommend submitting a notification early on, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Streambed Alteration Agreement notification package, please call (562) 430-7924.

The following information will be required for the processing of a Streambed Alteration Agreement and the Department recommends incorporating this information to avoid subsequent CEQA documentation and project delays:

1) Delineation of lakes, streams, and associated habitat that will be temporarily and/or permanently impacted by the proposed project (include an estimate of impact to each habitat type);
2) Discussion of avoidance measures to reduce project impacts; and,
3) Discussion of potential mitigation measures required to reduce the project impacts to a level of insignificance.

5-16 cont.

Section 15370 of the CEQA guidelines includes a definition of mitigation. It states that mitigation includes:

1) Avoiding the impact altogether by not taking a certain action or parts of an action,
2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation,
3) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment,
4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action,
5) Compensating for the impact by replacing or providing substitute resources or environments.

In the absence of specific mitigation measures in the CEQA documents, the Department believes that it cannot fulfill its obligations as a Trustee and Responsible Agency for fish and wildlife resources. Permit negotiations conducted after and outside of the CEQA process deprive the public of its rights to know what project impacts are and how they are being mitigated in violation of CEQA Section 15002.

Thank you for this opportunity to comment. Please contact Robin Maloney-Rames at (909) 980-3818, if you have any questions regarding this letter.

Sincerely,

Jeff Brandt
Senior Environmental Scientist

cc: Michael Flores

COMMENT LETTER #6

CITY of CHINO

June 23, 2010

Mr. Ryan Shaw
Inland Empire Utilities Agency
P.O. Box 9020
Chino Hills, CA 91709

Subject: DSEIR for Peace II Project, Chino Groundwater Basin

Dear Mr. Shaw:

The City of Chino has reviewed the Peace II Project Draft Subsequent Environmental Impact Report (DSEIR), and appreciates the opportunity to provide comments pertaining to this important document. As you know, many of the facilities described in the DSEIR, in particular the proposed Chino Creek Well Field (CCWF) and the Chino I Desalter, are located within the City of Chino.

Implementation of the Peace II Agreement calls for hydraulic control of groundwater discharges from the Chino Basin through extractions from the Chino Basin Desalter Authority's (CDA's) wells. Groundwater extractions at the planned CCWF in the southern Management Zones (MZs) 1 and 2 will facilitate the lowering of groundwater levels below historic levels, which increases the potential for land subsidence and ground fissuring in these areas. Mitigation measures described in the DSEIR (for example, see pages 4-125 and 4-126) specify that implementation of the Peace II Agreement will not contribute to new inelastic subsidence in MZ1 and/or cause or contribute to any new significant inelastic subsidence. Our comments, below, are based on the City's review of the DSEIR, and our understanding of the issues, and are intended to focus attention on the potential for land subsidence impacts and appropriate mitigation.

6-1

1. Significant inelastic subsidence is defined as "greater than a total of six inches in magnitude over the planning period." The impact evaluation states (for example, see pages 4-125 and 4-126), "New inelastic subsidence less than six inches in the non-MZ1 Managed Area is considered to be less than significant." Our review of the DSEIR (including technical appendices) did not reveal the technical basis for the six-inch threshold, as stated. How was the six-inch threshold determined? On what basis is the six-inch threshold deemed applicable across the Chino Basin?

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RESPONSES TO COMMENTS
LETTER #6
CITY OF CHINO

6-1 Please refer to responses to comments 3-11, 3-13 and 4-18. Permanent (inelastic) compaction of aquifer sediments—which results in permanent subsidence of the land surface and, in some cases, can cause ground fissuring—is the main concern. Elastic subsidence and rebound of the ground surface as groundwater levels fluctuate is not a concern because the magnitude of elastic subsidence and rebound is small (less than 2 inches anywhere in the Chino Basin) and has never been associated with damage to overlying infrastructure. Conversely, as much as 4-5 feet of permanent subsidence has occurred in some areas of the Chino Basin since about 1933. Where this permanent subsidence was *differential* in its spatial occurrence, the ground surface cracked (ground fissuring), damaging overlying infrastructure in the southwestern portion of Chino Basin in the early 1990s. Ground fissuring is the primary subsidence-related hazard in the Chino Basin, and groundwater pumping and recharge should be managed to minimize the potential for the occurrence of ground fissuring.

6-2

2. Based on our hydro-geologic understanding of the Chino Basin and the ability of existing facilities to monitor subsidence in the Managed Area of MZ1, it is our view that mitigation for subsidence can be achieved. However, currently there exists little monitoring control of subsidence in areas outside of the MZ1 Management Area, particularly in southern MZ1 and southern MZ2 locations where CDA wells exist and the CCWF are proposed. This is due to a lack of coherent InSar data, and the fact that land leveling surveys are narrow in coverage. Therefore, the ability to observe and mitigate the occurrence of inelastic subsidence in southern MZ1 and MZ2, as presented in the DSEIR, using current monitoring procedures/practices would likely not be achievable unless those activities were expanded to include the following mitigation measures: a) Installation of extensometer/piezometer to directly monitor groundwater level and subsidence; b) Increased ground level measurement frequency and distribution of benchmarks into the southern MZ1 and MZ2 areas; c) Prohibition of desalter well designs that would allow for groundwater to be drawn from aquifer zones that are susceptible to compression and may lead to subsidence; and d) Real-time monitoring of land level response to lowering of the groundwater levels, contemporaneous with commencement of operation of the CDA wells, in order to be able to guide changes in CDA operations to avoid possible long-term subsidence impacts.

6-3

3. Modeling work performed to ascertain the likelihood of attaining hydraulic control assumed CCWF production exclusively from the shallow zone of the aquifer. However, bid documents for the first two wells of the CCWF describe well screen perforations that extend to depths generally considered deeper than the shallow zone. It appears the DSEIR fails to evaluate potential impacts, such as land subsidence, that may be associated with the production of groundwater from depths below the shallow aquifer, where such production, regardless of the amount of water produced, may still cause a reduction in head pressure that allows inter-bedded compressible fine-grained sediments to consolidate.

Thank you for your timely and thorough response to the issues and comments identified in this letter. Should you have any questions or require clarification regarding these comments, please contact Mr. David Crosley, Water & Environmental Manager, at (909) 591-9823.

Please notify us of any further environmental review pertaining to this project, and also provide any subsequent versions of the DSEIR, supplements to the DSEIR, or Final EIR, when they are available.

Sincerely,

Jose Alire
Director of Public Works

cc: David Crosley

6-2 IEUA concurs with this comment. Monitoring is the key step in preventing subsidence. Adaptive management based on the analysis of monitoring data is the appropriate method for identifying and mitigating subsidence-related hazards. It is our opinion that current subsidence monitoring in the area of the CCWF is not adequate to support an adaptive management program, and will likely need to be expanded to include additional monitoring wells, additional leveling monuments, annual leveling surveys, and a borehole extensometer(s). This one requires additional discussion with management.

With regard to the City's desire to prohibit "desalter well designs that would allow for groundwater to be drawn from aquifer zones that are susceptible to compression and may lead to subsidence." Watermaster can not preclude a party to the Judgment from drilling a well and pumping the well at the desired depths. However, Watermaster may deny the issuance of a determination of "no Material Physical Injury" as applicable to the proposed desalter w3ells and thereby withhold up to 400,000 acre-feet of water for the proposed desalter wells and thereby withhold up to 400,000 acre-feet of water for replenishment. CDA has indicated it intends to withdraw groundwater only from the upper (Zone 1) aquifer and it intends to clarify its preliminary project design to conform with this regulatory requirements. If the CCWF wells are constructed in the shallow aquifer system only, and operated in a reasonable way, then the performance requirement regarding subsidence and fissuring as stated in the Peace Agreement (Exhibit B, page 26) is more likely to be met than if the wells are screened across the deep aquifer system. This opinion is based on the results of Watermaster's ongoing subsidence monitoring program in the MZ1 Managed Area.

6-3 The City of Chino is correct in it observation that the groundwater modeling work used to evaluate the Peace II Alternative assumed that the new CCWF would pump from the shallow groundwater system only. In addition, the Peace II modeling work did not assess the potential for subsidence in any portion of the Chino Basin except for the MZ1 Managed Area, which is located about two miles to the northwest of the proposed CCWF.

Watermaster can run an additional model simulation where the CCWF pumps from both the shallow and deep aquifer systems to re-assess the likelihood of achieving hydraulic control. However, the Watermaster groundwater-flow model does not currently simulate aquifer-system compaction and land subsidence. That said, Watermaster has the ability to generate first-order estimates of potential permanent land subsidence associated with the Peace II Alternative by (i) using geologic data from existing wells in the area of the proposed CCWF, (ii) using sediment properties derived from the subsidence monitoring program in the MZ1 Managed Area, (iii) making logical assumptions of the pre-consolidation stress in the area of the proposed CCWF, and (iv) using predicted drawdown results from the modeling of the Peace II Alternative. These estimates can be improved over time using the lithologic information and aquifer stress test results from the CCWF test wells and with the development of computer-simulation models of subsidence

COMMENT LETTER #7

STATE OF CALIFORNIA

GOVERNOR'S OFFICE of PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
Governor

CYNTHIA BRYANT
Director

June 25, 2010

Ryan Shaw
Inland Empire Utilities Agency
P.O. Box 9020
Chino Hills, CA 91709

Subject: Ponce II Project, Chino Groundwater Basin
SCH#: 2009061047

Dear Ryan Shaw:

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 June 23, 2010, 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:

7-1 "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,

Scott Morgan
Acting Director, State Clearinghouse

Enclosures
cc: Resources Agency

RESPONSES TO COMMENTS
LETTER #7
OFFICE OF PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

7-1 This is an acknowledgment letter verifying that the State Clearinghouse submitted the Draft EIR to selected state agencies for review and that one state agency submitted comments to the Clearinghouse by the close of comment date, June 23, 2010. The State Clearinghouse assigned this project the following tracking number, SCH #20080041047 (assigned originally to the OBMP PEIR in 2000). This letter is for information purposes only and it does not require a substantive response.

Document Details Report
State Clearinghouse Data Base

SCH#	2000041047
Project Title	Peace II Project, Chino Groundwater Basin
Lead Agency	Inland Empire Utilities Agency

Type	EIR Draft EIR
Description	The proposed project has two main features: the expansion of the desalter program such that the groundwater pumping for the desalters will reach 40,000 acre-ft/yr and that the pumping will occur in amounts and at locations that contribute to the achievement of hydraulic control; and the strategic reduction in groundwater storage (Re-Operation) that, along with the expanded desalter program, significantly achieves hydraulic control for the Chino Groundwater Basin. Through Re-Operation and pursuant to a Judgment Amendment, Watermaster will engage in controlled overdraft and use up to a maximum of 500,000 acre-ft/yr, which corresponds to the new water pumping requirement of 11,900 acre-ft/yr expanding to 23,900 ac-ft/yr. The new product water developed at Desalter II would be conveyed to the Jurupa Community Services District, the City of Ontario, and/or Western Municipal Water District through existing and new pipelines.

Lead Agency Contact

Name	Ryan Shaw		
Agency	Inland Empire Utilities Agency		
Phone	909-993-1600	Fax	
email			
Address	P.O. Box 9020		
City	Chino Hills	State CA	Zip 91709

Project Location

County	San Bernardino			
City				
Region				
Lat / Long	34° 04' 03" N / 117° 32' 41" W			
Cross Streets				
Parcel No.				
Township	Range	Section	Base	SBBSM

Proximity to:

Highways	60, I-10, I-15
Airports	Ontario, Chino
Railways	UPRR, BNSF
Waterways	Several: Chino, Cucamonga, San Sevaine
Schools	Several
Land Use	Various

Project Issues	Air Quality; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Growth Inducing; Toxic/Hazardous; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife
Reviewing Agencies	Resources Agency; Department of Fish and Game, Region 5; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 8; Regional Water Quality Control Board, Region 8; Department of Toxic Substances Control; Native American Heritage Commission

Date Received	05/10/2010	Start of Review 05/10/2010	End of Review 06/23/2010

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

COMMENT LETTER #8

Department of Toxic Substances Control

Linda S. Adams
Secretary for
Environmental Protection

Maziar Movassaghi
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

June 24, 2010

Mr. Ryan Shaw
Inland Empire Utilities Agency
P.O. Box 9020
Chino Hills, California 91709

COMMENTS ON THE DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT FOR THE INLAND EMPIRE UTILITIES AGENCY PEACE II PROJECT, CHINO GROUNDWATER BASIN, CALIFORNIA, MAY 2010

Dear Mr. Shaw:

The Department of Toxic Substances Control (DTSC) has reviewed the Draft Subsequent Environmental Impact Report (Draft SEIR) for the above-referenced project. The SEIR (prepared by Tom Dodson and Associates) was submitted by the Inland Empire Utilities Agency (IEUA) to DTSC on May 11, 2010

DTSC has the following comments on the Draft SEIR as stated below.

B-1 1. The Draft SEIR references draft versions of the Supplemental Feasibility Study and the Zone 4 Remedial Investigation Report for the Stringfellow Superfund Site. Both of these documents are available as final versions at the following links:

- http://www.envirostor.dtsc.ca.gov/public/final_documents2.asp?global_id=33490001&doc_id=6019509 (Final Zone 4 Remedial Investigation Report for the Stringfellow Superfund Site, February 5, 2010; Kleinfelder West, Inc.)
- http://www.envirostor.dtsc.ca.gov/public/final_documents2.asp?global_id=33490001&doc_id=6015695 (Final Supplemental Feasibility Study Stringfellow Hazardous Waste Site, July 13, 2009; ENVIRON International Corporation).

Those final versions should be reviewed and referenced in the Draft SEIR rather than the draft versions.

B-2 2. (p. 3-23) - The first complete paragraph states that "A plume of contaminated ground water was migrated southerly approximately 4 miles from the Stringfellow site..." (p. 4-117) - The first full paragraph states that the perchlorate plume extends approximately 25,000 feet to the southwest from the original disposal area. These dimensions for the same plume do not agree, and we recommend that IEUA review of the Final Zone 4 Remedial Investigation Report, which contains information on the current understanding of the plume extent at Stringfellow, to resolve this discrepancy in your text.

RESPONSES TO COMMENTS
LETTER #8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

8-1 Your comment is noted and will be made available to the decision-makers prior to certification of the Final SDEIR. These documents have been reviewed and the following comments reflect the referenced information in these document.

8-2 The text will be revised to indicate the plume from the Stringfellow site extends approximately 25,000 feet to the southwest of the original disposal area.

3. (p. 4-117). The first full paragraph states that "Figure 4.3-68a shows the approximate areal extent of the Stringfellow VOC plume as of 2008." The next paragraph states that "Figure 4.3-68a shows the approximate areal extent of perchlorate concentrations exceeding the Notification level (6 µg/L) as of 2008." These references to Figure 4.3-68a seem to be contradictory and the text should be revised accordingly.

8-3

4. (p. 4-117 to 4-119). Further clarification of your modeling assumptions and input parameters should be provided in the text to fully describe the modeling efforts and possible uncertainties related to the modeling results. Specific clarification questions are provided below:

- What are the initial concentrations of the simulated plumes? Was a single concentration used throughout the indicated plume extents or were variable concentrations used?
- What concentrations are depicted in the simulated plumes in 2030; (i.e., is the plume outline at the same concentration as the initial condition and/or can you show isoconcentration contours?)
- Do the transport simulations for the Stringfellow plume account for existing operating extraction wells within the plume?
- Considering that the model domain does not include the majority of the Stringfellow plume and the plume within the model domain is adjacent to the model boundary, please clarify how well the model expected to accurately simulate transport in this area?

8-4

If you have any questions regarding these comments, please call me at 916-255-6552 or contact me via email at sfears@dtsc.ca.gov.

Sincerely,

Susan Fears, PG, CHG
Chief, Geologic Unit
San Joaquin and Legacy Landfills Office

8-3 After review the referenced figure, 4.3-68a, the approximate location of the plume represents both VOC contamination and perchlorate contamination above the Notification level, both as of 2008. There is no contradiction, the figure shows the extent of the water quality anomaly that includes both pollutants.

8-4 The groundwater model was developed during 2007 by Wildermuth Environmental, Inc. in a very public process. The model is thoroughly documented in *Final Report, 2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description* (WEI, 2007), which is listed as a reference in the SDEIR and in *2009 Production Optimization and Evaluation of the Peace II Project Description* (WEI, 2009). The 2007 report is posted on Watermaster's website and has been since December 2007. The calibration results in the southern part of the Basin are included in the 2007 report. The quality of the calibration is excellent. The text in the SDEIR will be modified to include a reference to the 2007 report and statements on the quality of the calibration over the Basin. The 2007 report will be included as an appendix of the final SEIR.

With regard to DTSC's specific questions in their comments:

- The initial concentrations used for the Stringfellow plume were variable, and were derived from isoconcentration contours of perchlorate that were drawn from well data provided to Watermaster by DTSC.
- The outline of the simulated plume in 2030 is 0.1 ug/L.
- Most of the Stringfellow plume is outside of the model domain, so the extraction well pumping was not included in the model simulation.
- Since the majority of the plume is outside the model domain, the model boundary in the vicinity of the plume was assigned a flux with a constant concentration for perchlorate at 12 ug/L for the duration of the simulation. The flux term was estimated based on known aquifer geometry, measured hydraulic gradients, and calibrated aquifer properties.

ATTACHMENT 1

PEACE II AGREEMENT PROGRAM
SUBSEQUENT PROGRAM ENVIRONMENTAL IMPACT REPORT
RESPONSES TO COMMENTS
ATTACHMENT 1

The following mitigation measures have been revised as shown and will be included in the Final Subsequent Program Environmental Impact Report (SEIR).

4.2-12 ~~Require the use of diesel particulate filters, diesel oxidation catalysts, and aqueous diesel fuel on construction vehicles.~~ Deleted because it is replaced by the revision to measure 4.2-16.

4.2-16 ~~Use Tier 3 rated engines during site grading for all equipment exceeding 100 horsepower if available.~~ *Construction activities that require off-road equipment shall utilize Tier III, Tier IV or the most current commercially available version of off-road equipment certified by the SCAQMD at the time of the construction activity and over the life of the Peace II Agreement Program.*

4.2-17 ~~Utilize equipment whose engines are equipped with diesel oxidation catalysts if available~~.
Deleted because it is replaced by the revision to measure 4.2-16.

4.2-18 ~~Utilize diesel particulate filer on heavy equipment where feasible.~~ Deleted because it is replaced by the revision to measure 4.2-16.

4.2-28 Minor edits as shown: To the extent feasible, the IEUA/~~Watermaster~~/Stakeholders shall select equipment for future OBMP and Peace II project<u>s</u> that minimize electricity consumption. Documentation of such efforts shall be retained in project files to verify that electricity consumption of such equipment has been given consideration before selecting a specific piece of equipment, such as a booster pump. This measure is not intended to dictate selection of equipment that minimizes electricity consumption, only to ensure that this criterion is clearly given consideration in the selection of such equipment.

4.3-1 Minor edits as shown: ~~Under the direction of the Watermaster, i~~<u>I</u>f any well intercepts a contamination plume, the affected well will be connected to a treatment unit to remove the plume pollutants to a level that meets potable/drinking water quality standards. If this cannot be achieved, the well will be removed from production.

4.3-3 Minor edits as shown: When closing abandoned wells in the Chino Basin the entity closing the well shall, where technically feasible, sample and analyze the well water to determine whether the groundwater in the well is contaminated. If contamination is identified, the entity shall report the discovery to the appropriate parties, including the owner (if known) and the regulatory agencies. The ~~Watermaster~~ <u>well owner/operator</u> shall monitor the status of the well until residual contamination is remediated.

4.3-5 Minor edits as shown: Hydrogeologic studies, including modeling, will be completed for each recharge site, including ASR wells, to define the recharge impacts on known groundwater quality anomalies (contaminated groundwater plumes). If modeling demonstrates that the rate of contaminated plume expansion or ~~secondary effects~~ <u>contamination of a downstream well</u> associated with such expansion will adversely

impact groundwater or water production capabilities, the recharge facility shall be moved to an alternative location where such impacts will not occur or else impacted production facilities will be replaced. The threshold for adverse impacts will be if existing domestic water production wells will be impacted by the plume a minimum of one year earlier than under pre-existing conditions, or if significant quantities of additional groundwater (more than 5,000 acre-feet) will become contaminated within a five year period due to the recharge of water. This is a modification of mitigation measure 4.5-15 from the OBMP.

4.3-6 When recharge of recycled water is proposed for a specific location, the entity proposing such recycling shall determine whether recharge would cause a violation of current DHS requirements at any existing production wells or critical water supply aquifers. If impacts will affect existing wells or critical water supply aquifers, the entity proposing to ~~discharge~~ recharge recycled water shall fund the provision of a comparable quality and quantity of potable water through installing new wells, direct water deliveries (for example from desalters), or comparable measures. This is mitigation measure 4.5-13 from the OBMP.

4.3-7 All water recharge operations shall be monitored, and if impacts that were not forecast to occur ~~demonstrate that the~~ as a result of recharge operations ~~are causing a~~ cause unexpected significant adverse impact on the groundwater aquifer, the recharge operations shall be terminated or modified to eliminate the adverse impact.

4.3-8 ~~Under the direction of the Watermaster, the stakeholders shall continue to implement adaptive management in conjunction with the Peace II Program. The adaptive management program performance standard is to offset any actual loss of storage beyond the 600,000 AF allowed through the OBMP and Re-Operation (measured or modeled by the Watermaster) by reduced takes or increased puts (or an alternative method deemed equivalent by the Watermaster to reduced takes or increased puts) measured over each ten year period of the Program. To the extent feasible or as determined by the Watermaster in consultation with stakeholders, a lowering of groundwater table in any portion of the Chino Basin attributable to the Peace II Program beyond that which, pursuant to the Judgment, is prescribed through Re-Operation to achieve hydraulic control shall be offset by a reduction in takes and/or puts or an alternative.~~ Replace with: *Watermaster shall continue to implement adaptive management in conjunction with the Physical Solution contained with the Chino Basin Judgment and the Peace Agreement. The limit of permanent change in storage will not exceed the 600,000 acre-ft limit authorized in the Peace II Agreement and the Judgment. Watermaster will periodically revise the safe yield of the Chino Basin and its' Recharge Master Plan. Watermaster will replenish the Basin with supplemental water pursuant to the Judgment based on production and safe yield in such a manner as to maintain the Basin in a state of dynamic equilibrium with no net loss of storage beyond the 600,000 acre-ft provided as in the Judgment and the Peace II Agreement. Watermaster will direct its supplemental water recharge in the Basin to balance the recharge and discharge in every area and subarea pursuant to the Peace Agreement.*

4.3-9 ~~Continue to identify and study subsidence hazards and susceptible areas, and propose mitigation technology that is appropriate to the findings of the monitoring study. The implementation of Peace II facilities shall not in any way contribute to subsidence conditions in pre-existing subsidence zones (as shown in Figure 4.3-60). Peace II will not cause or contribute to any new, significant subsidence impacts greater~~

~~than a total of six inches in magnitude over the planning period. New inelastic subsidence less than six inches in the Non-MZ1 Managed Area is considered to be less than significant.~~ Replace with: *The OBMP Implementation Plan (Peace Agreement, Exhibit B, page 26) states "The occurrence of subsidence in Management Zone 1 is not acceptable and should be reduced to tolerable levels or abated." Watermaster has developed and implemented an adaptive management program of pumping and recharge in MZ1 to identify subsidence-related hazards and mitigate them to "tolerable levels." This adaptive management program is described in the MZ1 Subsidence Management Plan (MZ1 Plan). The Court approved the MZ-1 Plan in November 2007 and ordered its implementation. Watermaster plans to expand this program as a mitigation measure for subsidence-related hazards that could occur as a result of the Peace II project. This expanded program will include changes to Watermaster's existing subsidence monitoring program and the procedures for making adaptive management decisions. Similar to current practice, Watermaster will collect, compile, review, and report annually on the monitoring program data under the supervision of a newly-formed Subsidence Committee. This Committee will include representatives from all interested parties and the CDA. The annual reports will include recommendations for adaptive management to mitigate any measured subsidence that the Subsidence Committee identifies as "intolerable." Adaptive management may come in the form of the establishment of threshold water levels at index wells, reduced pumping at specific wells, sealing of well screens at specific depth intervals at specific wells, adjustment of pumping schedules, cessation of pumping at certain wells, installation of additional wells in alternate locations, and other appropriate measures.*

4.3-10 ~~If modeling conducted for the expanded CDA desalter wellfield demonstrates that such pumping will contribute to inelastic subsidence in the MZ1 Managed Area, then a potentially significant impact can occur, and a subsequent environmental document will be prepared. No OBMP/Peace II activities allowed under this document will be permitted to cause or contribute to inelastic subsidence that causes adverse effects to facilities at the ground surface within the MZ1 Managed area defined in the OBMP Phase 1 Report and Figure 4.3-69 of this DSEIR.~~ Replace with: *Mitigation will be provided to well owners/operators within the Mitigation Area when the well owner/operator cannot produce enough groundwater to meet their needs and the cause of reduced production can be demonstrated to be the expansion of the desalter program. The mitigation will either restore enough of the lost production capacity to ensure that the well owner/operator can produce enough groundwater to meet their needs or provide an alternate source of water to replace the lost production capacity. The method of mitigation will be determined at the discretion of the CDA taking into account the historical fluctuations in the water table, the depth to water, the pump and well efficiency and the reasonableness of the well owner's expectation that the existing well configuration (pump, well and water table) should be partially or fully protected. As a pre-requisite to receiving mitigation, every well owner will be expected to engage in reasonable self-help measures to address inefficient groundwater withdrawal practices.*

4.3-11 Replaced by revised 4.3-10.

4.3-12 Requires site-specific geotechnical investigations of proposed development to include an assessment of potential impacts and mitigation measures related to expansive and reactive soils and liquefaction. Under Peace II, ~~Watermaster~~ Stakeholders will continue to monitor the areas with potential liquefaction hazards and will work with local jurisdictions to ensure that any future structures are constructed with the

appropriate foundations to address increased liquefaction potentials apropos to the specific area. This mitigation measure will reduce impacts to a less than significant level.

4.4-3 This measure will be revised from: ~~IEUA shall coordinate with all stakeholders to ensure that discharges from its wastewater treatment plants exceed 20,000 acre feet during the period May 1 through October 1 of each calendar year. This will ensure adequate surface flows into Prado Basin during summer periods and during droughts.~~ To: *The Chino Basin Stakeholders are committed to ensuring that the Peace II Agreement actions will not significantly adversely impact the Prado Basin riparian habitat. This includes the riparian portions of Chino and Mill Creek's between the terminus of hard lined channels and Prado Basin proper. The available modeling data in the SEIR indicates that Peace II Agreement implementation will not cause significant adverse effects on the Prado Basin riparian habitat. However, the following contingency measure will be implemented to ensure that the Prado Basin riparian habitat will not incur unforeseeable significant adverse effects, due to implementation of Peace II. IEUA, Watermaster, OCWD and individual stakeholders, that choose to participate, will jointly fund and develop an adaptive management program that will include, but not be limited to: monitoring riparian habitat quality and extent; investigating and identifying essential factors to long-term sustainability of Prado Basin riparian habitat; identification of specific parameters that can be monitored to measure potential effects of Peace II Agreement implementation effects on Prado Basin; and identification of water management options to minimize the Peace II Agreement effects on Prado Basin. This adaptive management program will be prepared as a contingency to define available management actions by Prado Basin stakeholders to address unforeseeable significant adverse impacts, as well as to contribute to the long-term sustainability of the Prado Basin riparian habitat. The above effort will be implemented under the supervision of a newly-formed Prado Basin Habitat Sustainability Committee. This Committee will include representatives from all interested parties and will be convened by the Watermaster and IEUA. Annual reports will be prepared and will include recommendations for ongoing monitoring and any adaptive management actions required to mitigate any measured loss or prospective loss of riparian habitat that may be attributable to the Peace II Agreement. As determined by Watermaster and IEUA, significant adverse impacts to riparian habitat that are attributable to the Peace II Agreement will be mitigated.*

4.4-11 Require facility designs to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions.

a. ~~Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources.~~ *To the extent feasible habitat areas that support rare, threatened or endangered species shall be avoided; where avoidance of such habitat is not feasible, habitat loss shall be compensated for by habitat acquisition or creation at a minimum 2:1 ratio, or a ratio established through consultation with agencies that issue incidental take permits or that manage such habitat.*

c. ~~Within habitats of plants listed by the CNDDB or CNPS as "special" or "of concern," require that new facilities not result in a reduction in the number of these plants, if they are present. This measure is 4.8-4 from the OBMP PEIR.~~ *Within habitat of plants listed by the CNDDB or CNPS as "special" or "of concern" all feasible attempts to avoid such habitat through facility siting shall be implemented, and where significant habitat impacts to such species cannot be,*

no net reduction in the number of plant or plant habitat shall occur. This may require habitat creation for such plants or acquisition of habitat at a ratio of 1:1.

XI-1 Construction shall be limited to the hours of 7 a.m. to 7 p.m. on Monday through Friday, and between 9 a.m. to 6 p.m. on Saturday, and shall be prohibited on Sundays and federal holidays. Exceptions are for well drilling or declared emergency circumstances. This measure is a modification to 4.11-1 from the OBMP PEIR. *Applicable local agency noise standards may be used instead of the threshold(s) identified in this measure if they provide equal or greater noise mitigation/attenuation.*

XI-3 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided with adequate hearing protection devices to ensure no hearing damage will result from construction activities. This is measure 4.11-3 from the OBMP PEIR. *Applicable local agency noise standards may be used instead of the threshold(s) identified in this measure if they provide equal or greater noise mitigation/attenuation.*

XI-5 All production wells or booster pumps shall have their noise levels attenuated to 50 dBA CNEL at the adjacent property boundary, when noise sensitive uses occur on such property. This measure is a modification to 4.11-5 from the OBMP PEIR. *Applicable local agency noise standards may be used instead of the threshold(s) identified in this measure if they provide equal or greater noise mitigation/attenuation.*

XI-11 Desalters shall be constructed and operated so that noise levels from operations do not exceed 50 dB during night hours and 65 dB averaged over the 12 hours of day time when located adjacent to existing or future sensitive land uses. This can be achieved by siting desalters a sufficient distance from sensitive noise receptors; by incorporating attenuation features in the facility or designing attenuation features at the boundary of the property. This is measure 4.11-8 from the OBMP PEIR. *Applicable local agency noise standards may be used instead of the threshold(s) identified in this measure if they provide equal or greater noise mitigation/attenuation.*

XI-13 All above ground well pumps or booster pump stations shall have their noise levels attenuated to 50 dBA CNEL at the property boundary when adjacent to a noise sensitive land use. *Applicable local agency noise standards may be used instead of the threshold(s) identified in this measure if they provide equal or greater noise mitigation/attenuation.*

XV-1 The construction contractor will provide adequate traffic management resources, as determined by the ~~applicable jurisdiction~~ *respective OBMP/PEACE II facility proponent*, to ensure adequate access to all occupied properties on a daily basis, including emergency access. The applicable jurisdiction shall require a construction traffic management plan for work in public roads that complies with the Work Area Traffic Control Handbook, or other applicable standard, to provide adequate traffic control and safety during construction activities. The traffic management plan shall be prepared and approved by the applicable jurisdiction prior to initiation of construction within a traveled roadway alignment. The plan can include the following components: protective devices, flag persons or police assistance for traffic control sufficient to maintain safe traffic flow on local streets affected by construction at all times. This measure is a modification to 4.7-2 from the OBMP PEIR. *This TMP shall be prepared and submitted for review and comment by the applicable local jurisdiction(s).*

XV-2 The applicable jurisdiction shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other ~~applicable jurisdiction~~ *respective OBMP/PEACE II facility proponent* standards. This measure is a modification to 4.7-5 from the OBMP PEIR. *These improvements shall be coordinated with the applicable local jurisdiction(s) as part of the encroachment permit process.*

XV-4 During construction the ~~applicable jurisdiction~~ *respective OBMP/PEACE II facility proponent* shall require that traffic hazards for vehicles, bicycles, and pedestrians be adequately identified and controlled to minimize hazards. This measure is a modification to 4.7-3 from the OBMP PEIR. *These improvements shall be coordinated with the applicable local jurisdiction(s) as part of the encroachment permit process.*

XV-5 The ~~applicable jurisdiction~~ *respective OBMP/PEACE II facility proponent* shall require the contractor to ensure that no open trenches or traffic safety hazards are left in roadways during periods of time when construction personnel are not present (nighttime, weekends, etc.) This measure is a modification to 4.7-4 from the OBMP PEIR. *These improvements shall be coordinated with the applicable local jurisdiction(s) as part of the encroachment permit process.*

XV-6 Peace II related projects located within 1/4 mile of a school will be required to prepare a traffic management plan for review and approval by the ~~appropriate school district~~ *respective OBMP/PEACE II facility proponent* . The minimum performance standard for the traffic plan will be to provide sufficient traffic management resources to protect pedestrian and vehicle safety in the vicinity of school sites. *These improvements shall be coordinated with the applicable local school district(s) as part of the local land use agency's encroachment permit process.*

ATTACHMENT 2

Table 1a

Monthly Flow at Mill Creek as Projected by the WLAM *(acre feet)*

Scenario 1a - Planned Reuse in 2010

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1949										1,392	2,127	4,542	
1950	2,615	2,564	1,603	1,375	1,156	1,012	953	990	1,137	1,392	1,856	1,611	21,465
1951	2,283	1,584	1,501	1,494	1,212	1,012	953	990	1,221	1,524	1,656	8,960	17,047
1952	10,896	1,448	6,750	1,717	1,158	1,012	953	990	1,175	1,380	2,792	2,351	40,336
1953	1,895	1,569	1,620	1,577	1,157	1,012	953	990	1,137	1,390	1,610	1,712	18,428
1954	7,983	4,400	2,407	1,184	1,156	1,012	953	990	1,137	1,380	2,249	1,365	25,819
1955	3,221	1,824	1,496	1,518	1,519	1,012	953	990	1,137	1,380	1,882	1,618	19,235
1956	16,064	1,536	1,360	1,630	1,222	1,012	953	990	1,137	1,380	1,345	1,769	30,617
1957	5,517	2,132	1,819	1,464	1,463	1,120	953	990	1,228	1,862	1,500	4,667	21,203
1958	3,553	8,531	4,333	5,067	1,827	1,012	953	1,030	1,168	1,395	1,394	1,611	35,484
1959	2,652	2,662	1,356	1,320	1,156	1,012	953	990	1,148	1,380	1,390	1,619	17,677
1960	2,157	2,534	1,503	1,672	1,164	1,012	953	990	1,137	1,556	1,752	1,623	17,847
1961	2,165	1,377	1,816	1,188	1,164	1,012	953	1,037	1,137	1,380	1,932	3,285	16,692
1962	3,350	9,417	1,679	1,178	1,208	1,012	953	990	1,137	1,381	1,345	1,619	27,232
1963	1,949	5,988	2,539	1,327	1,156	1,012	953	990	2,911	1,427	2,843	1,611	23,084
1964	2,806	1,435	2,258	1,439	1,161	1,032	953	990	1,144	1,408	1,948	2,493	18,912
1965	1,760	1,425	1,796	5,533	1,156	1,012	953	990	1,168	1,380	13,069	4,365	21,671
1966	2,168	2,235	1,416	1,181	1,156	1,012	953	990	1,137	1,392	1,796	19,126	30,755
1967	8,562	1,375	3,552	2,544	1,165	1,012	953	992	1,168	1,380	8,310	2,415	43,828
1968	1,873	1,656	5,768	1,368	1,157	1,012	1,026	990	1,137	1,440	1,570	1,482	22,888
1969	37,278	22,215	2,833	1,260	1,235	1,012	955	990	1,137	1,380	1,873	1,620	73,783
1970	2,302	1,895	5,232	1,182	1,158	1,017	953	990	1,188	1,380	4,501	4,498	20,845
1971	1,728	1,624	1,546	1,225	1,201	1,016	953	995	1,137	1,428	1,438	13,156	21,813
1972	1,509	1,427	1,366	1,184	1,156	1,066	953	1,013	1,141	1,731	2,070	2,473	26,603
1973	5,072	9,344	3,051	1,183	1,160	1,012	953	990	1,137	1,380	1,796	1,646	30,178
1974	11,325	1,385	2,594	1,414	1,162	1,012	953	990	1,137	1,700	1,346	3,681	27,115
1975	1,801	2,083	3,403	1,466	1,164	1,012	953	990	1,137	1,396	1,390	1,690	20,534
1976	1,583	3,858	2,134	1,414	1,165	1,012	954	990	1,229	1,398	1,418	1,890	19,214
1977	4,140	1,621	1,566	1,175	2,464	1,012	953	1,878	1,137	1,380	1,376	3,921	20,874
1978	11,219	12,250	19,078	1,789	1,168	1,012	953	990	1,514	1,426	1,761	2,309	56,949
1979	6,434	3,575	5,225	1,178	1,194	1,012	973	990	1,137	1,838	1,368	1,637	36,213
1980	15,341	26,746	6,524	1,199	1,169	1,012	953	990	1,137	1,407	1,345	1,742	59,832
1981	2,333	1,932	2,704	1,205	1,161	1,012	953	990	1,139	1,440	2,338	1,732	18,112
1982	4,384	2,152	13,228	2,405	1,161	1,012	954	992	1,292	1,408	2,388	2,870	38,434
1983	6,824	6,271	8,358	2,224	1,309	1,012	953	1,221	1,395	2,272	2,809	5,738	35,826
1984	1,595	1,428	1,392	1,232	1,165	1,012	953	991	1,260	1,392	1,593	5,308	19,820
1985	1,847	1,814	1,578	1,179	1,158	1,012	953	990	1,142	1,434	2,418	1,801	19,060
1986	1,907	2,700	2,926	1,652	1,156	1,012	953	990	1,514	1,439	1,527	1,727	20,465
1987	2,574	1,690	1,518	1,190	1,165	1,012	953	990	1,137	1,347	1,597	2,047	16,912
1988	2,581	1,638	1,527	1,593	1,168	1,012	953	992	1,137	1,390	1,537	3,320	18,936
1989	1,700	2,078	1,837	1,178	1,158	1,012	953	990	1,213	1,415	1,388	1,611	18,271
1990	2,080	3,427	1,203	1,315	1,333	1,014	953	990	1,137	1,380	1,369	1,611	18,357
1991	2,108	3,616	7,892	1,175	1,166	1,012	953	990	1,165	1,479	1,346	2,040	24,419
1992	2,176	7,688	5,191	1,175	1,158	1,012	953	990	1,137	1,575	1,346	4,879	38,345
1993	24,632	18,332	1,243	1,175	1,163	1,368	953	990	1,137	1,381	1,420	1,796	54,256
1994	1,874	2,307	2,344	1,508	1,169	1,012	953	990	1,137	1,476	1,461	1,812	17,938
1995	12,800	2,198	12,126	1,287	1,166	1,402	954	990	1,137	1,380	1,345	1,861	38,520
1996	1,937	6,910	2,381	1,204	1,166	1,012	953	990	1,137	1,559	2,968	3,126	26,304
1997	7,258	1,396	1,365	1,175	1,166	1,022	953	990	1,297	1,390	1,517	2,133	24,258
1998	4,086	14,760	2,160	1,250	2,665	1,012	953	1,067	1,143	1,380	1,968	1,847	35,546
1999	2,019	1,509	1,410	1,609	1,166	1,036	953	990	1,137				16,411
Average	5,350	4,540	3,543	1,565	1,258	1,031	956	1,016	1,224	1,473	2,191	3,058	27,146
Minimum	1,509	1,377	1,365	1,175	1,156	1,012	953	990	1,137	1,380	1,346	1,611	16,411
Maximum	37,278	26,746	19,078	5,533	2,665	1,402	1,026	1,878	2,911	2,272	13,069	19,139	73,783
Std Dev	6,609	6,378	3,749	841	256	77	11	125	274	170	1,727	2,750	12,426
Skew	3.11	2.32	2.63	3.78	3.96	4.30	6.93	6.37	5.20	2.68	5.46	3.58	2

Table 2a
Monthly Flow at Chino Creek as Projected by the WLAM *(acre-feet)*
Scenario 7a - Planned Reuse in 2010

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1949										2,483	3,257	5,028	10,748
1950	4,240	4,682	3,000	2,409	2,100	1,873	1,814	1,864	2,064	2,461	3,100	2,771	34,713
1951	3,059	2,744	2,842	2,617	2,134	1,878	1,814	1,864	2,121	2,603	2,548	10,105	39,631
1952	10,445	2,536	9,727	2,618	2,108	1,878	1,814	1,864	2,121	2,456	4,513	4,352	50,485
1953	3,232	2,671	2,741	2,637	2,111	1,878	1,814	1,864	2,084	2,457	2,860	2,609	32,651
1954	9,325	5,025	4,299	2,144	2,108	1,878	1,814	1,864	2,084	2,456	3,843	3,334	38,753
1955	6,640	2,815	3,567	2,521	2,506	1,878	1,814	1,867	2,064	2,456	3,049	2,881	33,491
1956	13,335	3,842	2,410	2,595	2,234	1,873	1,833	1,864	2,064	2,460	2,377	2,952	39,772
1957	5,824	3,012	2,512	2,545	2,426	1,965	1,814	1,884	2,064	3,104	2,320	6,714	38,215
1958	4,085	11,201	6,760	6,800	2,131	1,881	1,813	1,878	2,076	2,479	2,501	2,771	46,712
1959	4,353	3,591	2,410	2,359	2,109	1,878	1,814	1,864	2,060	2,456	2,423	3,515	30,192
1960	4,097	3,904	2,812	3,087	2,118	1,878	1,814	1,864	2,064	2,735	3,599	2,760	31,931
1961	3,340	2,356	2,863	2,160	2,100	1,878	1,814	1,864	2,064	2,456	2,440	4,356	29,695
1962	4,814	11,560	2,764	2,127	2,188	1,879	1,814	1,864	2,064	2,450	2,377	2,774	40,733
1963	2,859	6,014	3,553	2,737	2,108	1,879	1,814	1,864	5,314	2,435	4,194	2,771	36,152
1964	3,844	2,456	3,270	2,415	2,142	1,896	1,814	1,864	2,908	2,477	3,194	3,095	32,156
1965	2,858	2,531	3,184	6,791	2,108	1,878	1,843	1,884	2,234	2,456	10,521	5,134	34,921
1966	3,281	3,551	2,512	2,127	2,111	1,878	1,814	1,864	3,520	2,474	3,909	12,906	39,768
1967	7,842	2,388	3,107	3,895	2,100	1,881	1,814	1,864	2,066	2,456	5,229	4,053	46,438
1968	3,191	2,567	8,540	2,333	2,108	1,878	1,843	1,884	2,064	2,527	2,588	3,033	38,841
1969	18,249	18,065	2,752	2,440	2,264	1,878	1,821	1,864	3,085	2,458	3,711	2,876	58,896
1970	3,233	4,585	6,750	2,127	2,108	1,880	1,814	1,864	2,064	2,456	5,169	5,156	39,458
1971	2,838	2,528	2,703	2,213	2,210	1,882	1,814	1,884	2,064	2,857	2,551	5,287	32,191
1972	2,740	2,473	2,419	2,173	2,100	1,882	1,814	2,102	2,105	2,833	4,053	4,510	34,250
1973	5,816	7,503	4,635	2,127	2,109	1,878	1,814	1,864	2,064	2,456	3,302	2,910	41,003
1974	10,684	2,403	4,517	2,427	2,119	1,878	1,814	1,884	2,064	2,875	2,377	5,872	38,948
1975	2,747	4,360	5,307	2,830	2,136	1,880	1,814	1,864	2,064	2,460	2,423	2,071	35,796
1976	2,740	5,160	3,295	2,550	2,114	1,829	1,814	1,864	3,562	2,528	2,701	3,726	32,826
1977	7,567	3,145	3,484	2,194	4,405	1,878	1,814	3,741	2,064	2,456	2,429	7,711	39,247
1978	8,532	10,687	15,387	2,829	2,108	1,878	1,814	1,864	2,740	2,470	3,205	4,066	61,666
1979	9,182	4,528	7,303	2,127	2,169	1,878	1,820	1,854	2,064	3,136	2,496	2,956	42,682
1980	14,608	19,250	6,853	2,270	2,207	1,878	1,814	1,884	2,064	2,461	2,377	3,083	62,042
1981	4,228	3,468	4,502	2,390	2,109	1,878	1,814	1,864	2,102	2,530	3,856	3,284	32,768
1982	5,828	3,588	8,112	3,109	2,109	1,878	1,814	1,882	2,214	2,502	7,794	4,405	40,008
1983	8,914	8,560	10,249	4,460	2,112	1,880	1,814	2,254	3,081	3,381	6,540	4,872	58,114
1984	2,740	2,473	2,435	2,217	2,108	1,879	1,819	1,866	2,141	2,454	3,006	8,106	34,460
1985	3,295	3,584	5,000	2,127	2,110	1,878	1,814	1,864	2,174	2,564	5,597	3,043	35,402
1986	4,116	8,533	7,208	2,802	2,108	1,878	1,814	1,864	3,068	2,530	3,983	3,040	43,065
1987	7,073	3,189	2,899	2,177	2,100	1,879	1,815	1,864	2,075	4,470	3,695	7,075	33,739
1988	4,567	3,000	3,555	3,988	2,108	2,609	1,814	1,875	2,064	2,458	2,747	9,572	39,497
1989	3,067	3,923	3,059	2,157	2,108	1,878	1,814	1,864	2,100	2,900	2,604	2,806	33,615
1990	3,683	5,150	2,412	2,242	2,459	1,879	1,814	1,864	2,064	2,456	2,434	2,771	31,580
1991	3,535	4,655	7,903	2,127	2,108	1,878	1,814	1,864	2,268	2,820	2,377	3,232	35,812
1992	8,901	8,695	7,071	2,143	2,108	1,879	1,815	1,864	2,064	2,910	2,077	7,715	40,375
1993	19,550	12,613	2,810	2,127	2,106	2,305	1,814	1,854	2,064	2,456	2,606	3,193	53,657
1994	2,803	3,869	3,893	2,717	2,119	1,875	1,814	1,854	2,064	2,516	7,568	3,074	31,357
1995	19,275	3,329	10,652	2,721	2,106	2,719	1,813	1,864	2,064	2,456	2,377	3,085	51,781
1996	4,150	8,713	3,954	2,235	2,108	1,878	1,814	1,854	2,064	3,308	4,061	5,950	37,716
1997	8,939	2,424	2,410	2,127	2,108	1,880	1,814	1,864	2,300	2,457	3,407	6,329	37,002
1998	4,166	18,601	4,030	2,399	1,843	1,879	1,814	1,896	2,065	2,456	2,806	2,659	53,737
1999	5,375	2,595	5,587	2,714	2,106	1,841	1,815	1,854	2,064				28,253
Average	6,057	5,509	4,534	2,589	2,206	1,920	1,820	1,915	2,263	2,510	3,451	4,532	39,035
Minimum	2,740	2,388	2,410	2,127	2,108	1,878	1,813	1,854	2,064	2,456	2,377	2,771	10,746
Maximum	19,550	19,250	15,387	6,791	4,405	2,719	1,843	3,741	5,314	4,470	10,521	12,906	62,042
Std Dev	4,144	4,351	2,779	947	451	165	26	271	548	341	1,528	2,234	9,760
Skew	1.74	1.85	1.81	3.23	4.52	4.14	4.51	6.53	4.21	2.85	2.79	1.78	1

Table 2b
Monthly Flow at Chino Creek as Projected by the WLAM *(acre-feet)*
Scenario 7d - Planned Reuse in 2020

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1949										2,127	3,168	4,764	10,059
1950	4,073	4,422	2,466	2,034	1,896	1,443	1,331	1,401	1,674	2,125	3,090	2,506	30,504
1951	3,752	2,436	8,001	2,442	1,722	1,449	1,331	1,401	1,731	2,297	2,560	9,543	28,522
1952	10,178	2,368	9,388	2,241	1,606	1,443	1,331	1,401	1,731	2,125	4,526	6,360	46,340
1953	2,955	2,413	2,369	2,451	1,688	1,445	1,331	1,401	1,704	2,121	2,779	2,545	28,553
1954	5,058	4,767	3,908	1,798	1,666	1,449	1,331	1,401	1,674	2,125	3,566	3,071	34,543
1955	3,873	2,556	2,228	2,149	2,173	1,449	1,331	1,401	1,674	2,120	2,861	2,728	28,372
1956	13,068	2,376	2,068	2,920	1,821	1,449	1,372	1,401	1,674	2,128	2,287	2,689	35,654
1957	5,558	2,754	2,570	2,170	2,013	1,533	1,331	1,401	1,674	2,738	2,502	6,451	30,107
1958	3,758	10,842	5,427	6,125	1,718	1,449	1,331	1,416	1,686	2,143	2,412	2,508	45,604
1959	4,057	3,302	2,069	1,993	1,666	1,446	1,331	1,401	1,675	2,120	2,394	3,253	28,081
1960	3,530	3,728	2,271	2,802	1,704	1,446	1,331	1,401	1,674	2,402	3,512	2,517	27,702
1961	3,073	2,130	2,022	1,704	1,666	1,446	1,331	1,401	1,674	2,120	2,761	4,093	25,487
1962	4,547	11,300	2,423	1,751	1,779	1,446	1,331	1,401	1,674	2,124	2,287	2,311	36,023
1963	2,882	5,756	3,512	2,382	1,686	1,446	1,331	1,401	4,923	2,130	4,107	2,508	32,041
1964	3,577	2,222	2,529	2,070	1,730	1,467	1,331	1,401	2,572	2,134	3,048	3,823	28,043
1965	2,891	2,243	2,823	6,406	1,698	1,446	1,461	1,401	1,674	2,120	10,434	4,872	39,814
1966	3,014	3,290	2,171	1,752	1,659	1,446	1,331	1,401	2,130	2,138	3,821	12,703	35,861
1967	7,376	2,130	2,815	8,523	1,798	1,446	1,331	1,401	1,675	2,120	5,141	4,331	42,330
1968	2,024	2,399	3,136	1,962	1,695	1,446	1,401	1,401	1,674	2,192	2,479	2,821	24,723
1969	17,682	17,793	2,411	2,064	1,851	1,446	1,340	1,401	1,675	2,120	3,822	2,594	55,457
1970	2,986	4,325	6,446	1,752	1,896	1,448	1,331	1,401	1,674	2,120	5,071	4,895	35,345
1971	2,602	2,650	2,359	1,835	1,798	1,460	1,331	1,401	1,674	2,302	2,483	6,025	28,054
1972	2,478	2,206	2,388	1,757	1,896	1,449	1,331	1,608	1,714	2,297	3,856	4,247	30,134
1973	5,549	7,244	4,294	1,751	1,896	1,446	1,331	1,401	1,671	2,120	3,413	5,636	38,853
1974	10,417	2,143	4,578	2,062	1,706	1,449	1,331	1,401	1,674	2,549	2,257	5,609	34,625
1975	5,480	4,131	4,867	2,224	1,726	1,447	1,331	1,401	1,674	2,166	2,336	2,600	31,957
1976	2,473	4,583	2,956	2,304	1,701	1,467	1,331	1,401	3,152	2,192	2,613	3,462	29,528
1977	7,301	2,556	3,153	1,809	3,993	1,448	1,331	3,278	1,674	2,120	2,340	7,450	38,138
1978	5,416	10,428	15,057	2,553	1,996	1,445	1,331	1,401	2,350	2,131	3,118	3,624	57,587
1979	8,816	4,270	5,962	1,751	1,747	1,449	1,337	1,401	1,674	2,709	2,408	2,683	38,576
1980	14,342	19,582	8,609	1,845	1,795	1,448	1,331	1,401	1,674	2,125	2,287	2,600	57,925
1981	3,962	3,240	4,641	2,015	1,696	1,449	1,331	1,401	1,712	2,203	3,787	3,081	28,880
1982	5,361	3,300	7,771	2,725	1,608	1,448	1,331	1,419	1,674	2,166	7,706	4,202	35,907
1983	8,847	8,301	9,908	4,085	1,698	1,448	1,331	1,781	2,891	3,066	6,453	4,610	55,005
1984	2,460	2,206	2,094	1,842	1,696	1,449	1,335	1,402	1,751	2,129	2,918	7,645	30,374
1985	3,028	3,305	2,880	1,752	1,696	1,446	1,331	1,401	1,744	2,225	5,510	2,700	31,290
1986	3,546	6,073	5,066	2,527	1,696	1,446	1,331	1,401	2,570	2,294	2,904	2,785	33,684
1987	3,509	2,380	2,548	1,801	1,698	1,448	1,333	1,401	1,835	4,135	3,607	5,814	29,679
1988	4,300	2,732	2,217	3,291	1,688	2,174	1,331	1,416	1,674	2,120	2,668	6,011	35,380
1989	2,760	3,666	2,718	1,782	1,666	1,446	1,331	1,401	1,700	2,237	2,518	2,543	25,768
1990	3,417	4,891	2,071	1,896	2,049	1,446	1,331	1,401	1,674	2,120	2,345	2,505	27,470
1991	3,289	4,399	7,559	1,752	1,669	1,446	1,331	1,421	1,970	2,293	2,287	3,698	31,703
1992	3,634	8,426	6,781	1,769	1,665	1,446	1,336	1,401	1,674	2,575	2,287	7,454	35,257
1993	15,685	12,354	7,477	1,751	1,685	1,673	1,331	1,401	1,674	2,120	2,615	2,634	55,666
1994	2,613	3,609	3,652	2,342	1,703	1,446	1,331	1,401	1,674	2,290	2,497	2,752	27,246
1995	16,199	3,071	10,221	2,348	1,695	2,298	1,331	1,401	1,674	2,120	2,287	2,834	47,674
1996	3,694	6,451	2,613	1,960	1,695	1,446	1,331	1,401	1,674	2,762	3,693	5,997	33,597
1997	6,672	2,166	2,065	1,761	1,695	1,448	1,331	1,401	1,910	2,121	3,215	5,957	32,894
1998	3,899	18,242	4,219	2,024	3,631	1,447	1,331	1,433	1,686	2,120	2,617	2,596	45,626
1999	8,107	2,357	2,226	2,399	1,696	1,508	1,334	1,401	1,674				25,154
Average	5,790	5,246	4,253	2,313	1,826	1,491	1,338	1,452	1,876	2,277	3,352	4,270	34,906
Minimum	2,473	2,130	2,068	1,751	1,696	1,446	1,331	1,401	1,674	2,120	2,287	2,508	10,059
Maximum	18,555	19,582	15,057	6,406	3,993	2,298	1,461	3,278	4,923	4,135	10,434	12,703	57,925
Std Dev	4,144	4,351	2,779	947	451	165	26	271	543	341	1,528	2,235	9,592
Skew	1.74	1.98	1.81	3.23	4.52	4.14	4.51	6.53	4.21	3.86	2.76	1.79	1

Table 3

Projected Monthly Surface Water Flow into Prado Basin[1]

(all values in acre-feet)

Mill Creek[2] with IEUA Planned Discharge for 2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Average	5,326	4,645	3,543	1,455	1,256	1,011	966	1,016	1,224	1,470	2,107	3,255	27,140
Minimum	1,593	1,377	1,385	1,178	1,156	1,012	953	920	1,137	1,380	1,345	1,511	15,411
Maximum	37,226	26,716	19,078	5,533	2,665	1,402	1,035	1,676	2,811	2,272	13,066	8,126	75,752
Std Dev	6,600	5,175	3,528	861	242	77	11	129	274	177	1,727	2,256	12,524
Skew	3	3	2	4	4	4	6	5	5	3	5	4	2

Mill Creek[2] with IEUA Planned Discharge for 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Average	5,751	4,434	3,267	1,338	864	544	384	575	897	1,251	2,134	3,003	23,522
Minimum	1,077	1,266	1,116	833	754	524	381	478	790	1,168	1,355	1,566	12,557
Maximum	37,210	27,632	19,532	5,406	2,253	814	474	1,337	2,525	2,046	13,070	15,774	70,772
Std Dev	7,675	6,579	3,545	341	286	77	11	128	224	170	1,727	2,791	12,426
Skew	3	3	3	4	4	4	3	6	3	3	5	4	2

Chino Creek[3] with IEUA Planned Discharge for 2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Average	5,257	4,596	4,524	2,544	2,230	1,622	1,620	1,215	2,186	2,612	3,451	4,562	30,080
Minimum	2,740	2,386	2,410	2,127	2,125	1,575	1,613	1,904	2,164	2,455	2,271	2,771	10,746
Maximum	11,953	16,350	10,087	6,761	4,430	2,719	1,943	3,241	3,314	4,470	10,521	12,255	62,042
Std Dev	4,144	4,261	2,776	647	451	155	26	271	543	341	1,526	2,234	9,750
Skew	2	2	2	3	6	4	5	7	4	4	3	2	1

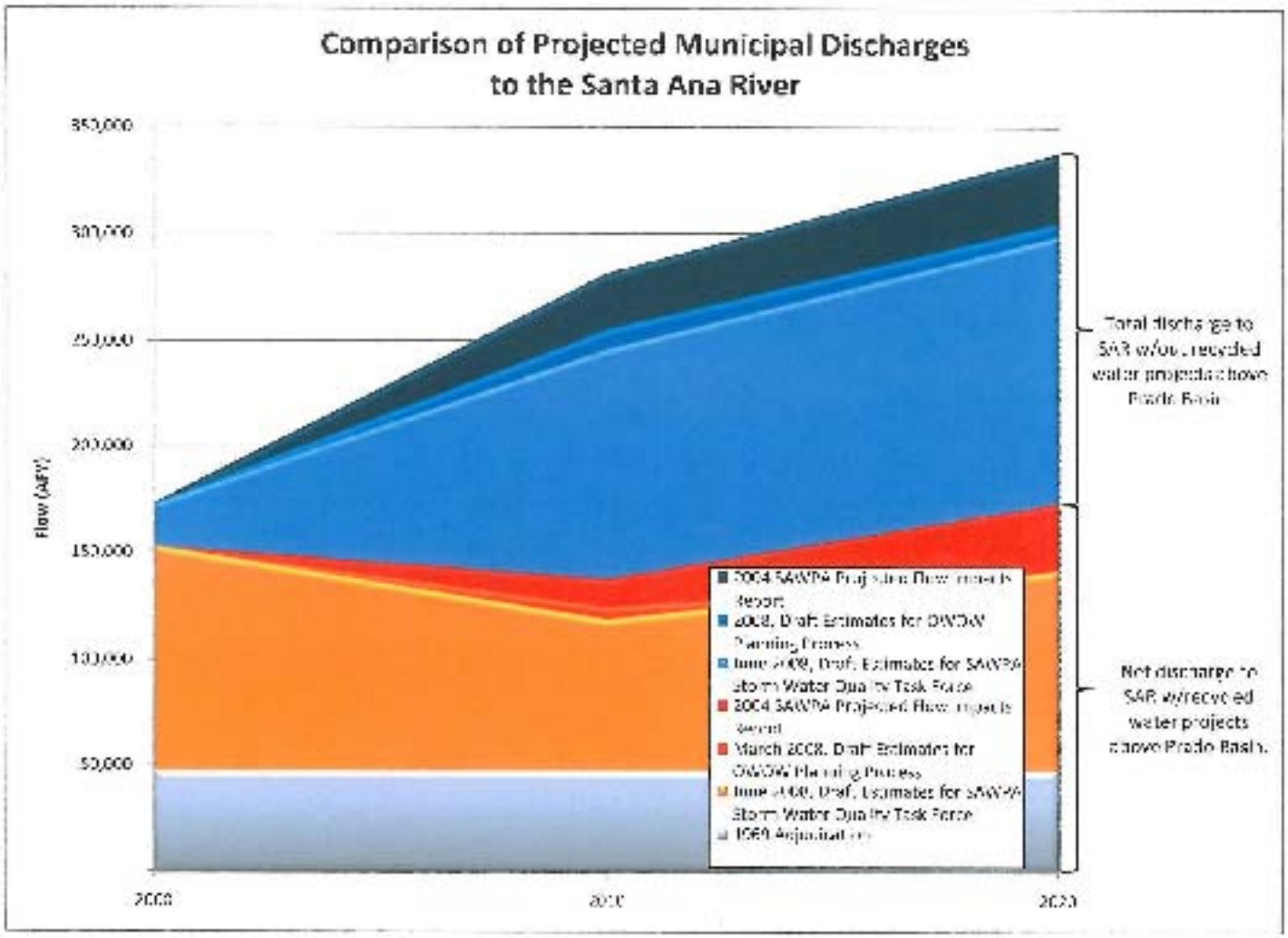
Chino Creek[3] with IEUA Planned Discharge for 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Average	6,790	3,246	4,350	2,513	1,355	1,461	1,388	1,452	876	2,277	3,352	4,270	34,003
Minimum	2,473	2,130	2,146	1,761	1,395	1,446	1,381	1,401	1,674	2,120	2,267	2,604	16,060
Maximum	17,603	18,552	17,077	6,406	3,397	2,206	1,461	3,275	4,569	4,125	11,434	12,706	67,925
Std Dev	4,144	4,261	2,776	647	451	155	26	271	543	341	1,526	2,235	9,552
Skew	2	2	2	3	6	4	5	7	4	4	2	2	1

1 -- Projections are summarized from daily Wasteload Allocation Model results of Scenario 7a (planned recycled water reuse in 2010) and Scenario 7c (planned recycled water reuse in 2020) that was performed in support of a future Basin Plan amendment in 2010 or 2011. Flows include planned IEUA discharges and storm flow runoff.

2 -- Projected flows at model node located at the end of the concrete channel on Mill Creek.

3 -- Projected flows at model node located at the end of the concrete channel on Chino Creek + RP-5 discharge + RP-1 (RP-001) discharge.


Comparison of Projected Municipal Discharges to the Santa Ana River
Flow (AFY)
350,000
300,000
250,000
200,000
150,000
100,000
50,000
2008
2010
2020
Total discharge to SAR w/out recycled water projects above Prado Basin
Net discharge to SAR w/recycled water projects above Prado Basin.
2004 SAWPA Projected Flow Projects Report
2008, Draft Estimates for OWOW Planning Process
June 2008, Draft Estimates for SAWPA Storm Water Quality Task Force
2004 SAWPA Projected Flow Projects Report
March 2008, Draft Estimates for OWOW Planning Process
June 2008, Draft Estimates for SAWPA Storm Water Quality Task Force
1969 Adjudication

SEIR
MITIGATION MONITORING AND REPORTING PROGRAM

INLAND EMPIRE UTILITIES AGENCY
PEACE II PROJECT, CHINO GROUNDWATER BASIN
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Air Quality						
4.2-1	Water active grading sites and haul roads at least three times daily and when dust is observed migrating from the site. This is a modification of measure 4.8-1 from the OBMP.	Subsequent Environmental Impact Report (SEIR)	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-2	Pave or apply water three times daily, or apply non-toxic soil stabilization on all unpaved access roads, parking areas, and staging areas. More frequent watering will occur if dust is observed migrating from the site during grading activities.	SEIR	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-3	Enclose, cover, or water twice daily, or apply non-toxic soil binders, to any onsite stockpiles of debris, dirt or other dusty material.	SEIR	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-4	Suspend all grading and excavation operations when wind speeds exceed 25 mph. This is measure 4.8-2 from the OBMP.	SEIR	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Air Quality (continued)						
4.2-5	Replace ground cover or pave disturbed areas immediately after construction is completed in the affected area. This is measure 4.8-4 from the ODMP.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-6	Hydro-seed, apply non-toxic chemical soil stabilizers or otherwise stabilize any cleared area which is to remain inactive for more than 10 days after clearing is completed. This is a modification of measure 4.8-2 from the ODMP.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-7	Cover all truck hauling soil, sand and other loose materials or require all trucks to maintain at least two feet of freeboard.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-8	Sweep or wash any site access points daily if any visible dirt deposition on any public roadway. This is a modification of measure 4.8-5 from the ODMP.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Air Quality (continued)					
4.2-9 Reduce traffic speed on unpaved roads to less than 15 mph.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspection by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-10 Install sandbags or other erosion control measures to prevent silt runoff to public roadways.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspection by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-11 Limit the area subject to excavation, grading and other construction activity at any one time.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspection by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-12 Deleted, replaced by measure 4.2-18					
4.2-13 All equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspection by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Air Quality (continued)					
4.2-14 General contractor shall maintain and operate construction equipment so as to minimize exhaust emissions.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-15 Require 30-day low-NOx tune-ups for off-road equipment.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-16 Use Tier 3-rated engines during site grading for all equipment exceeding 100 horsepower if available.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-17 Deleted, replaced by measure 4.2-16					
4.2-18 Deleted, replaced by measure 4.2-16					
4.2-19 During construction, trucks and vehicles in loading and unloading queues would be kept with their engines off, when not in use, to reduce vehicle emissions.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Air Quality (continued)					
4.2-20 Limit allowable idling to 5 minutes for trucks and heavy equipment.	SEIR	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-21 Encourage car pooling for construction workers.	SEIR	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-22 Limit lane closures to off-peak travel periods, when possible.	SEIR	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-23 Park construction vehicles off traveled roadways.	SEIR	Local Measure. The measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	The measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Air Quality (continued)					
4.2-24 Encourage receipt of materials during non-peak traffic hours.	SEIR	Local Measure. This measure shall be implemented during construction.	Agency implementing a project that will generate air emissions.	This measure shall be incorporated into the construction contract. Verification of implementation shall be based on field inspections by agency inspection personnel that verify the measure is being implemented during construction. Field notes documenting verification shall be retained in the project file.	
4.2-25 IEUA/Watermaster/Stakeholders shall establish a monitoring program to track future OBMP and Peace II program construction activities for specific project components. To the extent feasible and using this monitoring data, future specific project construction activities shall be scheduled in sequence or to minimize overlap of maximum emissions from each construction activity.	SEIR	Report. This measure shall be implemented on an annual basis. Stakeholders will provide basic information regarding projects implemented in support of the OBMP and Peace 2 programs. A list of construction projects shall be retained by IEUA and/or Watermaster and made available to all stakeholders within the Chino Basin.	Stakeholders, IEUA and/or Watermaster	Monitoring shall be carried out by contacting each OBMP/Peace II Agreement stakeholder each month and compiling a list of projects under construction. The monthly data shall be compiled into an annual list in December of each calendar year. Monthly and annual data shall be made available to Stakeholders.	
4.2-26 IEUA/Watermaster/Stakeholders shall establish a monitoring program to track future OBMP and Peace II electricity consumption for specific project components. As part of the monitoring program, those non-GHG emitting electrical generation projects implemented by all parties shall be quantified to demonstrate the specific reductions in both criteria pollutants and GHG relative to that which would occur from relying on electricity delivered by the Southern California Edison (SCE) grid. To the extent feasible and consistent with each agency's ability, criteria pollutant and GHG emissions should be offset by 50% relative to reliance on the SCE grid to power future OBMP and Peace II equipment.	SEIR	Report. This measure shall be implemented on an annual basis. Stakeholders will provide basic information regarding projects implemented in support of the OBMP and Peace 2 programs. A list of construction projects shall be retained by IEUA and/or Watermaster and made available to all stakeholders within the Chino Basin.	Stakeholders, IEUA and/or Watermaster	Monitoring shall be carried out by contacting each OBMP/Peace II Agreement stakeholder annually. A list of OBMP/Peace II projects and electrical consumption shall be compiled. Also, a list of projects installed to offset or replace grid electricity use shall be compiled. Examples of such projects are solar units, fuel cells, and wind turbines. Annually the compiled list shall be made available to Stakeholders. An estimate of emission reductions shall be incorporated into the annual report.	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Air Quality (continued)						
4.3-27	To the extent feasible, the IEUA, Stakeholders shall select landscaping that is fast-growing to create visual buffers at future CBMP and Peace II sites and to offset GHG emissions. Where landscaping is feasible, a landscape plan designed to initiate carbon sequestration and these plants shall be periodically harvested and/or replanted to maintain carbon sequestration. Alternatively, these agencies may choose to purchase annual or permanent carbon credits from the available carbon banks at the time that a facility begins operation.	SEIR	Construction. The landscape plans and carbon management plans shall be considered when a new project with adequate area to support landscaping and access to recycled water is implemented.	Stakeholders, IEUA, and/or Watermaster	Copies of landscape and carbon management plans shall be retained by each stakeholder implementing this measure. On an annual basis IEUA/Watermaster shall compile a list of landscape/carbon sequestration projects implemented by Stakeholders and make the list available to Stakeholders.	
4.3-28	To the extent feasible, the IEUA, Stakeholders shall select equipment for future CBMP and Peace II projects that minimize electricity consumption. Documentation of such efforts shall be retained in project files to verify that electricity consumption of such equipment has been given consideration before selecting a specific piece of equipment, such as a booster pump. This measure is not intended to dictate selection of equipment that minimizes electricity consumption, only to ensure that this decision is clearly given consideration in the selection of such equipment.	SEIR	Construction. Individual stakeholders shall implement this measure concurrent with equipment purchases.	Stakeholders, IEUA, and/or Watermaster	On an annual basis, Stakeholders shall provide IEUA/Watermaster with a list of equipment purchases, if any, that reduce emissions relative to standard emission controls. As an example, substitution of a fuel cell for a generator using biogas or natural could substantially reduce emissions. On an annual basis IEUA/Watermaster shall compile a list of CBMP/Peace II-related equipment that reduces emissions and an estimate of emission reductions achieved. The list shall be made available to Stakeholders.	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems						
Water Quality						
4.9-1	If any well intercepts a contamination plume, the affected well will be connected to a treatment unit to remove the plume pollutants to a level that meets potable/drinking water quality standards. If this cannot be achieved, the well will be removed from production.	SEIR	Construction. If and when a new well installed in support of the OBMP/Peace II Agreement program intercepts contaminated groundwater, the well owner/operator shall notify Watermaster immediately. At the time of notification, the well owner/operator shall verify that the well is either removed from production, or properly treated or blended to meet potable/drinking water quality standards.	Stakeholders, well owner/operator, and Watermaster	For wells installed in support of the OBMP/Peace II Agreement program, well test data shall be submitted to Watermaster when groundwater contamination is encountered. The management actions (well removed from production or treatment unit installed) implemented for such wells shall be documented by the well owner/operator and a record of such actions retained by Watermaster.	
4.9-2	Prior to cleaning out, refurbishing or capping a well, samples will be obtained and chemically analyzed to ensure that the discharge does not contain any contaminants exceeding regulatory thresholds. If contaminants are discovered, then they shall be removed or lowered below the regulatory threshold prior to discharge to the environment. Discharge of non-storm water into storm drains will require a NPDES permit.	SEIR	Construction. This measure applies to wells installed in support of OBMP/Peace II Agreement programs. The tests and management actions shall be implemented during activities that result in the discharge of groundwater from a well. The process of reducing contaminations shall be carried out during any discharge. Where required, the NPDES permit or sewer shall be obtained prior to a discharge and permit conditions shall be implemented during the discharge.	Stakeholders or well owner	The Stakeholder shall retain copies of water quality data from tests and analyses. Copies of any NPDES permit or sewer shall also be retained in the project file. Field inspections during discharge shall verify that any management actions required to reduce contaminant concentrations are implemented and notes documenting inspections shall be retained in the project file.	
4.9-3	When closing abandoned wells in the Chino Basin the entity closing the well shall, where technically feasible, sample and analyze the well water to determine whether the groundwater in the well is contaminated. If contamination is identified, the entity shall report the discovery to the appropriate parties, including the owner (if known) and the regulatory agencies. The well owner/operator shall monitor the status of the well until residual contamination is remediated.	SEIR	Construction. This measure applies to OBMP/Peace II Agreement wells being closed. Where feasible, tests shall be conducted prior to closing such wells. Any reports of water quality shall be provided immediately after acquired.	Stakeholders, well owner/operator and/or Watermaster	The Stakeholder shall provide copies of well tests to Watermaster. Any active well monitoring after well closure shall be noted by the well owner/operator and monitoring reports shall be retained in a file on the well.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)						
4.3-4	Under no circumstance shall discharge of recharge water (e.g., SPW, recycled water, etc) cause or contribute to a cumulative violation of the 2004 Basin Plan maximum benefit objectives or initiate a violation of a designated beneficial use in a water or groundwater body. In addition to monitoring, the Watermaster and stakeholders will use models to forecast future TDS and Nitrate concentrations pursuant to the Basin Plan and recharge permit requirements. Watermaster and the stakeholders will, based on monitoring, begin the planning to develop measures to either protect beneficial uses of groundwater or to treat groundwater to meet beneficial use requirements. This is a requirement of the 2004 Basin Plan. This is a modification of mitigation measures 4.5-12 and 4.5-14 from the OBMP.	SEIR	Concurrent. The measure must be implemented prior to (modeling), during (ongoing monitoring of groundwater downstream of recharge sites), and when monitoring data indicates beneficial uses could be compromised.	Stakeholders, IEUA and Watermaster	Monitoring data for recharge locations shall be retained for each recharge site. Modeling data shall be retained for each recharge site. Summaries of any remedial management actions shall be retained in the project file.	
4.3-5	Hydrogeological studies, including modeling, will be completed for each recharge site, including ASR wells, to define the recharge impacts on known groundwater quality anomalies (contaminated groundwater plumes). If modeling demonstrates that the rate of contaminated plume expansion or contamination of a downstream well associated with such expansion will adversely impact groundwater or water production capabilities, the recharge facility shall be moved to an alternative location where such impacts will not occur or else impacted production facilities will be replaced. The threshold for adverse impacts will be if existing domestic water production	SEIR	Concurrent. The hydrogeologic studies shall be completed prior to recharge or installation of ASR wells. Management actions to protect water quality at recharge locations shall be implemented on an as needed basis.	Stakeholders and Watermaster	A copy of hydrogeologic studies shall be retained in the recharge site project file. Management actions shall be documented and outcomes defined. This information shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)					
4.9-5 (cont.) wells will be impacted by the plume a minimum of one year earlier than under pre-existing conditions, or if significant quantities of additional groundwater (more than 5,000 acre-feet) will become contaminated within a five year period due to the recharge of water. This is a modification of mitigation measure 4.5-15 from the OBMP.					
4.9-6 When recharge of recycled water is proposed for a specific location, the entity proposing such recycling shall determine whether recharge would cause a violation of current DHS requirements at any existing production well or critical water supply aquifers. If impacts will affect existing wells or critical water supply aquifers, the entity proposing to recharge recycled water shall fund the provision of a comparable quality and quantity of potable water through installing new wells, deed water deliveries (for example from decoliths), or comparable measures. This is mitigation measure 4.5-12 from the OBMP.	SEIR	Cont. Modeling data or other available data that evaluates potential for contamination shall be completed prior to initiating recharge. Arrangements to offset any losses of production related to recharge projects shall be implemented on a case-by-case basis.	Stakeholders or IEUA	A copy of any determinations regarding potential for contamination shall be retained in the project file. Any management actions to offset contamination shall be documented and the information placed in the project file.	
4.9-7 All water recharge operations shall be monitored, and if impacts that were not forecast to occur as a result of recharge operations cause unexpected significant adverse impact on the groundwater aquifer, the recharge operations shall be terminated or modified to eliminate the adverse impact.	SEIR	Cont. Monitoring shall be conducted while recharge operations are being carried out at a recharge site. If recharge operations are terminated, documentation of the action shall be completed at the time of termination.	Stakeholders, Watermaster or IEUA	Monitoring data shall be retained in the project file, and documentation of any termination actions shall also be retained in the project file for the affected recharge basin.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)					
Groundwater Levels					
4.9-3 Watermaster shall continue to implement adaptive management in conjunction with the Physical Solution contained with the Chino Basin Judgment and the Peace Agreement. The limit of permanent change in storage will not exceed the 500,000 acre-ft limit authorized in the Peace II Agreement and the Judgment. Watermaster will periodically review the safe yield of the Chino Basin and its' Recharge Master Plan. Watermaster will replenish the Basin with supplemental water pursuant to the Judgment based on production and safe yield in such a manner as to maintain the Basin in a state of dynamic equilibrium with no net loss of storage beyond the 500,000 acre-ft provided for in the Judgment and the Peace II Agreement. Watermaster will direct its supplemental water recharge in the Basin to balance the recharge and discharge in every area and subarea pursuant to the Peace Agreement.	SEIR	Report. The measure shall be implemented on an as needed basis when either of the circumstances requires adaptive management.	Watermaster and Stakeholders	The Watermaster shall document each adaptive management activity initiated under this measure and further document the outcome and effectiveness of these measures in protecting the Chino Groundwater Basin's integrity under the Peace II Agreement.	
These were included as optional measures in the Initial Study. Depending on results of hydrology, maybe include as required.					
4.9-8 The OBMP Implementation Plan (Peace Agreement, Exhibit B, page 28) states "The occurrence of subsidence in Management Zone 1 is not acceptable and should be reduced to tolerable levels or abated." Watermaster has developed and implemented an adaptive management program of pumping and recharge in MZ-1 to identify subsidence-related hazards and mitigate them to "tolerable levels." The adaptive management program is described in the MZ-1 Subsidence Management Plan (MZ-1 Plan). The Court	SEIR	Report. The subsidence monitoring shall be carried out over the life of the Peace II Agreement.	Watermaster and Stakeholders	The subsidence monitoring data shall be retained in the project file by Watermaster.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)					
4.9-9 (cont.) approved the MZ-1 Plan in November 2007 and ordered its implementation. Watermaster plans to expand the program as a mitigation measure for subsidence-related hazards that could occur as a result of the Peace II project. The expanded program will include changes to Watermaster's existing subsidence monitoring program and the procedures for making adaptive management decisions. Similar to current practice, Watermaster will collect, compile, review, and report annually on the monitoring program data under the supervision of a newly-formed Subsidence Committee. The Committee will include representatives from all interested parties and the CDA. The annual report will include recommendations for adaptive management to mitigate any measured subsidence that the Subsidence Committee identifies as "intolerable." Adaptive management may come in the form of the establishment of threshold water levels at index wells, reduced pumping at specific wells, sealing of well screens at specific depth intervals at specific wells, adjustment of pumping schedules, cessation of pumping at certain wells, installation of additional wells in alternate locations, and other appropriate measures.					
4.9-10 Mitigation will be provided to well owners/operators within the Mitigation Area when the well owners/operators cannot produce enough groundwater to meet their needs and the cause of reduced production can be demonstrated to be the expansion of the desalter program. The mitigation will either	SEIR	Report. The measure shall be implemented when a request is submitted by a well owner/operator for assistance..	Stakeholders and Watermaster	A copy of any request for assistance shall be retained in the project file. The actions taken to resolve a request for assistance shall be documented and retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)					
4.8-10 (cont.) isolate enough of the lost production capacity to ensure that the well owner/operator can produce enough groundwater to meet their needs or provide an alternate source of water to replace the lost production capacity. The method of mitigation will be determined at the discretion of the CDA taking into account the historical fluctuations in the water table, the depth to water, the pump and well efficiency and the reasonableness of the well owner's expectation that the existing well configuration (pump, well and water table) should be partially or fully protected. As a pre-requisite to receiving mitigation, every well owner will be expected to engage in reasonable self-help measures to address insufficient groundwater withdrawal practices.					
4.8-11 Deleted, replaced by 4-10					
4.8-12 Require site-specific geotechnical investigations of proposed development to include an assessment of potential impacts and mitigation measures related to expansive and reactive soils and liquefaction. Under Peace II, Stakeholders will continue to monitor the areas with potential liquefaction hazards and will work with local jurisdictions to ensure that any future structures are constructed with the appropriate foundations to address increased liquefaction potentials appropriate to the specific area. The mitigation measure will reduce impacts to a less than significant level.	SEIR	Local Approval. The geotechnical report shall be completed prior to construction of new structures. If water level data indicate a potential for liquefaction within the Basin, the Watermaster shall monitor the area in question and make the data available to the local land use jurisdiction.	Stakeholders or project proponent	A copy of any geotechnical report shall be retained in the project file. If monitoring is required for liquefaction hazards, the Watermaster shall retain the monitoring data in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)						
Erosion Control						
4.5-13	To minimize potential ground disturbance associated with installation and maintenance of proposed monitoring equipment on existing wells, the equipment shall be installed within or along existing disturbed easements or right-of-way or otherwise disturbed areas, including access roads and pipeline or existing utility easements, wherever feasible. This is a modification of mitigation measure 4.5-1 from the OBMP.	SEIR	Local. This measure shall be implemented during equipment installation.	Stakeholders	Site locations selected for new equipment installation shall be identified and the feasibility of complying with this measure shall be documented for such equipment installation. These materials shall be retained in the project file.	
4.5-14	For long-term mitigation of site disturbance at Peace II facility locations, all areas not covered by structures shall be covered with hardscape (concrete, asphalt, gravel, etc.), native vegetation and/or non-native landscape areas (for example, grass). Revegetated or landscaped areas shall provide sufficient cover to ensure that, after a two year period, erosion will not occur from concentrated flows (rills, gully, etc.) and sediment transport will be minimal as part of sheet flows. These measures and requirements shall be applied to closure of abandoned well site disturbed areas.	SEIR	Local. Onsite erosion shall be incorporated into design plans for new Peace II Agreement facilities. The long-term erosion control measures shall be installed during construction of new facilities and maintained over the life of the facility.	Stakeholders	Copies of long-term erosion control designs shall be retained in the project file. Notes from field inspections during construction shall verify that the installation of erosion control measures has been accomplished and they shall be retained in the project file. Standard operations and maintenance procedures shall document the effectiveness of such erosion control measures, including recorded repair or replacement.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)						
Flood Control						
4.8-15	The Watermaster or other agencies implementing recharge programs shall confer with the San Bernardino County Department of Transportation and Flood Control or the Riverside County Flood Control and Water Conservation District and/or any flood control basin that is proposed to be utilized for recharging water in the Chino Basin, to define the amount of water that can be set aside as a conservation pool within existing flood control basins and specific operational parameters (such as volume of water that can be diverted into each basin). This will ensure that recharge activities do not conflict with flood control operations at any flood control basins. Variable pooling and recharge schedules that are coordinated with storm forecasting to halt deliveries during storm events will ensure that flood-related hazards remain less than significant. This is a modification of mitigation measure 4.5-2 from the OBMP.	SEIR	This measure shall be implemented prior to initiating recharge programs.	Stakeholders	Communications with flood control agencies shall be documented following the communication and the documentation shall be retained in the project file.	
4.8-16	Within each facility or project associated with the Peace II Program that will impact more than one half acre, surface runoff shall be collected and retained (for use on site) or detained and percolated into the ground on the site such that site development results in no net increase in off-site storm water flows. Detainment shall be achieved through Low-Impact Development techniques wherever possible, and shall include techniques that remove the majority of urban stormwater pollutants, such as petroleum products and sediment. The purpose of this measure is to	SEIR	The design component of this measure shall be implemented prior to implementation of any new Peace II Program facility. The designed drainage facilities shall be installed during construction and maintained during future operations.	Stakeholders	A copy of the site storm water facility design shall be retained in the project file. Field inspections shall verify that the design has been implemented during construction and field notes shall be retained in the project file. Maintenance during operations shall be documented by field inspection and placement of field notes in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)					
4.8-1 B (cont.) remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater. The onsite percolation shall be measured whenever possible such that any new yield can be calculated for possible blending credit with recharge of higher TDS water. If it is not possible to eliminate storm water flows off of a site, the facility shall not be constructed until a drainage study has been conducted that verifies that there will be no adverse impacts to downstream storm water management from implementation of the site development.					
4.8-1 F Prior to implementation of any recharge projects at either existing or new basins, a management plan will be established to the satisfaction of SBCFCD. The plan shall be created specifically for each individual basin to ensure the safety of surrounding property and people from undue risks associated with water-related hazards (i.e. flooding). The management plan will firmly establish a priority of flood control functions over and above recharge-related operations. Weather forecasts of upcoming storm events will be carefully monitored and in the event of a significant forecasted storm event, recharge deliveries to the basins will be ceased until further notice is received from SBCFCD that	SEIR	The management plan shall be completed prior to implementation of new recharge projects in support of Peace II Programs.	Stakeholders	A copy of the management plan shall be retained in the project file. Field inspections of the recharge site shall verify that the management plan is being implemented as defined in the plan.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology / Water Quality, Geology / Soils, Utilities / Service Systems (continued)					
4.8-1 f (cont.) to cycle to deliver water to resume. Additionally, no more than three days' percolative capacity of water will be allowed to sit in a basin at a time if such basin is also used for flood control activities. Additionally, each SBCFCD basin will have a specific management plan developed, so as to coordinate flood control with recharge. This mitigation measure will ensure that people and property are not subject to additional risk associated with water-related hazards in the Basin, and will allow SBCFCD to make full utilization of the basin's flood control capacity in the event of a storm.					
Biological Resources / Land Use & Planning					
4.A-1 Where future project-related impacts will impact undeveloped land, future surveys shall be conducted by a qualified biologist/ecologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the following subsequent mitigation actions will be taken. a. The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property	SEIR	Local. Surveys shall be completed prior to approval of specific Peace II Program projects. If sensitive species are identified and mitigation is required, mitigation shall be authorized by the Stakeholder prior to allowing the ground at the project site to be disturbed.	Stakeholders	A copy of each survey shall be retained in the project file. A copy of mitigation proposed for implementation for a project shall be retained in the project file. A note shall be placed in the project file when the mitigation has been accomplished.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources - Land Use & Planning (continued)					
4.A-1 (cont.) acquisition shall include the presence of all local ore animal or plant per animal or plant local at the development site to compensate for the loss of individual sensitive species. b. An endowment, to be determined at the time the impact is proposed, shall be provided by the project proponent and the endowment shall be adequate to fund ongoing management requirements for the property purchased. c. The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFG for any incidental take permits for listed species. The project proponent shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished.					
4.A-2 Prior to discharge of fill or streambed alteration of jurisdictional areas, the project proponent shall obtain regulatory permits from the U.S. Army Corps of Engineers, Santa Ana Regional Water Quality Control Board and the California Department of Fish and Game. Any future project that must discharge fill into a channel or otherwise alter a streambed shall be mitigated. Mitigation	SEIR	Local. Regulatory permits shall be obtained prior to discharging any fill into waters of the United States or State of California. Mitigation shall be implemented in accordance with the schedule outlined in the regulatory permits.	Stakeholders	A copy of the permits shall be retained in the project file. A note shall be placed in the file when the mitigation has been implemented.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources / Land Use & Planning (continued)					
4.4-2 (cont.) can be provided by purchasing into any authorized mitigation bank, by selecting a site of comparable acreage near the site and enhancing it with native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies, or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1 and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. A revegetation plan using native riparian vegetation common to the project area shall be prepared and reviewed and approved by the appropriate regulatory agencies. The project proponent will also obtain permits from the regulatory agencies (U.S. Army Corps of Engineers, Santa Ana Regional Water Quality Control Board and CDFG) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but the IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.					

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources / Land Use & Planning (continued)						
4.4-2	The Chino Basin Stakeholders are committed to ensuring that the Peace II Agreement actions will not significantly adversely impact the Prado Basin riparian habitat. This includes the riparian patches of Chino and Mill Creek between the terminus of hard-lined channels and Prado Basin proper. The available modeling data in the SEIR indicates that Peace II Agreement implementation will not cause significant adverse effects on the Prado Basin riparian habitat. However, the following contingency measure will be implemented to ensure that the Prado Basin riparian habitat will not incur unforeseeable significant adverse effects, due to implementation of Peace II. IEUA, Watermaster, OCWD and individual stakeholders, that choose to participate, will jointly fund and develop an adaptive management program that will include, but not be limited to, monitoring riparian habitat quality and extent, investigating and identifying essential factors to long-term sustainability of Prado Basin riparian habitat, identification of specific parameters that can be monitored to measure potential effects of Peace II Agreement implementation effects on Prado Basin, and identification of water management options to minimize the Peace II Agreement effects on Prado Basin. The adaptive management program will be prepared as a contingency to define available management actions by Prado Basin stakeholders to address unforeseeable significant adverse impacts, as well as to contribute to the long-term sustainability of the Prado Basin riparian habitat. The above	SEIR	Concurrent with approval. The management plans for Chino and Mill Creeks shall be completed within one year of certification of the SEIR. Implementation of the management plans actions for both Chino and Mill Creeks shall be completed as identified in the plans.	IEUA and Stakeholders	A copy of the completed water management plans for Chino and Mill Creeks shall be retained in the project file. If management actions are required for these two creeks to maintain sufficient flows to support riparian habitat, documentation of the actions implemented shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources / Land Use & Planning (continued)					
4.4-3 (cont.) The above effort will be implemented under the supervision of a newly-formed Prado Basin Habitat Sustainability Committee. The Committee will include representatives from all interested parties and will be convened by the Watermaster and IEUA. Annual reports will be prepared and will include recommendations for ongoing monitoring and any adaptive management actions required to mitigate any measured loss or prospective loss of riparian habitat that may be attributable to the Peace II Agreement. As determined by Watermaster and IEUA, significant adverse impacts to riparian habitat that are attributable to the Peace II Agreement will be mitigated.					
4.4-4 To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season (nesting season is February 1 through September 1). Alternatively, project impact areas will be evaluated by a qualified biologist prior to initiation of ground disturbance to demonstrate that no bird nests will be disturbed by project construction activities.	SEIR	Local. This measure shall be implemented prior to or during construction.	Stakeholders	The construction date for Peace II Program projects shall occur during the non-nesting period and documentation of the construction date shall be retained in the project file. Alternatively, prior to initiating construction verification shall be supplied that no nesting birds will be adversely impacted by construction activities. A copy of the verification shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources / Land Use & Planning (continued)						
4.4-5	Prior to commencement of construction activity in locations that are not fully developed, a clearance survey will be conducted by a qualified biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed by the biologist that will protect the burrow in place or provide for relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFG guidelines. Active nests must be avoided until all nestlings have fledged.	SEIR	Local. This measure shall be implemented prior to or during construction.	Stakeholders	A copy of the burrowing owl survey and findings shall be retained in the project file. If mitigation is required, stakeholder staff shall verify that mitigation is completed in accordance with CDFG guidelines. A note verifying completion shall be retained in the project file.	
4.4-6	Future Peace II activities that are proposed to be located within wildlife movement corridors within Chino Basin shall be sited at locations that avoid significant adverse impacts to such corridors, or shall be mitigated by restoring the corridor values to approximately original condition after a Peace II facility is installed.	SEIR	Local. Determination of mitigation through avoidance or compensation shall be completed prior to construction and implementation shall occur during construction.	Stakeholders	A copy of the recommended mitigation, avoidance or compensation, shall be retained in the project file. Documentation shall be retained in the project file that either avoidance has been accomplished, or that compensatory mitigation has been implemented.	
4.4-7	Prior to commencement of construction activity on Peace II project within MSHCP areas in Riverside County, a consistency analysis shall be prepared and reviewed with Riverside County Regional Conservation Authority (RCA). Through avoidance, compensation or a comparable mitigation alternative, each project shall be shown to be consistent with the MSHCP.	SEIR	Local. This measure shall be implemented prior to construction.	Stakeholders	A copy of the MSHCP consistency finding shall be retained in the project file. Documentation shall be placed in the project file that mitigation has been implemented in accordance with the consistency finding.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources - Land Use & Planning (continued)						
4.4-8	Following construction activities within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long-term vegetation management, which shall be implemented in cooperation with regulatory agencies and with oversight from a qualified biologist. The seed mix shall be varied to contain the maximum amount of invasive plant species seeds reasonably available for the project area.	SEIR	Cost: Where required, the revegetation plan shall be completed prior to construction and included in the construction contract. The revegetation shall be completed immediately following construction and monitored until it is self-sustaining.	Stakeholders	A copy of the revegetation plan shall be retained in the project file. Field inspection notes shall verify completion of the revegetation plan and shall be retained in the project file. Success of a sustainable revegetation effort shall be documented and a copy of documentation placed in the project file.	
4.4-9	Place primary emphasis on the preservation of large, unbroken blocks of natural open space and wildlife habitat areas, and protect the integrity of habitat linkages. As part of this emphasis, incorporate programs for purchase of lands, clustering of development to increase the amount of preserved open space, and assurances that the construction of pipelines and other facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific project. This measure is 4.3-1 from the OBMP PEIR.	SEIR	Cost/Responsibility: This measure shall be implemented prior to approval of specific projects and specific mitigation defined to meet this measure shall be implemented prior to completion of construction or as stipulated by regulatory agencies.	Stakeholders, IEUA and/or Watermaster	As individual Peace II Program projects are implemented that require mitigation for loss of habitat, documentation shall be placed in the project file indicating that this measure has been effectively implemented.	
4.4-10	When determining which portion of a facility site should be retained in open space, give emphasis to the preservation of habitat areas and linkages, avoiding destruction of viable, sensitive habitat areas and linkages as a trade-off for preserving open space for purely aesthetic purposes. Further, wherever feasible, avoid impacts and disturbance to individuals and species considered sensitive by jurisdictional agencies. This measure is 4.3-2 from the OBMP PEIR.	SEIR	Cost: This measure must be implemented prior to construction and during construction.	Stakeholders	Where appropriate, the determination of areas to be preserved within future Peace II Program facility sites shall be documented in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources / Land Use & Planning (continued)					
4.4-11 Require facility designs to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions. a. Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources. b. Within riparian areas and wetlands subject to state or federal regulations, riparian woodlands, oak and walnut woodland, and habitat linkages, require that the vegetative resources which contribute to habitat carrying capacity (vegetative diversity, burrow rooting sites, foraging areas, and food sources) are preserved in place or replaced so as not to result in an measurable reduction in the reproductive capacity of sensitive biotic resources. c. Within habitats of plants listed by the CNDDB or CNPS as "special" or "of concern," require that new facilities not result in a reduction in the number of these plants, if they are present. This measure is 4.3-4 from the OBMP PEIR.	SEIR	Cont. This measure must be implemented prior to construction and during construction.	Stakeholders	Where appropriate, facility designs shall implement this measure and documentation of site preservation shall be retained in the project file. As individual Peace II Program projects are implemented that preserve onsite resources or habitat, documentation shall be placed in the project file indicating that this measure has been effectively implemented.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources - Land Use & Planning (continued)						
4.4-12	Maximize the preservation of individual oak, sycamore and walnut trees within proposed development sites. This measure is 4.3-4 from the OMP PEIR.	SEIR	Local. This measure must be implemented prior to construction and during construction.	Stakeholders	Where appropriate, facility designs shall implement this measure and documentation of site preservation shall be retained in the project file. As individual Peace II Program projects are implemented that preserve onsite native tree resources, documentation shall be placed in the project file indicating that this measure has been effectively implemented.	
4.4-13	Prohibit the use of motorized vehicles within sensitive habitat areas and linkages except for routine maintenance and/or construction activities. This measure is 4.25 from the OMP PEIR.	SEIR	Local. This measure must be implemented prior to construction and during construction.	Stakeholders	This measure shall be contained in construction contracts and field inspections shall verify implementation. Field notes verifying implementation shall be retained in the project file.	
4.4-14	Require the establishment of buffer zones adjacent to areas of preserved biological resources. Such buffer zones shall be of adequate width to protect biological resources from grading and construction activities, as well as from the long-term use of adjacent lands. Permitted land modification activities with preservation and buffer areas are to be limited to those that are consistent with the maintenance of the reproductive capacity of the identified resources. The land uses and design of project facilities adjacent to a vegetative preservation area, as well as activities within the designated buffer areas are not to be permitted to disturb natural drainage patterns to the point that vegetative resources receive too much or too little water to permit their	SEIR	Local. This measure must be implemented prior to construction and during construction.	Stakeholders	Where individual Peace II Program projects are implemented that are located adjacent to preserved biological resources, documentation shall be placed in the project file indicating that preserved zone habitat values have been effectively maintained.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Biological Resources / Land Use & Planning (continued)					
4.4-1 (cont.) ongoing health. In addition, landscape adjacent to areas of preserved biological resources shall be designed so as to avoid invasive species which could negatively impact the value of the preserved resource. This measure is 4.3-6 from the OMNIPLAN					

INITIAL STUDY
MITIGATION MONITORING
AND REPORTING PROGRAM

INLAND EMPIRE UTILITIES AGENCY
PEACE II PROJECT, CHINO GROUNDWATER BASIN
MITIGATION MONITORING AND REPORTING PROGRAM (Initial Study)

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Aesthetics						
I-1	All surfaces disturbed by Peace II construction activities, except those areas occupied by structures or hardscape, shall be revegetated, either with native vegetation in natural landscapes or in accordance with a landscape plan in man-made landscape areas. In non-native landscape areas, landscaping shall prioritize the use of native species or drought tolerant non-invasive species. Once construction is completed revegetation shall begin immediately. Where a formal landscape plan is to be implemented, it shall be coordinated with the local agency and the local design guidelines for consistency. Where a native landscape is to be restored, it shall be implemented in cooperation with regulatory agencies with oversight from a qualified biologist. This measure is a modification of 4.15-1 from the OBMP PEIR.	Initial Study	Local. Landscape plans for surface disturbances shall be completed prior to construction activity. Landscape designs shall be implemented during construction and verified at the completion of construction at Peace II Agreement sites.	Stakeholders	A copy of the landscape plan shall be retained in the project file and the contractor shall be provided a copy for implementation. Field inspections shall verify that the landscape plan has been implemented and a note to file verifying completion shall be retained in the project file.	
I-2	Where facilities will disrupt views from occupied areas with significant scenic vistas, a visual simulation analysis shall be performed of the facility's impact on the important view. If the analysis identifies a significant impact on a scenic vista, the facility shall be relocated, redesigned to reduce the impact to a non-significant level, or a subsequent environmental evaluation shall be prepared. This measure is the same as 4.15-2 from the OBMP PEIR.	Initial Study	Local. Simulations shall be completed prior to making a final decision to implement a specific facility. Follow-on actions shall be committed or implemented prior to construction of the facility	Stakeholders	A copy of the simulations shall be retained in the project file. When follow-on actions are implemented they shall be recorded and retained in the project file.	
I-3	All utility connections for Peace II facilities shall be placed underground unless technically infeasible. This measure is a modification to 4.15-3 from the OBMP PEIR.	Initial Study	Local. Designs shall be completed prior to construction and the design drawings shall be implemented by the contractor during construction.	Stakeholders	A copy of the design plans shall be retained in the project file. Field inspections shall verify that the design drawings are fully implemented and a note shall be placed in the project file.	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Aesthetics (continued)						
I-4	Where facilities are proposed to be located adjacent to scenic highways, corridors or other scenic features identified in local agency planning documents, Peace II facility implementation will conform with design requirements established in these planning documents. This measure is a modification to 4.15-2 from the OBMP PEIR.	Initial Study	Local. This measure requires design measures to be incorporated in the project design and to be implemented during construction.	Stakeholders	A copy of any design measures for facilities located adjacent to a scenic highway shall be retained in the project file and provided to the contractor for implementation. Field inspections shall verify that the design measures have been implemented and field notes placed in the project file.	
I-5	Fencing, landscaping and/or architectural design will be incorporated in project design to reduce the visual impact of facilities in a manner consistent with the surrounding development and with the local agency design guidelines to the extent that such measures do not conflict with the engineering and budget constraints established for the facility. This measure is a modification to 4.15-4 from the OBMP PEIR.	Initial Study	Local. This measure requires design measures to be incorporated in the project design and to be implemented during construction.	Stakeholders	A copy of any design measures for facilities located adjacent to a scenic highway shall be retained in the project file and provided to the contractor for implementation. Field inspections shall verify that the design measures have been implemented and field notes placed in the project file.	
I-6	Future project review and implementation shall implement the following. • Use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare. • Height of lighting fixtures shall be lowered to the lowest level consistent with the purpose of the lighting to reduce unwanted illumination. • Directing light and shielding shall be used to minimize off-site illumination.	Initial Study	Site lighting shall be reviewed for compliance with these measures prior to awarding the construction contract. The lighting requirement shall be included in the construction contract and implemented during construction.	Stakeholders	A copy of the site engineering plan with the lighting design included shall be retained in the project file and provided to the contractor for implementation. Field inspection shall verify that the lighting design measures have been implemented and field notes placed in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Aesthetics (continued)					
I-8 (cont.) • No light shall be allowed to intrude into sensitive light receptor areas off of a specific project site. This measure is a modification to 4.15-8 from the OBMP PEIR.					
Agricultural Resources					
II-1 Where future Peace II facilities are proposed on locations that support agricultural operations on important farmlands, alternative sites shall be selected that do not occupy such acreage (unless agricultural operations have already been terminated). This measure is a modification to 4.2-2 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented during the site selection process for each Peace II Agreement facility.	Stakeholder	The data documenting avoidance of important farmlands shall be retained in the project file.	
Cultural Resources					
Archaeology V-1 Inventory. A required basic archaeological inventory should encompass the following guidelines. a. Literature and Records Search - Existing maps, site reports, site records, and previous EIRs in the region of the subject area should be researched to identify known archaeological sites and work completed in the region. All maps, EIRs, historical maps and documents, and site records should be cited in text and references. Local historical societies should also be contacted and referenced. State Information Centers will provide the bulk of this information. The San Bernardino County Archeological Information Center (AIC) or the Eastern Information Center (EIC) at UC Riverside should be contacted.	Initial Study	Local. Any archaeology inventory shall be completed prior to ground disturbance, most often in conjunction with a second-tier CEQA environmental determination for a Peace II Agreement project.	Stakeholder	A copy of any archaeological inventory shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-1 (cont.) b. Field Reconnaissance - Conduct a surface survey to obtain comprehensive examination of current status of the area and gather general understanding of the kinds of cultural and related phenomena present. At a minimum, all ground surface chosen for survey should be walked over in such a way that every foot of ground can be visually scanned. All previously recorded cultural resources should be revisited to determine their current status, and all newly discovered sites should be recorded on either State Form 422 or 523 and supplements, as appropriate. Trinomial designations will be obtained from the Information Center. For the inventory process, a compilation of all historical resources, including archaeological and historic resources older than 50 years, using appropriate State record forms, following guidelines in the California Office of Historic Preservation's handbook, should be completed for all new discoveries. Two copies should be submitted to the San Bernardino County Archeological Information Center for the assignment of trinomials if discovered within San Bernardino County. Otherwise, the appropriate comparable agency in Riverside County shall be the recipient of these reports.					

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-1 (cont.) c. Report - A technical report should be prepared which fully describes both the methods and results of all efforts. Research sources should be listed, and the information summarized. The field work should be presented in detail, with all appropriate maps and graphics. Any areas not inspected with full intensity should be specified, preferably using clear, easily understood maps, and the reasons for the deficiency presented. Site records should be prepared for all new discoveries, and amendments prepared to update old records where necessary, since locational data are shielded from public access, the actual forms should be provided in the separable appendix, but the sites should be described in the main text. Each resource description should include a professional opinion of significance, with reference to the guidelines or research potential which make it worthy of further consideration. Archaeological sites which need test excavation to confirm significance, integrity, and boundaries should be identified, and a sampling program recommended. For each potentially significant cultural resource, possible impacts should be listed and mitigating measures developed. All standards for compliance with the CEQA requirements and those of the lead agencies should be addressed. This measure is 4.J.4-1 from the CBMP PEIR.					

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-2 Assessment. Properties shall be evaluated using a well-understood cultural context that describes the cultural development of an area and identifies the significant patterns that properties represent. The same historic context caused to organize all identification, registration, and preservation decisions within the planning framework. To be useful in subsequent stages of the planning process, evaluation decisions must make clear the significance of the property with the historic context. Potential preservation treatments should not influence the evaluation of significance (National Park Service n.d.-35). The nature and type of assessment will depend on the particular resource(s) and level of information for a particular region. Consequently, it is not possible to prescribe specific methods to be utilized. However, there are certain basic elements that should be included and are as follows. a. Preparation of a Research Design - Archaeological documentation can be carried out only after defining explicit goals and a methodology for reaching them. The goals of the documentation effort directly reflect the goals of the preservation plan and the specific needs identified for the relevant historic contexts.	Initial Study	Local. Any archaeology Assessment shall be completed prior to ground disturbance, most often in conjunction with a second-tier CEQA environmental determination for a Peace II Agreement project.	Stakeholder	A copy of any archaeological assessment shall be retained in the project file. Where assessments are required, any documentation in the assessment shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-2 (cont.) b. Field Studies - The implementation of the research design in the field must be flexible enough to accommodate the discovery of new or unexpected data, changes in properties, or changing field conditions. An important consideration in choosing methods to be used in the field studies should be assuring full, clear, and accurate description of all field operations and observations, including excavation and recording techniques and stratigraphic or inter-site relationships. c. Report - The assessment report should evaluate the significance and integrity of all historical resources within the project area, using criteria established in Appendix K of the CEQA Guidelines for important archaeological resources and/or CFR 60.4 for eligibility for listing on the National Register of Historic Places. The report should contain the following information and should be submitted to the San Bernardino County Archaeological Information Center or to the Eastern Information Center at UC Riverside for permanent archiving. (1) Description of the study area; (2) Relevant historical documentation/ background research; (3) The research design; (4) The field studies as actually implemented, including any deviation from the research design and the reason for the changes;					

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-2 (cont.) (5) All field observations, (6) Analyses and results, illustrated as appropriate with tables, maps, and graphs, (7) Evaluation of the study in terms of the goals and objectives of the investigation, including discussion of how well the needs dictated by the planning process were served, (8) Information on where recovered materials are curated and the satisfactory condition of those facilities to protect and to preserve the artifacts and supporting data. The County of San Bernardino requires that historical resource data and artifacts collected within the project area be permanently curated at a repository within the County. d. In the event that a prehistoric or historic artifact over 50 years in age is encountered within the project area, especially during construction activities, all land modification activities in the immediate area of the finds should be halted and an onsite inspection should be performed immediately by a qualified archaeologist. The professional will be able to assess the find, determine its significance, and make recommendations for appropriate mitigation measures. Further, if human remains of any kind are encountered on the property, the San					

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-2 (cont.) Remains or Riverside County Coroner's Office must be contacted within 24 hours of the find, and all work should be halted until a clearance is given by that office and any other involved agencies. This measure is 4.14-2 from the OBMP PEIR.					
V-3 Monitoring. In situations where resources are potentially subject to direct or indirect impact and testing or data recovery is not proposed, an archaeological monitor and Native American observer/ consultant should be present during subsurface work. One circumstance under which harm might occur would be if a known resource were close to an area of impact and the site boundaries were ambiguous. Monitors help ensure that exposed data or materials are collected and that if potentially significant cultural materials or features are encountered, they will be preserved either by realignment of the proposed facilities or by prompt evaluation and recommendations for any necessary mitigative measures. This measure is 4.14-3 from the OBMP PEIR.	Initial Study	Local. Monitoring shall be conducted during ground disturbing activities that can adversely impact archaeological resource. Once construction activities cannot harm resources, no further monitoring is required.	Stakeholder	Results of monitoring shall be documented with a short report of findings. A copy of the report shall be retained in the project file. Any professional reports prepared shall be obtained by the project sponsor and shall be retained in the project file.	
V-4 Data Recovery. If an archaeological resource is found to be significant and no other preservation option is possible, mitigation of adverse effects by scientific data recovery, including analysis and reporting of the method of both recovery. Such a mitigation program is usually only developed	Initial Study	Local. Data recovery and mitigation for significant cultural resources shall be completed prior to destruction of the resource. A report of findings shall be completed within one year of the data recovery.	Stakeholder	A copy of the data recovery and mitigation report shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-4 (cont.) while an assessment tool has been completed to identify physical parameters and cultural complexity, and formulate a research design. Each specific program would have to be developed in response to the site and potential impact, with the concurrence of the appropriate agencies and in consultation with Native American representatives. This measure is 4.14-4 from the OBMP PEIR.					
V-5 Future Project Siting. Future project shall be located, whenever possible or feasible, outside of the highly sensitive cultural resource areas depicted in Figure 4.14-1. Before any projects are located, and before any construction activities begin, any proposed project that will result in ground disturbance to any area that does not have a complete cultural resource survey on record with either the AIC or the EIC at least will conduct a site specific cultural resource evaluation and report prior to any ground breaking activity. Further, if cultural resources have been identified on the site, a qualified archeological or paleontological will be retained to devise an excavation and/or curation plan for the resources, and a qualified cultural resource monitor will be present on site during all construction-related activities that could potentially uncover previously undiscovered resources. The monitor will examine excavated soils and have the authority to cease construction activities if resources are un-earthed. This measure is 4.14-5 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to final site selection for a Peace II Agreement project.	Stakeholder	The data documenting avoidance of sensitive cultural resource locations shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
Architectural Resources V-6 Based solely upon the level of investigation and at the stage of project planning, it would be premature to propose specific mitigation measures. However, certain options can be presented presupposing a general level of knowledge regarding impacts. These options can be utilized to avoid impacts upon the cultural resources - the preferred result - or to lessen adverse effects. It should be emphasized that these options are not the only ones that may be applied. As such, these measures are not recommended as conditions of Project approval but are included for the Authority's consideration and implementation as appropriate. a. Conduct a comprehensive historic building survey which is integrated with economic development programs; b. Adopt a preservation ordinance and create a preservation board; c. Ensure other planning programs, plans, and ordinances are compatible to the historic preservation goals and policies; d. Direct existing funding sources and loan programs to historic neighborhoods in need of revitalization; e. Provide incentives and direction encouraging preservation and revitalization; and	Initial Study	Local. The measure shall be implemented prior disturbing a known or identified cultural resources.	Stakeholder	The selected mitigation for a significant cultural resource shall be documented and its implementation verified by a report of findings from implementing the mitigation. A copy of the report of findings shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Cultural Resources (continued)					
V-8 (cont.) f. Develop ongoing programs for enhancing public appreciation of historic resources. g. Project Redesign - A proposed project may be redesigned in either of two ways. (1) Outside of site boundaries, thus avoiding impact to the site, or (2) Restricting impacts to those areas of a site where previous impacts have already destroyed the integrity and research potential. Other options may also apply and may include capping of the site, relocation of structures, and integration of extant buildings into project design. From measure C-4.14-8 from the CIMP PEIR.					
V-9 At all locations where project impacts will extend to depths below 10 feet, spot monitoring shall be carried out to determine if high sensitivity deposits are being excavated. If high sensitivity deposits are being disturbed, then continuous paleontological monitoring will be required for all ground disturbing activities within these deposits. If paleontological resources are located during construction within sensitive deposits, construction in that area must stop, the resources must be collected, and treatment by a qualified paleontological must occur following professional procedures.	Initial Study	Local. This measure shall be retained in the project file.	Stakeholder	This measure shall be incorporated into construction contract that include activities below ten feet in depth. A report of monitoring findings shall be retained in the project file.	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils						
4.A-7	Mitigate the risks from geological hazards through a combination of engineering construction, land use and development standards.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to issuing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The specific measures required to mitigate geologic hazards shall be retained in the project file and field inspections during construction shall verify the measures are implemented.	
4.A-8	Require each site within identified Liquefaction Hazard Zones to be evaluated by a licensed engineer prior to design or land disturbance/ construction.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to issuing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The specific measures required to mitigate liquefaction hazards shall be retained in the project file and field inspections during construction shall verify the measures are implemented.	
4.A-9	Apply appropriate design and construction criteria to all structures subject to significant seismic shaking.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to issuing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The specific measures required to mitigate significant seismic shaking hazards shall be retained in the project file and field inspections during construction shall verify the measures are implemented.	
4.A-10	Prohibit critical, essential, and high risk land uses near earthquake special studies areas shown on the Hazard Overlay Maps developed by the County of San Bernardino and Riverside.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to issuing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The data documenting avoidance of earthquake special studies areas shall be retained in the project file.	
4.A-11	Require stability analysis for Landslide Hazard areas designated "Generally Susceptible" and "Mostly Susceptible" on the Hazards Overlay Maps.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to issuing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The stability analysis for landslide hazard areas shall be retained in the project file and field inspections during construction shall verify the measures are implemented.	
4.A-12	Institute restrictions on construction in high landslide potential and steep-slope areas to ensure safe development.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to issuing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The data documenting avoidance of high risk landslide areas shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)						
4.A-13	Continue to identify and study subsidence hazards and susceptible areas, and propose mitigation technology that is appropriate to the findings of the monitoring study. The implementation of Peace II activities shall not in any way contribute to subsidence conditions in pre-existing subsidence zones (as shown in Figure 4.A-18). Peace II will not cause or contribute to any new, significant subsidence impacts greater than a total of six inches in magnitude over the planning period. Impacts less than 6 inches in new areas are considered to be less than significant.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Regional. This is an ongoing measure that will be implemented over the life of the project.	Watermaster	The periodic reports on subsidence within the Chino Basin shall be retained in the project file and annual data collected regarding subsidence should be made available to Stakeholders upon request.	
4.A-14	If modeling conducted for the expanded OBMP SAWPA desalter well field demonstrates that such pumping will contribute to subsidence in the existing subsidence area, then a potentially significant impact can occur, and a subsequent environmental document will be prepared. No OBMP/Peace II activities allowed under this document will be permitted to cause or contribute to the subsidence within the pre-existing subsidence area defined in the OBMP Phase I Report and Figure 4.A-18.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local/Regional. This measure must be implemented if modeling or field data indicate that subsidence data will occur or is occurring from a Peace II Agreement activity.	Stakeholder and/or Watermaster	The data (modeling or field) indicating subsidence will occur shall be retained in the project file. Any subsequent environmental document that addresses the potential impact shall be retained in the project file. The effectiveness of actions required to prevent subsidence or mitigate for subsidence shall be verified by qualified professionals and the data made available to Stakeholders upon request.	
4.A-15	To ensure that pumping impacts in the vicinity of the desalter well field do not have an adverse impact on water levels and subsidence issues, the following performance standards shall be used to evaluate the desalters.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local/Regional. This measure shall be implemented when and where an adverse pumping impact is identified over the life of the Peace II Agreement.	Stakeholder and/or Watermaster	Data documenting the need to implement mitigation from lowering the water table shall be retained in the project file. The party implementing this measure shall document the mitigation action taken and its effectiveness.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)					
4.A-15 (cont.) a. Water level declines in areas surrounding the desalter pumping locations will not be allowed to decline to the extent that pumping capabilities for surrounding wells are impacted. If surrounding wells and producers are impacted by declines in water levels, alternative access to equivalent quantity and quality of water will be provided to affected surrounding parties. The water may be provided through distribution of funding to affected parties for the deepening of existing wells, or may be provided through the delivery (paid for by the implementing agency) of comparable or improved quality and quantity of water from other sources. b. If desalter well fields are demonstrated to cause or exacerbate impacts to subsidence areas measurable by a decline of over six inches in ground level at a 1/4 mile radius, or at the radius of the nearest non-OBMP Peace II participating structure, then pumping patterns for the desalters shall be modified to reduce impacts to cause no more than six inches of decline in ground level at the smallest of the two radii.					

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)						
4.A-1 B	Require site-specific geotechnical investigations of proposed development to include an assessment of potential impacts and mitigation measures related to expansive and reactive soils and liquefaction. Under Peace II, Watermaster will continue to monitor the areas with potential liquefaction hazards and will work with local jurisdictions to ensure that any future structures are constructed with the appropriate foundations to address increased liquefaction potential as appropriate for the specific area. This mitigation measure will reduce impacts to a less than significant level.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The soils analysis shall be retained in the project file and field inspections during construction shall verify the measures are implemented.	
4.A-1 F	Apply provisions of Title 8 erosion and sediment control that reduce volume and velocity of flows and content of sediment to levels that do not cause significant rill or gully erosion in susceptible areas. In addition, provide for restoration of areas that do become eroded.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The Title 8 erosion control measures shall be retained in the project file and field inspections during construction shall verify the measures are implemented.	
4.A-1 G	Prevent unnatural erosion in erosion-susceptible areas by tailoring grading and land clearance activities, and by prohibiting grazing and use of off-road vehicles.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented concurrent with the construction of any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The control measures for erosion-susceptible areas shall be retained in the project file and field inspections during construction shall verify the measures are implemented.	
V-1	When determined necessary by the affected jurisdictions, geotechnical and soils engineering reports shall be prepared in conjunction with the preparation of preliminary design layouts and grading plans for all new development projects implemented within the proposed Project Area.	Initial Study	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	A copy of the geotechnical and soils engineering report shall be retained in the project file and field inspections during construction shall verify any design measures are implemented.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)					
VII-1 (cont.) These studies will verify the presence or absence of hazardous soil conditions. If necessary, these reports will provide specific mitigation measures for the treatment of potential geologic and soils hazards. This measure is 4.A-1-2 from the OBMP PEIR.					
VII-2 Comprehensive geotechnical investigation shall be required prior to engineering and design development of structural and/or substantial rehabilitation of structures identified under Risk Class I & II, e.g., public facilities, as identified below. Risk Class I & II, Structures Critically Needed after Disaster. Structures which are critically needed after a disaster include important utility centers, fire stations, police stations, emergency communication facilities, hospitals, and critical transportation elements such as bridges and overpasses and smaller dams. Acceptable Damage. Minor non-structural, facility should remain operational and safe, or be suitable for quick restoration of service. Risk Class III. High occupancy structures, structures required after disasters, i.e., places of assembly such as schools and churches. Acceptable Damage. Some impairment of function acceptable, structure needs to remain operational.	Initial Study	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	A copy of the geotechnical engineering report shall be retained in the project file and field inspections during construction shall verify any design measures are implemented.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)					
VII-2 (cont.) Risk Class IV, Ordinary Risk Tolerance. The vast majority of structures in urban areas, most commercial and industrial buildings, small hotels and apartment buildings, and single family residences. Acceptable Damage. An "ordinary" degree of risk should be acceptable. The criteria envisioned by the Structural Engineers Association of California provide the best definition of the "ordinary" level of acceptable risk. These criteria require that buildings be able to: a. Resist minor earthquakes without damage, b. Resist moderate earthquakes without structural damage, but with some non-structural damage, or c. Resist major earthquakes, of the intensity or severity of the strongest experienced in California, without collapse, but with some structural, as well as non-structural damage. Risk Class V, Moderate to High Risk Tolerance. Open space uses, such as farms, ranches and parks without high occupancy structures, warehouses with low intensity employment, and the storing of non-hazardous materials. Acceptable Damage. Not applicable. This measure is 4.A-20 from the OBMP PEIR.					

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)						
VII-3	All structures previously identified in categories III through V shall be designed in accordance with the applicable multiple factor seismic design provisions of the Seismic Safety Report to promote safety in the event of an earthquake. This measure is 4.A-21 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	A copy of the geotechnical engineering report shall be retained in the project file and field inspections during construction shall verify any design measures are implemented.	
VII-4	The direct impacts of faults upon proposed projects shall be considered during preliminary planning processes, and the engineering design phases. This measure is 4.A-22 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The data documenting avoidance of active fault zones shall be retained in the project file.	
VII-5	All rehabilitation and new development projects implemented as a result of the proposed Project shall be built in accordance with current and applicable Uniform Building Code (UBC) standards and all other applicable City, County, State and Federal laws, regulations and guidelines, which may limit construction and site preparation activities such as grading, and shall make provisions for appropriate land use restrictions, as deemed necessary, to protect residents and others from potential environmental safety hazards, either seismically induced or those resulting from other conditions such as inadequate soil conditions, which may exist in the proposed Project Area. This measure is 4.A-23 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	A copy of the project design engineering drawings incorporating current UBC standards shall be retained in the project file and field inspections during construction shall verify any design measures are implemented.	
VII-6	Local grading and building codes should reflect measures to minimize possible seismic damage. This measure is 4.A-24 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	A copy of the project design engineering drawings shall be retained in the project file and field inspections during construction shall verify any design measures are implemented.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)						
4.A-25	Utilize geologic and seismic data in land planning so that identified risk areas, if any, are avoided, or structures and landforms are located and designed to reflect local site conditions.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	The data documenting avoidance of seismic/geologic hazards or designs to accommodate these hazards shall be retained in the project file.	
4.A-26	Inspect older facilities and improve earthquake design features when possible.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local. This measure shall be implemented over the life of the Peace II Agreement.	Stakeholder	A copy of the project design engineering drawings where earthquake retrofit or proposed shall be retained in the project file and field inspections during construction shall verify the retrofit measures are implemented.	
4.A-27	Maintain a disaster preparedness plan.	From Section 4.A.4.2 - Geology of the OBMP PEIR	Local/Regional. This measure shall be implemented over the life of the Peace II Agreement.	Stakeholder, IEUA and Watermaster	A copy of the disaster preparedness plan shall be retained by each agency to address management of disasters/risks during a disaster.	
VI-1	Add protective covering of mulch, straw or synthetic material (erosion control blankets, blocking will be required). This measure is 4.A-1 from the OBMP PEIR.	Initial Study	Local. Where applicable this measure shall be implemented as part of the SWPPP during and immediately after construction.	Stakeholder	This measure shall be incorporated into the construction contract and implementation shall be verified by field inspections. Field inspection notes shall be retained in the project file.	
VI-2	Limit the amount of area disturbed and the length of time slopes and barren ground are left exposed. After pipeline installation, soil shall be compacted to a level similar to pre-construction conditions. This measure is 4.A-2 from the OBMP PEIR.	Initial Study	Local. Where applicable this measure shall be implemented as part of the SWPPP during and immediately after construction.	Stakeholder	This measure shall be incorporated into the construction contract and implementation shall be verified by field inspections. Field inspection notes shall be retained in the project file.	
VI-3	Construct diversion dikes and interceptor ditches to divert water away from construction areas. This measure is 4.A-3 from the OBMP PEIR.	Initial Study	Local. Where applicable this measure shall be implemented as part of the SWPPP during and immediately after construction.	Stakeholder	This measure shall be incorporated into the construction contract and implementation shall be verified by field inspections. Field inspection notes shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Geology and Soils (continued)					
VI-10 Install slope drains (conduits) and/or water-velocity-control devices to reduce concentrated high-velocity streams from developing. This measure is 4.A-4 from the OBMP PEIR.	Initial Study	Local. Where applicable this measure shall be implemented as part of the SWPPP during and immediately after construction.	Stakeholder	This measure shall be incorporated into the construction contract and implementation shall be verified by field inspections. Field inspection notes shall be retained in the project file.	
VI-11 Construction of facilities and structures in locations with high liquefaction potential shall be limited without further geologic and hazard-related studies conducted by a qualified geologist or geotechnical firm. Such studies will provide guidelines to minimize the risk to humans and to capital-intensive facilities. This measure is 4.A-5 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder	A copy of the project design engineering drawings shall be retained in the project file and field inspections during construction shall verify any design measures are implemented.	
VI-12 If a conjunctive use program might be implemented that would bring water levels up to a level that significantly increases the risk of liquefaction, a more detailed monitoring and geologic study focused on this issue will be conducted to determine whether or not liquefaction poses a hazard to surface structures and to human safety. If such a study finds the impacts to be significant, the volume of water permitted to be stored in the Basin will be decreased sufficiently until a water level is achieved that does not pose any significant hazard to surface structures or people. This measure is 4.A-6 from the OBMP PEIR.	Initial Study	Local/Regional. This measure shall be implemented prior to finalizing the design for any Peace II Agreement facility or structure that requires mitigation.	Stakeholder and Watermaster	A copy of the project geology and monitoring study shall be retained in the project file. Specific actions to reduce the water table (volume of water stored) shall be documented and field inspections during such reductions shall verify the reduction in water stored or lowering of the water table.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hazards and Hazardous Materials						
VIII-1	For IEUA facilities that handle hazardous materials or generate hazardous waste the Business Plan prepared and submitted to the county or local city shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals. The facility manager shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes. The measure is 4.10-1 from the OBMP PEIR.	Initial Study	Local. The measure shall be implemented prior to receipt of hazardous materials or generation of hazardous waste at a Peace II Program facility.	Stakeholder	A copy of the approved Business Plan shall be retained in the facility file. Facility inspection shall include verification that the measures to control potential for accidental releases are being implemented. A copy of inspection reports shall be retained in the project file.	
VIII-2	The business plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material. Adequate funding shall be provided to acquire the necessary equipment, train personnel in response and to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials. The measure is 4.10-2 from the OBMP PEIR.	Initial Study	Local. The measure shall be implemented prior to receipt of hazardous materials or generation of hazardous waste and during operations of Peace II Program facilities..	Stakeholder	A copy of the approved Business Plan shall be retained in the facility file. Facility inspection shall include verification that the measures to control potential for accidental releases are available and that adequate training has been provided to facility staff for responders. A copy of inspection reports shall be retained in the project file.	
VIII-3	For the storage of any acutely hazardous material at an OBMP facility, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved. The measure is 4.10-3 from the OBMP PEIR.	Initial Study	Local. The measure shall be implemented prior to receipt and storage of acutely hazardous materials or generation of acutely hazardous waste and during operations of Peace II Program facilities..	Stakeholder	A copy of the approved model of pathways of release for acutely hazardous materials/wastes shall be retained in the facility file. Measures identified to control accidental release of acutely hazardous materials/wastes shall be implemented and facility inspections shall include verification that the measures to control accidental releases are implemented. A copy of inspection reports shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hazards and Hazardous Materials (continued)						
VIII-4	All contaminated material shall be delivered to a licensed treatment, disposal or recycling facility that has the appropriate systems to manage the contaminated material without significant impact on the environment. This measure is 4.10-4 from the CIMP PEIR.	Initial Study	Local. This measure shall be implemented after collection of contaminated material for disposal or remedial management. Delivery to facility with capability to manage the contaminated material shall occur immediately after collection of the material.	Stakeholder	The Stakeholder shall ensure that the contaminated material is delivered to the appropriate management facility and retain documentation verifying delivery.	
VIII-5	Before determining that an area contaminated as a result of an accidental release is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken within the contaminated area to verify that these clean-up thresholds have been met. This measure is 4.10-2 from the CIMP PEIR.	Initial Study	Local. This measure shall be implemented following a spill of hazardous material or waste to the environment. The remediation in accordance with the requirements of this measure shall be completed as quickly as possible following discovery of the contaminated area.	Stakeholder	The documentation verifying specific thresholds that are protective of human health and meet current regulatory requirements shall be placed in the project file.	
VIII-6	Prior to selecting a Peace II facility location that will use hazardous substances within 1/4 mile of a school, a study of alternative sites shall be completed and either identify a suitable alternative site, or verify that no other alternative site can perform the required activities. If feasible, an alternative site at a distance greater than 1/4 mile shall be implemented.	Initial Study	Local. This measure shall be implemented prior to selecting a Peace II Program facility site location.	Stakeholder	The data documenting the site selection process as outlined in this measure shall be retained in the project file.	
VIII-7	Engineering controls over any hazardous emissions or accidental releases of hazardous substances shall be comprehensive, redundant and state of the art to minimize emissions from the facility or to minimize the potential for an accidental release. A report verifying the adequacy of such controls shall be provided to decision-makers before authorization to install a Peace II facility.	Initial Study	Local. This measure shall be implemented prior to selecting emission controls for any stationary source emission related to a Peace II Program facility site location.	Stakeholder	The documentation that identifies the proposed emission controls shall be retained in the project file. The report verifying the effectiveness of the emission control system shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hazards and Hazardous Materials (continued)						
VIII-3	Where the location of a Peace II facility must be located within 1/4 mile of a school, the facility proponent shall confer with the local school district. The notice to the school district shall define the type of controls over hazardous substances that will be implemented and request the district to provide review and input on the design controls for such substances.	Initial Study	Local. This measure shall be implemented prior to selecting a Peace II Program facility site location.	Stakeholder	The outcome from the discussions with the local school district shall be documented and retained in the project file. Based on the feedback and the need for the facility, a decision will be made to use the proposed site or shift to a new location. The site selected and record supporting the decision shall be retained in the project file.	
VIII-4	Before acquiring a Peace II facility site, the project proponent shall have a Phase I property evaluation completed. If a potential for contamination exists, a Phase 2 property evaluation shall be completed. If contamination of the site is identified, the Peace II project proponent shall avoid the site, or shall prepare a work plan for developing the site and have the work plan reviewed and approved by the local CUPA or DTSC. The approved work plan for the site shall be implemented in a manner that does not cause a significant health risk for the public or employees.	Initial Study	Local. This measure shall be implemented prior to selecting a Peace II Program facility site location.	Stakeholder	A copy of the Phase I and/or Phase 2 site investigation report(s) shall be retained in the project file.	
VIII-5	Where contamination of a site is accidentally discovered after development is initiated, the Peace II project proponent shall retain a qualified industrial hygienist to characterize the type and extent of the contamination, contain the contamination and oversee the proper removal and disposal of contamination in accordance with an approved work plan, and all applicable laws, regulations and standards.	Initial Study	Local. This measure shall be implemented during construction when contamination is encountered within the construction area of a Peace II Program facility site location.	Stakeholder	A record of finding of any contaminated site shall be developed and retained in the project file. Documentation of all remediation actions, including ultimate disposal or treatment, shall be included in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hazards and Hazardous Materials (continued)						
VIII-1	Where alternative treatment systems are available to reduce potential health risks at OBMP facilities, such alternatives shall be selected if they meet defined technical, logistical and economic requirements for operation of such facilities. This measure is 4.10-3 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to selection of a treatment system for Peace II Program facility.	Stakeholder	A copy of the decision making process for treatment systems selected for Peace II Agreement facilities shall be retained in the project file.	
VIII-2	Prior to installing any above ground structures or facilities within FAA Restricted Use, Development and Height Areas or within two miles of a public airport, a final determination will be made on the acceptability of such facilities within the zone or area. If not permitted, such structures or facilities will be relocated out of the zone on adjacent parcels of land. Final locations for such facilities within FAA Restricted Use, Development and Height Area (ALUP Referral Area "B") will be reviewed with the Airport Manager, and any exceptions will be obtained in accordance with FAA regulations.	Initial Study	Local. This measure shall be implemented prior to construction when Peace II Program facilities are sited within two miles of a public airport.	Stakeholder	A copy of the analysis of potential conflicts with public airport operations in accordance with FAA Restricted Use, Development and Height Areas shall be retained in the project file.	
VIII-3	During construction activities within existing road rights-of-way or other easements where continuous access is required, a road operation management plan shall be prepared and implemented. At a minimum the plan shall define how to minimize the amount of time spent on construction activities, how to minimize disruption of vehicle and alternative modes of traffic at all times, but particularly during periods of high traffic volumes, side-guide signage and other controls, including flagpersons, to ensure that traffic can flow	Initial Study	Local. The road operation traffic management plan shall be prepared prior to initiating construction. The plan shall be implemented during construction when Peace II Program facilities are sited within existing road rights-of-way.	Stakeholder	A copy of the road operation traffic management plan shall be retained in the project file. Field inspectors shall verify that the plan measures are implemented during construction. Notes of inspections verifying compliance shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hazards and Hazardous Materials (continued)					
VII-13 (cont.) adequately during construction, the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc) with drivers and neighborhoods where construction activities will occur, and at the end of each construction day roadways shall be opened for continued utilization without any significant roadway hazards remaining. This measure is 4.10-8 from the OBMP PEIR.					
VII-14 To the extent feasible, installation of pipelines or other construction activities in support of the OBMP shall not be located on major evacuation or emergency response routes within any communities in the Chino Basin. Where construction on such routes is necessary, local emergency response providers shall be contacted and emergency access and evacuation requirements shall be maintained at a level sufficient to meet their needs. This measure is 4.10-7 from the OBMP PEIR.	Initial Study	Local. The process of selecting of pipeline alignment shall incorporate this measure's requirements prior to making a final determination of a pipeline route.	Stakeholder	Pipeline alignment planning shall incorporate this measure's requirements in the planning process. Data used in conjunction with the pipeline alignment selection process shall be retained in the project file..	
VII-15 To the extent feasible, future Peace II facilities shall avoid areas of high wildfire hazard. Where Peace II facilities must be located within such areas, the facility design shall include sufficient buffer area to be protective of the facility, or to prevent the facility from contributing to a higher wildfire hazard than exists in pre-development conditions.	Initial Study	Local. The process of selecting of Peace II Program facility locations shall incorporate this measure's requirements prior to making a final determination to locate a new facility within a high wildfire hazard area.	Stakeholder	New Peace II Program facility planning shall incorporate this measure's requirements in the planning process. Data used in conjunction with the facility site selection process shall be retained in the project file..	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology and Water Quality					
VIII-1 The construction contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices that will be implemented to prevent construction pollutants from contacting stormwater with the intent of keeping all product of erosion from moving off site. The SWPPP shall be developed with the goal of achieving a reduction in pollutants both during and following construction to control urban runoff to the maximum extent practicable based on available, feasible best management practices. The SWPPP and the monitoring program for the construction project shall be consistent with the requirements of the latest version of the State's General Construction Activity Storm Water Permit and NPDES Permit No. CAS618036, Order No. R8-2002-0012 for projects within San Bernardino County or NPDES No. CAS618033, Order No. R8-2002-0011 for projects within Riverside County. The following items should be included in the SWPPP. • The length of trenches which can be left open at any given time should be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored on site at any given time. • Backfill material should not be stored in areas which are subject to the erosive flows of water.	Initial Study	Local. The SWPPP shall be prepared prior to initiating construction for a Peace II Program facility and implemented during construction.	Stakeholder	A copy of the SWPPP shall be retained in the project file and at the construction job site. Field inspections shall verify that the best management practices required by a project specific SWPPP are effective in controlling erosion and water quality degradation, and a copy of inspection notes shall be retained in the project file	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology and Water Quality (continued)					
VIII-1 (cont.) • Measures such as the use of straw bales, sandbags, silt fencing or detention basins shall be used to capture and hold eroded material for future cleanup. • Rainfall will be prevented from entering material and waste storage areas and pollution-laden surfaces. • Construction-related contaminants will be prevented from leaving the site and polluting waterways. • Replanting and hydroseeding of native vegetation will be implemented to reduce slope erosion and "urban runoff". • A spill prevention control and remediation plan to control release of hazardous substances.					
VIII-2 The site design for Peace II facilities shall prepare and implement a Water Quality Management Plan (WQMP) which specifies Best Management Practices that will be implemented to prevent long-term surface runoff from discharge of pollutants from sites on which construction has been completed. The WQMP shall be developed with the goal of achieving a reduction in pollutants following construction to control urban runoff pollution to the maximum extent practicable based on available, feasible best management practices.	Initial Study	Local. The WQMP shall be prepared prior to initiating construction for a Peace II Program facility and installed during construction. The WQMP shall be implemented at the project site after construction is completed and the facility begins operation.	Stakeholder	A copy of the WQMP shall be retained in the project file and at the facility site. Field inspections over the life of the project shall verify that the best management practices required by a project specific WQMP are effective in controlling erosion and water quality degradation, and a copy of inspection notes shall be retained in the project file.	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Hydrology and Water Quality (continued)						
VIII-2	Any future Peace II facilities that will be inhabited shall avoid locations that may be impacted by mudflows. Peace II facilities that are not inhabited may be installed at a location where flood hazards may occur, but must either be hardened to withstand a mudflow or be installed with the acknowledgment that the facility or structure proponent is temporary or that the permanent loss does not constitute a significant effect on the Peace II program.	Initial Study	Local. The process of selecting of Peace II Program facility locations shall incorporate the measure's requirements prior to making a final determination to locate a new facility within a potential mudflow hazard area.	Stakeholder	New Peace II Program facility planning shall incorporate the measure's requirements in the planning process. Data used in conjunction with the facility site selection process shall be retained in the project file.	
Land Use and Planning						
IX-1	Following selection of alternative sites for construction of future Peace II projects, each site shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future Peace II projects can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses or will physically divide an established community, an alternative site shall be selected, or a technical report shall be prepared that identifies the specific measures that will be utilized to reduce potential incompatible activities or effects to below thresholds established in the general plan for the jurisdiction where the facility will be located. This measure is a modification to 4.2-1 from the OBMPPEIR.	Initial Study	Local. The process of selecting of Peace II Program facility locations shall incorporate the measure's requirements prior to making a final determination to locate a new facility at a site location that has potential for significant land use incompatibility with adjacent uses.	Stakeholder	New Peace II Program facility planning shall incorporate the measure's requirements in the planning process. Data used in conjunction with the facility site selection process shall be retained in the project file.	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Noise						
XI-1	Construction shall be limited to the hours of 7 a.m. to 7 p.m. on Monday through Friday, and between 8 a.m. to 5 p.m. on Saturday, and shall be prohibited on Sundays and federal holidays. Exceptions are for well drilling or declared emergency circumstances. This measure is a modification to 4.11-1 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented during construction in areas where sensitive noise receptors occur.	Stakeholders	This measure shall be incorporated into the construction contract and implemented by the contractor. Field inspections shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-2	All construction vehicles and fixed or mobile equipment shall be equipped with properly operating and maintained mufflers. This is measure 4.11-2 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented during construction in areas where sensitive noise receptors occur.	Stakeholders	This measure shall be incorporated into the construction contract and implemented by the contractor. Field inspections shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-3	All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided with adequate hearing protection devices to ensure no hearing damage will result from construction activities. This is measure 4.11-3 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented during construction in areas where excessive noise is generated.	Stakeholders	This measure shall be incorporated into the construction contract and implemented by the contractor. Field inspections shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-4	If equipment is being used that can cause hearing damage at adjacent noise receptor locations (distance attenuation shall be taken into account), portable noise barriers shall be installed that are demonstrated to be adequate to reduce noise levels at receptor locations below hearing damage thresholds. This is measure 4.11-4 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented during construction in areas where excessive noise is generated.	Stakeholders	This measure shall be incorporated into the construction contract and implemented by the contractor. Field inspections shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Noise (continued)						
XI-5	All production well or booster pumps shall have their noise levels attenuated to 50 dB(A) CNEL at the adjacent property boundary, when noise sensitive uses occur on such property. This measure is a modification to 4.J.1-5 from the OBMP PEIR.	Initial Study	Local. Design to attenuate noise shall be completed prior to initiating construction. The design measures to attenuate noise shall be implemented during construction. .	Stakeholder	A copy of the noise attenuation design shall be retained in the project file. The measure shall be incorporated into the construction contract and implemented by the contractor. Field inspectors shall verify that the measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-6	Project design will include measures which assure adequate interior noise levels as required by Title 25 (California Noise Insulation Standards). This is measure 4.J.1-6 from the OBMP PEIR.	Initial Study	Local. Design to assure adequate interior noise levels shall be completed prior to initiating construction. The design measures to attenuate noise shall be implemented during construction.	Stakeholder	A copy of the interior noise attenuation design shall be retained in the project file. The measure shall be incorporated into the construction contract and implemented by the contractor. Field inspectors shall verify that the measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-7	Utilize construction methods or equipment that will provide the lowest level of noise impact, i.e., use newer equipment that will generate lower noise levels.	Initial Study	Local. The measure shall be implemented during construction.	Stakeholder	The measure shall be incorporated into the construction contract and implemented by the contractor. Field inspectors shall verify that the measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-8	Schedule the construction such that the minimum number of pieces of equipment will be operating at the same time.	Initial Study	Local. The measure shall be implemented during construction.	Stakeholder	The measure shall be incorporated into the construction contract and implemented by the contractor. Field inspectors shall verify that the measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Noise (continued)						
XI-9	Maintain good relations with the local community where construction is scheduled, such as keeping people informed of the schedule, duration, and progress of the construction, to minimize the public objections of unavoidable noise. Communities should be notified in advance of the construction and the expected temporary and intermittent noise increases during the construction period.	Initial Study	Local. Initial communication regarding construction activities and related noise shall begin prior to construction and be continued during construction.	Stakeholder	Public outreach efforts regarding project-related construction noise shall be documented in the project file.	
XI-10	Require that all parking facilities uses adjacent to residential areas be enclosed within a structure or separated by a solid wall with quality landscaping as a visual buffer. This is measure 4.11-7 from the ORMPPEIR.	Initial Study	Local/Regional. Parking facility design of facilities near residential areas shall be completed prior construction and implemented through construction.	Stakeholder and Watermaster	A copy of the parking facility design shall be retained in the project file. Field inspection shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-11	Facilities shall be constructed and operated so that noise levels from operations do not exceed 50 dB during night hours and 65 dB averaged over the 12 hours of daytime when located adjacent to existing or future sensitive land uses. This can be achieved by siting facilities a sufficient distance from sensitive noise receptors, by incorporating attenuation features in the facility or designing attenuation features at the boundary of the property. This is measure 4.11-8 from the ORMPPEIR.	Initial Study	Local. The site selection and design component of this measure shall be implemented prior to construction with any design measures being implemented during construction.	Stakeholders	A copy of any facility noise attenuation design or site selection data shall be retained in the project file. Field inspections shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XI-12	Where equipment or facilities will be installed adjacent to sensitive noise receptors in support of Peace II programs, a site specific noise/vibration study will be conducted to ensure that local jurisdictional noise standards will be met. Where noise attenuation is required, the facility design shall incorporate the noise attenuation measures.	Initial Study	Local. The noise/vibration study shall be completed prior to construction and required design measures shall be implemented during construction.	Stakeholders	A copy of any noise/vibration study shall be retained in the project file, along with the design implementing requirements of the study. Field inspections shall verify that the noise/vibration attenuation design is implemented during construction, and a copy of inspection notes shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Noise (continued)						
XI-12	All above ground well pumps or booster pump stations shall have their noise levels attenuated to 50 dBA CNEL at the property boundary when adjacent to a noise sensitive land use.	Initial Study	Local. The site selection and design component of this measure shall be implemented prior to construction with any design measures being implemented during construction.	Stakeholders	A copy of any decibel noise attenuation design or site selection data shall be retained in the project file. Field inspections shall verify that the measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
Population and Housing						
XII-1	Future facilities must be located on parcels occupied by existing housing, the proponent of the facility will ensure that short- and long-term housing of comparable quality and value are made available to the home owner(s) prior to initiating construction of the facility. This is measure 4.9-1 from the OBMP PEIR.	Initial Study	Local. The site selection component of this measure shall be implemented prior to construction while alternative housing shall be provided to residents when residential structures are acquired for demolition.	Stakeholders	A copy of any site selection data shall be retained in the project file. Field inspections shall verify that the measure is implemented concurrent with acquisition of residences, and a copy of inspection notes shall be retained in the project file.	
Public Services						
XIII-1	Peace II facilities shall be fenced or otherwise have access controlled to prevent illegal trespass or attractive nuisances, such as construction sites or recharge sites. This measure is a modification to 4.12-1 from the OBMP PEIR.	Initial Study	Local. Access controls shall be included in facility designs and the access controls shall be installed during construction and maintained during operations.	Stakeholders	A copy of any access control design shall be retained in the project file. Field inspections shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Transportation / Traffic					
XV-1 The construction contractor will provide adequate traffic management resources, as determined by the applicable jurisdiction, to ensure adequate access to all occupied properties on a daily basis, including emergency access. The applicable jurisdiction shall require a construction traffic management plan for work in public roads that complies with the Work Area Traffic Control Handbook, or other applicable standard, to provide adequate traffic control and safety during construction activities. The traffic management plan shall be prepared and approved by the applicable jurisdiction prior to initiation of construction within a traveled roadway alignment. The plan can include the following components: protective devices, flag persons or police assistance for traffic control sufficient to maintain safe traffic flow on local streets affected by construction at all times. This measure is a modification to 4.7-2 from the OBMP PEIR.	Initial Study	Local. The traffic management plan identifying adequate traffic management resources shall be completed prior to construction and adequate traffic management resources provided during construction.	Stakeholders	A copy of the traffic management plan shall be retained in the project file. Field inspection shall verify that this measure, with adequate traffic management resources, is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XV-2 The applicable jurisdiction shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable jurisdiction standards. This measure is a modification to 4.7-5 from the OBMP PEIR.	Initial Study	Local. This measure shall be require roadway repair designs to be completed prior to construction and implemented during construction.	Stakeholders	The roadway repair requirements shall be included in the construction contract and implemented by the contractor during construction. Field inspection shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	

Mitigation Measure		Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Transportation / Traffic (continued)						
XV-2	The construction contractor will time the construction activities to minimize obstruction of through traffic lanes adjacent to project sites and/or along project alignment during peak hours.	Initial Study	Local. This measure shall be implemented during construction.	Stakeholders	This scheduling requirement shall be included in the construction contract and implemented by the contractor during construction. Field inspection shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XV-4	During construction the applicable jurisdiction shall require that traffic hazards to vehicles, bicycles, and pedestrians be adequately identified and controlled to minimize hazards. This measure is a modification to 4.7-3 from the CIMP PEIR.	Initial Study	Local. The traffic management plan that minimizes traffic hazards shall be completed prior to construction and adequate resources provided during construction to minimize hazards. .	Stakeholders	A copy of the traffic management plan shall be retained in the project file. Field inspection shall verify that this measure, with adequate traffic hazard management resources, is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XV-5	The applicable jurisdiction shall require the contractor to ensure that no open trenches or traffic safety hazards are left in roadways during periods of time when construction personnel are not present (nighttime, weekends, etc.) This measure is a modification to 4.7-4 from the CIMP PEIR.	Initial Study	Local. This measure shall be implemented during construction.	Stakeholders	This performance requirement shall be included in the construction contract and implemented by the contractor during construction. Field inspection shall verify that this measure is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XV-6	Peace II related projects located within one-quarter mile of a school will be required to prepare a traffic management plan for review and approval by the appropriate school district. The minimum performance standard for the traffic plan will be to provide sufficient traffic management resources to protect pedestrian and vehicle safety in the vicinity of school sites.	Initial Study	Local. The traffic management plan that minimizes conflicts with school operations shall be completed prior to construction and adequate resources provided during construction to minimize hazards.	Stakeholders	A copy of the traffic management plan reviewed with local schools shall be retained in the project file. Field inspection shall verify that this measure, with adequate traffic management resources, is implemented during construction, and a copy of inspection notes shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Transportation / Traffic (continued)					
XV-1 IEUA and/or the responsible entity shall emphasize transportation demand management or non-motorized transportation alternatives to Peace II project related employees, where feasible, to reduce demand for roadway capacity. This measure is a modification to 4.17-8 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented during operation of Peace II Program facilities.	Stakeholder	The Stakeholder shall document efforts to implement transportation demand management for Peace II facilities and retain the documentation in the project file.	
XV-2 For each Peace II-related project that will substantially increase traffic generation (1,000 or more trips per day) relative to current traffic generation, the IEUA or responsible entity shall prepare a traffic study that identifies the net number of trips and the effect on levels of service (LOS) to maintain a LOS "E" or better. This measure is a modification to 4.17-1 from the OBMP PEIR.	Initial Study	Local. This measure shall be implemented prior to approval of a qualifying project and any required circulation system improvements shall be implemented prior to initiation of operations of the qualifying facility.	Stakeholder	A copy of the traffic study shall be retained in the project file. Field inspections shall verify that any required circulation system improvements have been installed in a timely manner. A copy of inspection notes shall be retained in the project file.	
XV-3 Future facility ingress/egress shall be reviewed with the agency having jurisdiction over the roadway providing access, and roadway improvements shall be required to eliminate any traffic hazards associated with access to a facility in accordance with standard agency requirements or prudent circulation system planning requirements. This measure is a modification to 4.17-1 from the OBMP PEIR.	Initial Study	Local. Ingress/egress design and roadway improvements shall be completed prior to approval of a project. The design and improvements shall be implemented during construction.	Stakeholder	A copy of engineering designs for ingress and egress to Peace II Program facilities, and any related roadway improvements, shall be retained in the project file. Field inspections shall verify that ingress/egress design and roadway improvements required on the circulation system have been installed. A copy of inspection notes shall be retained in the project file.	

Mitigation Measure	Source	Implementation Schedule	Responsible Party	Verification	Status / Date / Initials
Transportation / Traffic (continued)					
XV-10 During construction activities within existing road rights-of-way or other easements where continuous access is required, a road operation management plan shall be prepared and implemented. At a minimum the plan shall define how to minimize the amount of time spent on construction activities, how to minimize disruption of vehicle and alternative modes of traffic at all times, but particularly during periods of high traffic volumes, adequate signage and other controls, including flagpersons, to ensure that traffic can flow adequately during construction, the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc) with drivers and neighborhoods where construction activities will occur, and at the end of each construction day road ways shall be prepared for continued utilization without any significant road way hazards remaining. This measure is a modification to 4.10-8 from the OBMP PEIR.	Initial Study	Local. The traffic management plan identifying requisite traffic management resources shall be completed prior to construction and adequate traffic management resources provided during construction.	Stakeholder	A copy of the traffic management plan shall be retained in the project file. Field inspection shall verify that this measure, with adequate traffic management resources, is implemented during construction, and a copy of inspection notes shall be retained in the project file.	
XV-11 To the extent feasible, installation of pipelines or other construction activities in support of Peace II shall not be located on major evacuation or emergency response routes within any communities in the Chino Basin. Where construction on such routes is necessary, local emergency response providers shall be contacted and emergency access and evacuation requirements shall be maintained at a level sufficient to meet their needs. This measure is a modification to 4.10-7 from the OBMP PEIR.	Initial Study	Local. The process of selecting of pipeline alignment shall incorporate this measure's requirements prior to making a final determination of a pipeline route.	Stakeholder	Pipeline alignment planners shall incorporate this measure's requirements in the planning process. Data used in conjunction with the pipeline alignment selection process shall be retained in the project file..	

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