CHAPTER 3
Master Responses

3.1 Master Response 1: Project Purpose and Description

3.1.1 Introduction

Overview

This master response addresses comments received on the purpose, need and objectives of the project, as well as requests for additional background information on the existing Los Vaqueros Reservoir, clarification of the project benefits and further explanation of certain project elements. This master response does not include responses to technical questions related to the benefits analysis which are covered in **Master Response 5, Delta Hydrology and Aquatic Resources**. Other related Master Responses include **Master Response 2, Relationship to Other Initiatives and Projects**, and **Master Response 3, Project Alternatives**.

This master response is organized by the following subtopics:

- 3.1.2 Purpose, Need and Objectives
- 3.1.3 CCWD's Original Los Vaqueros Reservoir Project
- 3.1.4 Project Description

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- Contra Costa County, Public Works Department – L_CCCPW
- East Bay Municipal Utility District – L_EBMUD
- East Bay Regional Park District – L_EBRPD
- Richmond Community Redevelopment Agency – L_RCRA
- Santa Clara Valley Water District – L_SCVWD

Organizations

- California Farm Bureau Federation – O_CFBF
- East Bay California Native Plant Society – O_EBCNPS
- Planning and Conservation League – O_PCL

Individuals

- Betty Lu Graham – I_Graham
- Bob Mankin – I_Mankin
- Steven Navarro – I_Navarro
- Corin Pilkington – I_Pilkington

Draft EIS/EIR Section Reference

The Draft EIS/EIR, Vol. 1, addresses this topic area in the following locations: Executive Summary, Chapter 1, Purpose, Need and Objectives for the Los Vaqueros Reservoir Expansion Project; Chapter 2, Project Background, and; Chapter 3, Description of Project Alternatives.

3.1.2 Purpose, Need and Objectives

Comment Summary

This section of this master response responds to all or part of the following comments:

L_SCVWD-08	O_EBCNPS-03	O_PCL-02	O_PCL-03
I_Graham-06	I_Graham-07		

Summary of Issues Raised by Commenters

- More detail should be provided in the EIS/EIR to document the term “environmental water management” benefits.
- The Purpose and Need statement should recognize that there are sufficient quantities of water available, but the water is not accessible due to operating constraints imposed by the Endangered Species Act.
- Limitations on water availability may affect the project’s ability to meet the stated goals.

Response

Environmental Water Management. One of the two primary objectives of the Los Vaqueros Reservoir Expansion Project is to “Develop water supplies for environmental water management that supports fish protection, habitat management, and other environmental water needs.” The emphasis of the objective is on the broader goal of managing water for environmental benefit, which includes but is not limited to developing environmental water supplies. The Draft EIS/EIR explains how the project could be operated to achieve environmental water management benefits and how the different alternatives result in different levels of achievement. As explained in the Draft EIS/EIR (Vol. 1, Chapter 3, pg. 3-3), there are four project operations that result in environmental water management benefits: Improved Fish Screening, No Diversion Period,

Multiple Delta Intake Locations and Dedicated Storage for Environmental Water. These operations, together with the physical elements of the project (i.e., expanded reservoir, screened intakes, and the South Bay Connection), provide the means to manage water in the system—for a variety of end users—for environmental benefit. As one commenter points out (O_PCL-02), the environmental water management benefit is similar in some ways to the CALFED Environmental Water Account (EWA) program. However, the Los Vaqueros Reservoir Expansion Project is distinct from the EWA program because unlike the EWA program, the Los Vaqueros Reservoir Expansion Project provides the facilities, operations and water to improve fishery protection while maintaining water supplies, whereas the EWA relies upon purchase of supplies with limited funding and use of existing facilities, both of which have constrained the program. The Los Vaqueros Reservoir Expansion Project would provide conveyance with positive barrier screens and storage not currently available to the EWA, and operational mechanisms that reduce the constraints that are currently limiting provision of environmental benefits.

Comment O_EBCNPS-03 requests more specific information on environmental water management benefits, and misunderstands a statement in the Draft EIS/EIR (Vol. 1, Executive Summary, pg. ES-9 and Chapter 3, pg. 3-15) to mean that the project benefits are not defined. Environmental Water Management benefits are described both quantitatively and qualitatively in Draft EIS/EIR Vol. 1, Chapter 4.2, Delta Hydrology and Water Quality, at pages 4.2-34 through 4.2-41 and in Chapter 4.3, Delta Fisheries and Aquatic Resources, at pages 4.3-87 through 4.3-94. Current supplies available for environmental water management are discussed in Sections 1.4.2, 1.4.3 and 1.4.4, the change in environmental water management with the project is discussed in Sections 1.5.1 and 4.2 (see in particular the section entitled “Environmental Water Management”, starting on page 4.2-36 of the Draft EIS/EIR), and Section 4.2, set forth in Section 5.3 herein, where the measures and amounts are also discussed. Species benefited and the impacts to all species are the subject of Chapter 4.3.

The paragraph that led to this misunderstanding reads:

> The evaluation of benefits described in this report is intended to provide information for the potential project participants and to provide a basis for evaluating potential environmental impacts. If the lead agencies decide to pursue the project following this environmental analysis, additional analyses of the extent of these benefits will be necessary for potential project partners, including state and federal government agencies, to determine their level of interest and willingness to make a financial commitment to the Proposed Project.

This language was added at the request of potential partners to provide assurance that additional analyses of benefits and costs would be made available before a financial commitment had to be made to participate in the project. This is particularly important to the potential partners because their needs and their options differ. Additionally, through adaptive operations, the benefits of the expansion project can be tailored to meet specific needs while remaining consistent with the impact analysis. This is discussed in the Draft EIS/EIR (Vol.1, Chapter 3, pg. 3-2). Decisions to participate and commit financially to the expansion would be made after completion of the ongoing federal and state feasibility studies.

Purpose and Need. As required under the National Environmental Protection Act (NEPA), a Purpose and Need statement is provided for the project (Draft EIS/EIR, Vol. 1, Chapter 1, pg. 1-3). The need for the project is driven by three conditions: the Delta ecosystem is in a state of serious decline; insufficient quantities of water and lack of storage and flexibility contribute to the decline; and ecosystem decline has put other beneficial uses of water supplies conveyed through the Delta at risk. Taken together, these three conditions describe the context in which an expanded Los Vaqueros Reservoir system would function to improve Delta ecosystem conditions and reduce conflict among beneficial users of Delta water supplies. Comment L_SCVWD-08 states that the second condition, insufficient quantities of water, is a mischaracterization of the problem because sufficient supplies exist but are not accessible due to "operating constraints imposed by the Endangered Species Act." This concept is captured by the third driver — ecosystem decline has put other beneficial uses at risk due to court-ordered limits on Delta pumping. The lead agencies believe, however, that there are currently insufficient quantities of water available to meet all demands on the Delta, including environmental and municipal demands, at the times and places that the water is needed for multiple reasons, including operating constraints, conveyance capacity and storage availability.

Water Availability and Goals. One commenter (I_Graham-06 and I_Graham-07) observes that if water is not available, or if certain elements of the project are not built, the goals of the project would not be met. This is true in an absolute sense, that is, if water was not available, and facilities were not built, then there would be no benefits. However, as discussed in the Draft EIS/EIR (Vol. 1, Chapter 3, Section 3.1.2, pp. 3-1 through 3-5) the alternatives are distinguished by different combinations of facility options and water system operations, and these combinations result in different levels of achievement of the primary goals of the project. As detailed in the Draft EIS/EIR (Vol.1, Section 4.2, pp.4.2-34 through 4.2-41), the analysis of benefits and impacts for each of the alternatives takes into account known restrictions on water availability, and estimates future restrictions using the best available information. Implementation of any of the alternatives is dependent on participants determining that the benefits of the project to their agency are worth the costs.

3.1.3 CCWD's Original Los Vaqueros Reservoir Project

Comment Summary

This section of this master response responds to all or part of the following comments:

I_Graham-05 I_Navarro-02

Summary of Issues Raised by Commenters

- The document does not acknowledge that Rock Slough intake has not been screened as was required under the Biological Opinions for the Los Vaqueros Reservoir.
- Why was the Los Vaqueros Reservoir not constructed with more capacity?

Response

The Rock Slough Intake is described on pages 2-5 and 2-6 in the Draft EIS/EIR (Vol. 1, Chapter 2). The information provided includes the fact that a screen is required at the Rock Slough Intake under both the Central Valley Project Improvement Act and the 1993 United States Fish and Wildlife Services (USFWS) biological opinion for the Los Vaqueros Project, and discussion of the current status of the intake as "unscreened." The Draft EIS/EIR states that Reclamation is seeking an extension to 2018 to complete the screening because screen design requirements will change when CCWD completes its project to encase the earth-lined portion of the Contra Costa Canal. However, since publication of the Draft EIS/EIR, Reclamation and CCWD have determined that it is urgent, given the serious decline in the Delta ecosystem, to go forward with the screening project, and in 2009 federal stimulus funds were appropriated for this screen. Construction of the Rock Slough Fish Screen began in September 2009 and is scheduled to be completed and on line by the end of 2011. The Final EIS/EIR will reflect this change in the status of the Rock Slough Fish Screen with the language shown below to replace the last sentence of the first full paragraph on page 2-6 of the Draft EIS/EIR (Vol. 1, Chapter 2). This text change is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

> ~~Reclamation has received an extension on fish screen construction until December 2008, and is preparing a request for further extension until 2018 because the requirements for screen design will change when CCWD completes the ongoing project to encase the earth-lined portion of the canal.~~ Construction of the Rock Slough Fish Screen commenced in September 2009; the screen is expected to be operational by the end of 2011.

The analyses of impacts and benefits related to Delta Hydrology and Water Quality and Delta Fisheries and Aquatic Resources in the Draft EIS/EIR were conducted assuming Rock Slough remained unscreened in the future (Section 4.2 and Section 4.3, respectively). Now that screening is underway, that assumption has been changed in the modeling conducted for the Final EIS/EIR. Having a screen in place at the Rock Slough Intake would result in less entrainment at Rock Slough, greater flexibility in the use of intakes, and lower overall impacts from the expansion project. See Chapter 2, Section 2.3.2 Operations Update, and Section 3, updated Draft EIS/EIR Sections 4.2 and 4.3, set forth in Section 5.3 in this document (Vol. 4) for more information.

The Los Vaqueros Reservoir was sized at 100 thousand acre-feet (TAF) to provide water quality and emergency storage benefits to existing and planned future CCWD customers. Larger reservoirs providing regional, state and federal benefits were evaluated during the planning phase for the Los Vaqueros Reservoir, and extensive outreach to potential partners was conducted. However, no partners committed to the reservoir at the time so CCWD built the facility at its own cost to meet its own needs. Through the CALFED Storage Program, CCWD together with federal, state and local agencies are evaluating whether expanding the Los Vaqueros Reservoir is a cost-effective way to meet their water needs. The expansion to 275 TAF would provide environmental water management and water supply reliability benefits on a regional and statewide scale (see Response 3.1.4 below) while the expansion to 160 TAF would provide water supply reliability and water quality benefits to CCWD and other potential local partners. CCWD is evaluating increased storage because with the deterioration of the Delta, and with increased uncertainty in water supply

reliability due to climate change, the 100-TAF reservoir is not anticipated to provide enough storage to sustain CCWD's water quality and water supply reliability goals.

3.1.4 Project Description

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCPW-05	L_EBMUD-02	L_EBMUD-04	L_RCRA-02
L_SCVWD-07	O_CFBF-01	O_CFBF-02	O_CFBF-03
O_CFBF-04	O_EBCNPS-03	I_Graham-10	I_Mankin-01
I_Pilkington-03			

Summary of Issues Raised by Commenters

- The interests of CCWD ratepayers in the 100-TAF Los Vaqueros Reservoir Project need to be protected and the citizens of Contra Costa County should be given priority when using water stored in an expanded Los Vaqueros Reservoir during emergencies and droughts.
- CCWD Board Principles and the advisory vote of CCWD ratepayers limit the potential statewide benefits of the expansion project.
- What performance standards will be used for supplying Environmental Water Management; will there be a "cap" placed on available water; how will CCWD adjust for global warming impacts if they are "more significant" than modeled?
- The description of emergency water supply benefits in the Draft EIS/EIR should include operational and logistical constraints that may affect the use of existing interconnections between water agencies.
- Expand the discussion of impacts related to taking the reservoir out of service during construction and how these impacts will be mitigated; clarify the logistical issues related to using the intertie with EBMUD during this period.
- Develop a reservoir with "green" features.
- Provide comprehensive cost estimates.
- Clarify construction schedule

Response

Distribution of Benefits. Benefits of the existing 100 TAF of storage in an expanded Los Vaqueros Reservoir would remain with CCWD ratepayers under all expansion alternatives. In analyzing the alternatives to expand beyond 100 TAF, existing water quality blending operations were considered priority operations that had to be accomplished prior to operations for other benefits. The assumptions used in the modeling analyses of the alternatives are discussed in detail in Appendix C to the Draft EIS/EIR. CCWD's Board of Directors adopted Principles for Expansion in 2003 that protect the investment of CCWD ratepayers in the Los Vaqueros Reservoir. Among the principles for CCWD to participate in an expansion are requirements that water quality must be improved for CCWD customers beyond that available from the existing Los Vaqueros Project, water supply reliability during a drought must be improved for CCWD

customers, and CCWD must be reimbursed for the value of the existing Los Vaqueros Project assets shared, replaced, rendered unusable or lost with the expansion project. Additionally, CCWD must continue as the operator of the Los Vaqueros Reservoir system. The full set of Principles is set out in Section 2.2.2 of the Draft EIS/EIR (Vol.1, Chapter 2).

Benefits related to the expansion would be provided to participants in the expansion project according to the nature and level of their investment. Dry-year water supply benefits are part of the reliability improvements an expanded Los Vaqueros Reservoir would provide, and would be allocated according to the agreement with the participant(s). The State of California does not have any rights to water currently stored in Los Vaqueros Reservoir; entitlement to water in an expanded reservoir would correspond to the State's investment in the expansion and would be memorialized in an operating agreement. In a non-drought emergency, stored water could potentially be provided to agencies (both inside and outside Contra Costa County) that are not participants in the expanded reservoir, but how much water would be available, how it would be allocated, and at what cost cannot be determined at this time. As is CCWD's current practice, with expansion, requests for assistance during a water supply emergency from agencies that are not served by the reservoir would be considered on a case by case basis. There is not currently, and would not be with expansion, a preference or obligation to provide emergency supplies to any particular agency or region that was not a participant in the reservoir.

CCWD Board Principles. Both the California Farm Bureau Federation (CFBF) and Santa Clara Valley Water District (SCVWD) accurately note that there are constraints on the use of the expansion based on the CCWD Board of Directors Principles for Expansion and the advisory vote of CCWD ratepayers. CFBF further states that while the Los Vaqueros Reservoir Expansion Project as proposed appears to have some regional and local water supply benefits, it lacks potentially greater statewide benefits due to constraints placed by the CCWD Board of Directors through their Principles for Expansion and the advisory vote by CCWD customers. The Principles are set forth in the Executive Summary (Vol.1, pg. ES-7) and Chapter 2 (Vol. 1, pp. 2-12 through 2-13) of the Draft EIS/EIR. The ballot language for the advisory vote read:

> Shall Contra Costa Water District work with public water agencies to expand Los Vaqueros Reservoir, at no cost to District ratepayers, to: (1) increase water supplies for drought protection; (2) improve drinking water quality; and (3) protect endangered fish in the Delta, on condition that: (a) CCWD water rates will not increase; (b) no water will be exported to Southern California or a peripheral canal; and (c) CCWD will still operate the expanded reservoir?

While the Principles and the advisory vote place some policy limitations on the ultimate use of water stored in an expanded Los Vaqueros Reservoir, the limitations do not preclude operations that yield state and federal benefits. As part of the Federal Feasibility Study, Reclamation published the 2006 Initial Economic Evaluation for Plan Formulation Report (Reclamation, 2006) which concluded that, at a concept level, there appeared to be federal interest in expansion of Los Vaqueros Reservoir and that the expansion could be implemented while meeting the CCWD Board Principles. That study looked at expansion to both 500 TAF and 275 TAF and determined that the 275-TAF reservoir project appeared to be more cost effective than the larger expansion.

Federal and state interests in the expansion project are summarized at page ES-6 of the Executive Summary of the Draft EIS/EIR (Vol. 1).

The CFBF also expresses concern that going forward with the Los Vaqueros Reservoir expansion project might foreclose other opportunities to provide even greater water supply benefits and could result in cumulative loss of agricultural land if these other opportunities do not proceed. Both Reclamation and DWR continue to evaluate the feasibility of the expansion project in light of other potential storage projects and Delta programs. A decision by Reclamation and/or the State of California to invest in expansion of the Los Vaqueros Reservoir would be part of an overall solution to Delta and water supply issues and would not be made in a way that foreclosed other cost effective options. See Chapter 2, Project Description Update, of this Final EIS/EIR (Vol. 4) for a description of a potential implementation approach that allows CCWD to move forward with Alternative 4 to meet urgent local needs while Reclamation, DWR and other potential partners continue to study the feasibility of a subsequent reservoir expansion to 275 TAF in the context of other Delta initiatives including potential future storage and conveyance projects.

CFBF suggests further that the Draft EIS/EIR should have considered the indirect effects to statewide agriculture from Reclamation acquiring up to 150 TAF of refuge water. The refuge water supply program is a requirement of the Central Valley Project Improvement Act (CVPIA) which is discussed in Section 2.3.1 of the Draft EIS/EIR (Vol. 1). The Los Vaqueros Reservoir Expansion Project could help Reclamation meet the refuge water supply requirements of the CVPIA by providing dedicated storage for environmental water. Other environmental water demands could also be met from the dedicated environmental storage as described in Section 3.4.3 of the Draft EIS/EIR (Vol. 1). In the hydrological analysis for the expansion project, the water in dedicated environmental storage is either surplus water or water acquired through exchange or transfer. Having dedicated storage for this purpose provides the system flexibility to ensure that environmental water needs are met with no or minimal impacts to other water users.

Performance Standards, "Caps" on Water and Future Changes due to Climate Change. The Native Plant Society asked about performance standards that will be used for supplying Environmental Water Management; will there be a "cap" placed on available water; and how will CCWD adjust for global warming impacts if they are "more significant" than modeled? (O_EBCNPS-03). Chapter 4.2 describes the amounts and ranges of water that can be made available for Environmental Water Management. As the EBCNPS comment notes, these amounts are subject to change as conditions change from, for example the impacts of global warming. The quantities, measures and necessary adjustments to changing conditions would be, like any water project, described in the contractual arrangements for the operation of the expanded reservoir and its facilities. Such contractual arrangements would likely include ranges (depending on hydrological conditions) that would be expected, and operational procedures to ensure delivery of water supplies and Environmental Water Management benefits.

Emergency Water Supply. EBMUD comments that there are operational, regulatory and environmental constraints that may affect the ability of EBMUD to take emergency supplies from an expanded Los Vaqueros Reservoir, and that EBMUD cannot at this point quantify an

emergency supply benefit from the expansion project. The quantity of water that could be available during emergencies under different alternatives is included in the discussion of project benefits in the Draft EIS/EIR (Vol.1, Section 4.2, pp. 4.2-35 through 4.2-42).

Because the nature and location of emergencies are difficult to predict, specific beneficiaries are not identified and allocations are not assumed. It is anticipated that emergency supplies would be available to participants in the expansion project through project facilities, or other existing facilities, and could be available to some non-participants depending on the availability of water supplies and conveyance capacity at the time of the emergency. Terms of use of the emergency supplies and conveyance facilities for non-participants would be negotiated on a case by case basis. The EIS/EIR for this project does not cover any new facilities, or modifications to existing facilities, that might be needed to convey emergency water to non-participants. It does cover Delta impacts related to use of the emergency water for any end user.

Taking the Los Vaqueros Reservoir Out of Service. Three comments (L_EBMUD-04, I_Graham-10, and I_Pilkington-03) raise concerns with the impacts of taking the Los Vaqueros Reservoir out of service during construction of the reservoir expansion. As discussed in pages 3-53 through 3-54 of the Draft EIS/EIR (Vol. 1, Chapter 3, Section 3.5.1,), for Alternatives 1, 2, and 3, the reservoir would be out of service for about 4 years, from the time the reservoir was completely drained until it was refilled. The Los Vaqueros Reservoir is owned and operated by CCWD for the benefit of CCWD customers. The two primary purposes of the Los Vaqueros Reservoir are to provide high quality water for blending with lower quality water in the Contra Costa Canal during periods when Delta water quality is low, and to provide water during emergencies when Delta water may be unavailable. Although non-customers could potentially be served through existing interties or through exchange during an emergency, CCWD does not have any agreements in place to provide such an emergency benefit to non-customers.

During the period when the reservoir is out of service, CCWD water quality goals could be met in all but short portions of the driest years through use of CCWD's Alternative Intake Project (AIP) and through strategic use of the existing intertie with EBMUD. In a catastrophic emergency, CCWD would utilize interties with other agencies and alternative technologies such as mobile reverse osmosis units to reduce chlorides in Delta water and would institute emergency demand management as identified in CCWD's planning for seismic reliability. Another strategy during an emergency is to temporarily relax water quality goals which would allow greater use of lower quality water such as that available at CCWD's Mallard Slough Intake. Treated water delivered to customers would still meet all federal and state water quality standards but taste and odor could be affected. The Mallard Slough Intake was designed and built as part of CCWD's seismic reliability program.

For Alternative 4, the reservoir would be only partially drained and would remain in operation through the majority of construction (Draft EIS/EIR, Vol. 1, Section 3.4.5, pp. 3-37 through 3-41). There would be reduced stored water available for blending during construction, but the AIP and the intertie with EBMUD would enable CCWD to meet its water quality goals under most circumstances. The water remaining in the reservoir would be available during emergencies, as would the other strategies described above.

Any use of the EBMUD intertie, whether for water quality purposes or during an emergency, would be consistent with the agreement between CCWD and EBMUD. Additional "back-up" water from EBMUD has not been identified as necessary at this time, but if CCWD decides to seek water supplies beyond those specified in the CCWD-EBMUD agreement, CCWD would start discussions at the earliest possible time as requested by EBMUD.

Develop a Reservoir with "Green" Features. To the extent feasible, CCWD has committed to developing an energy efficient project (Draft EIS/EIR, Vol. 1, Chapter 3, pg. 3-65 and pg. 3-84 and Section 4.10, Air Quality, pg. 4.10-7). Existing operating practices designed to maintain and enhance CCWD's environmental stewardship, such as increasing water use efficiency within the service area and within CCWD's facilities, increasing fuel efficiency of CCWD's fleet, and requiring safe handling and encouraging reduced use of pesticides at CCWD facilities, would be extended to any new facilities constructed as part of the expansion project.

Provide Comprehensive Cost Estimates. As noted in comment L_EBMUD-02, cost estimates are not required to evaluate environmental effects of the project and are not provided in the Draft EIS/EIR. Comprehensive cost estimates are being developed for purposes of the state and federal feasibility reports currently estimated to be completed in 2011.

Clarify the Construction Schedule. EBRPD's comment on the construction schedule (L_EBRPD2-09) is addressed in Master Response 11, Recreation, Section 3.11.2. See Master Response 11 and Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol.4), for text changes to Chapter 3, Project Description, in the Draft EIS/EIR to clarify the anticipated closure of the reservoir due to construction.

3.2 Master Response 2: Relationship to Other Initiatives and Projects

3.2.1 Introduction

Overview

This master response addresses comments received on the relationship between the Los Vaqueros Reservoir Expansion Project and other Delta initiatives including the Bay Delta Conservation Plan (BDCP), the Delta Habitat Conservation and Conveyance Program (DHCCP) and Delta Vision Strategic Plan. It also addresses comments related to the expansion project in the context of the overall CALFED Storage Program, and in relationship to specific projects such as the Delta Wetlands Project. Related information can be found in **Master Response 3, Alternatives**, and **Master Response 5, Delta Hydrology and Aquatic Resources**.

This master response is organized by the following subtopics:

- 3.2.2 Coordination with and Relationship to BDCP, DHCCP, Delta Vision and CALFED Storage Program
- 3.2.3 Federal and State Feasibility Studies

Commenters

Commenters that addressed this topic include:

Federal Agencies

- Environmental Protection Agency – F_EPA

State Agencies

- None

Local and Regional Agencies

- Santa Clara Valley Water District – L_SCVWD
- Sacramento Regional County Sanitation District – L_SRCSD
- State Water Contractors – L_SWC
- Zone 7 Water Agency – L_Zone7

Organizations

- Contra Costa County Farm Bureau – O_CCCFB
- California Farm Bureau Federation – O_CFBF
- Delta Wetlands Project – O_DWP
- Planning and Conservation League – O_PCL

Individuals

- Gary Collier – I_Collier
- Bob Mankin – I_Mankin
- Corin Pilkington – I_Pilkington

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Executive Summary, pp. ES-7 through ES-8; Vol. 1, Chapter 2, Project Background, generally, and pp. 2-22 through 2-23; Vol. 1, Section 3.7.1, Decisions by Participating Parties, pp. 3-89 through 3-91; Vol. 1, Section 4.1, Introduction: Approach to Environmental Analysis, pp. 4.1-5 through 4.1-10.

3.2.2 Coordination with and Relationship to BDCP, DHCCP, Delta Vision and CALFED Storage Program

Comment Summary

This section of this master response responds to all or part of the following comments:

L_SCVWD-06	L_SCVWD-09	L_SRCSD-02	L_SWC-03
L_Zone7-01	L_Zone7-02	L_Zone7-03	O_CCCFB-01
O_CFBF-03	O_CFBF-04	O_DWP-01	O_DWP-02
O_DWP-03	O_PCL-05	I_Collier-03	I_Mankin-01
I_Pilkington-01			

Summary of Issues Raised by Commenters

- Los Vaqueros Reservoir Expansion should be coordinated with the BDCP, DHCCP and the Delta Vision Strategic Plan.
- The EIS/EIR should evaluate affects on LVE operations and benefits from implementation of the BDCP, DHCCP and Delta Vision Strategic Plan.
- Decision-makers need to be able to compare the Los Vaqueros Reservoir Expansion Project to other Delta initiatives and the storage options in the CALFED storage program in determining how to accomplish the long-term goals of improving water supply reliability and restoring the Delta.
- The BDCP and DHCCP should be included in the cumulative impacts analysis.
- The Delta Wetlands Project should be included in the cumulative analysis in the Final EIS/EIR.

Response

A number of comments state that the Los Vaqueros Reservoir Expansion Project should be coordinated with the BDCP, DHCCP, and Delta Vision Strategic Plan. Section 2.5 Other On-going Planning Processes in the Draft EIS/EIR (Vol. 1, Chapter 2) includes discussion of the relationship between the expansion project and both BDCP and Delta Vision Strategic Plan. The DHCCP is not specifically discussed in the Draft EIS/EIR because at the time of publication, the program had not been defined in public documents. The DHCCP is now defined on the BDCP website as "a partnership between the California Department of Water Resources and the Bureau of Reclamation to evaluate the ecosystem restoration and water conveyance alternatives identified by the BDCP. DHCCP activities include an environmental review of the BDCP." Throughout this

master response, except where specifically stated otherwise, "BDCP" should be read to include the companion DHCCP.

The BDCP is being developed to promote the recovery of endangered, threatened and sensitive fish and wildlife species and their habitats in the Sacramento-San Joaquin Delta in a way that will also protect and restore water supplies. As mentioned above, the DHCCP will evaluate the ecosystem restoration and water conveyance alternatives identified by the BDCP and prepare NEPA and CEQA documents for the BDCP. The Delta Vision Strategic Plan is a recommendation to the Governor on how to manage the Delta for the long term and is not a project under CEQA or NEPA.

Coordination with BDCP. The Los Vaqueros Reservoir Expansion Project is coordinating with the BDCP during project development to the extent information has been made available. It is not yet possible, however, to include the BDCP in future with or without project conditions. Assumptions related to the capacity and operations of proposed new conveyance being analyzed in the BDCP are only beginning to be formulated and the preliminary analyses (which use a broad range of possible operational scenarios), acreages of tidal marsh restoration and Delta flow requirements are not yet available. The BDCP official schedule anticipates a draft plan in the fall of 2010. Currently, BDCP is examining three sets of flow criteria and a recommended primary set to use for initial analysis is scheduled for the winter of 2010. However, the Sacramento-San Joaquin Delta Reform Act of 2009 requires the California State Water Resources Control Board (SWRCB) to develop new flow criteria by August 2010. This Act states: "For the purpose of informing planning decisions for the Delta Plan and the Bay Delta Conservation Plan, the board shall, pursuant to its public trust obligations, develop new flow criteria for the Delta ecosystem necessary to protect public trust resources." These flow criteria may result in changes to the draft BDCP. In any event, the BDCP and DHCCP that is producing the EIS/EIR for the BDCP must examine the full range of alternatives. Consequently, given the August 2010 input to the BDCP from the SWRCB, the flows that will be proposed for the final BDCP will not be known for some time. It also bears noting that published schedules to date have proven to underestimate the time actually needed to accomplish the tasks. The range of possible scenarios for the BDCP include different levels of inflow, outflow, floodplain flows, bypass flows and Old and Middle River flows corresponding to different levels of Delta protection, The scenarios also include different levels of new tidal habitat. Each of these factors results in a wide range of salinity and flow conditions, with numerous permutations possible, depending on which arrays are combined.

Reclamation and DWR have indicated a current preference to wait to make a decision on implementing a 275-TAF Los Vaqueros Reservoir Expansion Alternative until a preferred alternative has been selected for the BDCP. A 275-TAF expansion alternative would have broad regional and statewide benefits that may be affected, either positively or negatively, by the BDCP alternative selected. However, as described in Chapter 2 of this Final EIS/EIR (Vol. 4), CCWD is considering implementing Alternative 4 in the near term to help meet immediate local needs for drought reliability and water quality improvement while Reclamation and other potential partners may choose to continue to study the feasibility of a 275-TAF expansion alternative in the context of other Delta initiatives including, specifically, BDCP.

Although the BDCP cannot be quantitatively analyzed at this point, based on the qualitative analysis described below, CCWD has determined that the additional storage provided by Alternative 4 will continue to provide local water quality and drought reliability benefits regardless of the BDCP alternative implemented and can thus make an independent decision in advance of the BDCP.

Evaluation of Potential Effects of BDCP on Los Vaqueros Expansion. Without definitive operations and flow requirements, estimations of the quantitative effects of the BDCP on Delta flows and salinity remain uncertain. Qualitatively, new conveyance could result in reduced water quality at CCWD intakes at some times of the year and approximately the same water quality at other times, which could combine to affect operation of the expanded reservoir. However, this result is based on preliminary evaluations that have not yet considered potential water quality improvements from tidal marsh restoration in the Delta interior, the effect of mitigation measures that might be required, nor operational changes that can be made to offset water quality degradation. Water quality degradation can occur when outflow is reduced, or when exports from the south Delta are reduced to such low levels that agricultural drainage predominates in the south Delta, or when tidal marsh areas are established in the west Delta in a way that increases salinity intrusion. Water quality improvements occur when outflow is increased, exports in the south Delta remain at modest to high levels, or when tidal marsh areas are established in the Delta in a way that reduces salinity intrusion. Since the flows, tidal marsh areas and export operations remain undefined, it would be speculative to try to determine the exact effects of the BDCP on operations of a Los Vaqueros Reservoir expansion.

The extent of this potential water quality change cannot be determined without a more precise description of the new conveyance system, the restoration areas and the operations. It is clear though, that having additional storage in an expanded Los Vaqueros Reservoir, in combination with the flexibility of having three screened intakes at different locations in the Delta (Old River, AIP and Rock Slough), would enable CCWD to operate in a way that lessens the effects of water quality degradation from new conveyance or any other source. The reason for this is that the additional storage and the additional intakes allow additional flexibility to capture high quality water in periods with reduced impacts on fisheries for the project purposes. If water quality is degraded at times, the need for additional storage increases and the need for additional pumping capacity to refill the reservoir increases; in the absence of either, the ability to meet the project purposes are reduced. On the other hand, if BDCP activities improve water quality, the ability to meet the project purposes would also be improved beyond those already found.

The purpose of the BDCP is to restore Delta fisheries while restoring export water supplies. The BDCP has already determined that restoring export water supplies is not possible by taking all export water from the Sacramento River and that a “dual conveyance” system that retains a substantial amount of water pumped from existing facilities is needed. Preliminary studies indicate that the amount pumped from the south Delta would be about half of current pumping, with somewhat lower levels in fish sensitive periods necessary to reduce take. Under a general scenario, an expanded 275 TAF Los Vaqueros Reservoir would be able to increase the fishery protection because of its screened intakes and the ability to allow for further reductions in south

Delta export pumping while maintaining water supplies. Alternative 4 impacts, though already small, would likewise be reduced because of the decreased likelihood of fish being in the vicinity of the intakes during filling operations when export pumping in the south Delta is reduced. Consequently, the use of an expanded Los Vaqueros Reservoir (for all Alternatives) under the general operational parameters being discussed in the BDCP would be unlikely to increase, and would likely decrease, any adverse effects and environmental impacts when the alternatives and the BDCP are considered together.

Relationships to the Delta Vision Strategic Plan. The regional and statewide benefits identified for a 275-TAF expansion alternative could be either increased or decreased with new Delta conveyance depending on capacity and operations of the new conveyance and whether the operations of the new conveyance can be optimized with operations of an expanded Los Vaqueros Reservoir. The most important factors will be water quality and limitations on south Delta exports; screening diversions under Alternatives 1 and 2, for example could have added value if the south Delta export facilities continue to use salvage facilities rather than positive barrier fish screens.

As noted in the Draft EIS/EIR, the Los Vaqueros Reservoir Expansion Project is consistent with the Delta Vision Strategic Plan. The primary objectives of the reservoir expansion project – developing water supply for environmental water management and increasing water supply reliability for the Bay Area – are consistent with the two co-equal goals for managing the Delta set forth in the Strategic Plan. The Strategic Plan is described in the Delta Vision Committee Implementation Report as a document "that will serve as an important guide and reference as California moves forward to make improvements in the Delta". Additional storage was recognized as one of the priorities for a sustainable Delta; completion of all the CALFED storage program feasibility studies was listed as a near-term action. The possible timing variant implementation approach proposed for the expansion of the Los Vaqueros Reservoir (see Vol. 4, Chapter 2, Section 2.4) also remains consistent with the Delta Vision Strategic Plan.

Decision-Making in the Context of Other Delta Initiatives. The Delta Vision Strategic Plan, BDCP and the CALFED storage program all propose integrated, comprehensive approaches to solving Delta water issues. The latest legislation approved at the end of 2009 takes a similar approach. It is contemplated in these programs that individual components will be implemented consistent with the program goals and objectives as institutional and financial factors allow. The Los Vaqueros Reservoir Expansion Project has been developed within an integrated, comprehensive resource management program and implementation of any of the alternatives, now, or under the timing variant described in Chapter 2 of this document, remains consistent with the intent of these programs.

Cumulative Effects - BDCP. In analyzing cumulative impacts for Delta hydrology and aquatic resources in the Los Vaqueros Reservoir Expansion Project Draft EIS/EIR, all the projects in the "common assumptions" modeling package were considered as well as the Stockton Delta Water Supply Project. (See Draft EIS/EIR, Vol. 1, Section 4.1 Approach to the Environmental Analysis and Section 4.2 Delta Hydrology and Water Quality, pp. 4.2-68 through 4.2-70.) The common

assumptions modeling package was developed by Reclamation and DWR to facilitate comparison among modeling-based analyses performed by different entities and/or for different projects. The common assumptions modeling package does not currently include the new Delta conveyance being developed in the BDCP because details on capacity and operations have not been sufficiently defined and a preferred alternative has not been selected for those projects.

The BDCP continues to explore operations that minimize impacts, so the extent or direction of the impacts is not yet known (for example, Delta water quality could improve or degrade depending upon how the BDCP features are designed or operated). It is not possible to determine at this point in the planning of the BDCP how those projects would impact the Delta, much less how those projects would interact with the effects of the Los Vaqueros Reservoir Expansion Project. Therefore, the BDCP has not been included in the quantitative cumulative analysis performed for the Los Vaqueros Reservoir Expansion Project.

Cumulative Effects – Delta Wetlands Project. The Delta Wetlands Project (DWP) was not included in the cumulative impact analysis for the Los Vaqueros Reservoir Expansion Project Draft EIS/EIR because project operations had not been defined to the extent that they could be incorporated into the quantitative analysis. Up until issuance of the Notice of Preparation (NOP) in November 2008, the DWP was not considered "reasonably foreseeable" due to the outcome of the lawsuit over water rights referenced in the comment letter. While issuance of the NOP documented that a revised project proposal is moving forward again, it also states that additional analysis is necessary. The DWP NOP states "the scope of this California Environmental Quality Act (CEQA) analysis focuses primarily on the changes to the Project description proposed in the petitions for change regarding specific places of use for Project water, estimated diversion amounts, beneficial uses, means of transfer, and storage of water in groundwater banks. This CEQA update will also update the 2001 Final EIR to consider new information or changed circumstances, including new listings and changes in the status of threatened and endangered species." DWP issued a revised NOP in July 2009 that again states that the CEQA analysis would update the 2001 Final EIR to consider new information and changed circumstances. Without an updated model for the DWP that includes this new project information and accounts for the significantly changed circumstances in the Delta, DWP could not be included in the quantitative cumulative impacts analysis in the Draft EIS/EIR or Final EIS/EIR.

Based upon a qualitative assessment of the potential for cumulative impacts associated with this project, no cumulative impact based on future operation of Los Vaqueros Reservoir Expansion Project and DWP is anticipated. The terms of a settlement agreement between DWP, State Water Contractors and CCWD will preclude impacts to Delta water quality. In addition, the environmental analysis performed for the updated DWP should limit operations to those that are safe for the Delta ecosystem.

3.2.3 Federal and State Feasibility Studies

Comment Summary

This section of this master response responds to all or part of the following comments:

F_EPA-04 L_SCVWD-10

Summary of Issues Raised by Commenters

- Federal and State Feasibility Reports should be included in the Final EIS/EIR.
- Reclamation and CCWD should coordinate with CVP and SWP Contractors in the financial assessments being conducted as part of the Federal Feasibility Report.

Response

The Federal and State Feasibility Reports will not be completed until after this Final EIS/EIR is published and thus will not be included in the Final EIS/EIR. As described in the Draft EIS/EIR (Vol. 1, Chapter 3, Section 3.7 Permits and Approvals Needed for Alternatives, pg. 3-90), the Federal Feasibility Report analyzes engineering, economic, environmental and financial aspects of project alternatives, determines their costs and benefits and determines if there is a federal interest in implementation of the Los Vaqueros Reservoir Expansion Project. The state feasibility study is a parallel process. As explained in Chapter 2 of this Final EIS/EIR, CCWD is considering implementing Alternative 4 to help meet immediate local needs while Reclamation and other potential partners continue to study the feasibility of Alternatives 1, 2 and 3 in the context of other Delta initiatives including specifically the BDCP. Federal and state decisions on whether to participate in the Los Vaqueros Reservoir Expansion Project will be made after the feasibility studies are completed.

The federal decision process includes consideration of input from other federal, state, and local agencies, concerned stakeholders, tribes and the general public, obtained during development of both the Federal Feasibility Report and the Final EIS/EIR.

This Page Intentionally Left Blank

3.3 Master Response 3: Project Alternatives

3.3.1 Introduction

Overview

Comments about project alternatives generally fall into three categories: 1) questions regarding why certain alternatives, such as recycled water, desalination, and water use efficiency, were not carried forward for review in the Draft EIS/EIR; 2) requests for consideration of additional alternatives; and 3) requirements under CEQA to identify the Environmentally Superior Alternative.

This master response is organized by the following subtopics:

- 3.3.2 Alternatives Development
- 3.3.3 Additional Alternatives
- 3.3.4 Identification of the Environmentally Superior Alternative and Overriding Public Considerations

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- Central Contra Costa Sanitary District - L_CCCSD
- Delta Diablo Sanitation District - L_DDSD
- Dublin San Ramon Services District - L_DSRSD
- East Bay Municipal Utility District - L_EBMUD
- East Bay Regional Park District - L_EBRPD
- Santa Clara Valley Water District - L_SCVWD
- Zone 7 Water Agency - L_Zone7

Organizations

- California Farm Bureau Federation - O_CFBF
- Planning and Conservation League - O_PCL

Individuals

- Betty Lu Graham - I_Graham
- Corin Pilkington - I_Pilkington

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1 Chapter 3, Description of Project Alternatives, Section 3.2 (pp. 3-5 through 3-14) and Section 3.4 (pp. 3-15 through 3-41); and Vol. 3, Appendix B Alternatives Development.

3.3.2 Alternatives Development

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCSD1-01	L_CCCSD1-02	L_CCCSD2-01	L_CCCSD2-02
L_CCCSD2-03	L_DDSD-01	L_DDSD-02	L_DDSD-03
L_DDSD-04	L_DSRSD-02	L_EBMUD-03	O_PCL-01
O_PCL-03	O_PCL-04		

Summary of Issues Raised by Commenters

- Justifications for not including water use efficiency, recycled water, and desalination alternatives in the Draft EIS/EIR are inaccurate, insufficient or unclear.
- The Draft EIS/EIR should acknowledge the potential of local and regional recycled water and desalination projects to improve water supply reliability and provide other benefits.
- CCCSD's proposed industrial recycled water project should be integrated into the Los Vaqueros Reservoir Expansion Project to increase benefits without increasing environmental impacts.
- Recycling all of CCCSD's effluent would have less impact on Delta outflow than the Los Vaqueros Reservoir Expansion Project.

Response

Alternatives development is described in the Draft EIS/EIR, Vol. 1, Chapter 3, Description of Project Alternatives, Section 3.2 (pp. 3-5 through 3-14) and Vol. 3, Appendix B Alternatives Development. The descriptions of the early screening process are based on the Initial Alternatives Information Report (IAIR) issued by Reclamation in September 2005 (Reclamation, 2005). The IAIR is referenced in the Draft EIS/EIR, and is available on the Los Vaqueros Reservoir Expansion Project website. The primary purpose of the IAIR is to document the first phase of feasibility studies for the expansion project, specifically describing the formulation of initial alternative plans to address the problems, opportunities and planning objectives identified for the Los Vaqueros Reservoir Expansion investigation. Table B-1 in Appendix B is a summary of the outcome of the initial alternatives formulation process. The screening process that is reflected in Table B-1 is discussed in Chapter VI of the IAIR. Responses to comments related to consideration of conservation, recycled water and desalination alternatives reference the IAIR.

Conservation. PCL comments (O_PCL-01 and O_PCL-03) that conservation, storm water capture and the adoption of all best management practices (BMPs) should be included as a means

to achieve project objectives. Water use efficiency, which generally includes these activities, was considered during project alternatives development. Specifically, demand management and wastewater reclamation (discussed further below) were evaluated and eliminated from further study as alternatives to meet the project objectives. As shown in Table B-1, demand management was eliminated because it had a low potential to significantly address dry-year water supply reliability over and above existing/planned conservation programs, and there was little potential to contribute to the other planning objectives of the Los Vaqueros Reservoir Expansion Project. This rationale is further explained below.

For purposes of alternatives development, water demand management is defined as

> [I]mprovements in urban water use efficiency through technological or behavioral changes in indoor and outdoor residential, commercial, industrial, and institutional water use, leading to reduced demand, and reduced per capita water use. This measure would consist of *additional* [emphasis added] demand management programs *beyond* [emphasis added] the current programs and plans being actively pursued by Bay Area water agencies (ACWD, CCWD, SCVWD, and Zone 7) (Reclamation, 2005, page VI-20).

Current conservation programs are described in the Draft EIS/EIR in Chapter 2, Background (Vol. 1, pg. 2-21) and Appendix B (Vol. 3, pp. B-13 through B-14). CCWD and the South Bay water agencies all have aggressive and successful conservation programs that are integral parts of their water supply management plans. These programs would continue with or without implementation of any of the project alternatives. With the passage of Senate Bill (SB) X7 7 in November 2009 that requires reductions in urban use of 20 percent by 2020, some agencies may need to increase their conservation programs (Steinberg, 2009); however, CCWD and some other Bay Area water agencies have been implementing conservation programs for years and under SBX7 7 requirements, these agencies will, at most, be making modest changes to programs already in place. For example, CCWD believes that continuing its present programs will achieve most if not all of the SBX7 7 requirements. In any event, implementing programs to meet the 20 percent by 2020 goal does not change the assessment of the water demand management alternative evaluated here. There is still a low potential for conservation to significantly improve dry-year reliability and little potential to contribute to the other planning objectives of the Los Vaqueros Reservoir Expansion Project.

Analysis for the 2004 Los Vaqueros Reservoir Expansion Studies Planning Final Draft Report (CCWD, 2004) showed that CCWD and the South Bay water agencies had developed water management plans to meet current and future demands that included conservation and recycling in all years, but still required supplemental supplies in shortage years. As conservation and recycling increase, demand hardens and the ability of water users to cut back in shortage years decreases since the “slack” is already taken (for example, once an ultra-low flush toilet is installed or an irrigation system is converted to drip-irrigation, further savings are difficult to make). Agencies have made shortage-year water supply investments including groundwater storage and long-term transfers, but demand management and spot market purchases are still required in many shortage years, including dry and multiple dry years.

Additionally, as explained in the IAIR, current and planned conservation programs contain the more economically-efficient conservation measures (Reclamation, 2005). To the extent that other measures could be implemented, they would have lower cost effectiveness and consequently, higher incremental costs.

Since the IAIR was completed, Delta conditions have precipitously deteriorated leading to legal decisions and new biological opinions that reduce Central Valley Project (CVP) and State Water Project (SWP) exports, including exports to the South Bay water agencies, to protect fish. Supply reliability is not just a dry-year issue any longer for many agencies. Without alternatives like an expanded Los Vaqueros Reservoir, the frequency that South Bay water agencies have to acquire supplemental supplies and enforce rationing programs will increase.

Recycled Water. Several comments question the "low" rating given to recycled water in Table B-1 (see page B-11 of the Draft EIS/EIR, Vol. 3, Appendix B) and the decision to eliminate recycled water from further study as an alternative to meet the project objectives (L_CCCSD2-02, L_DDSD-01, L_DDSD-02, and L_DSRSD-02). O_PCL-04 asserts that recycling could meet all project objectives and should be included in the EIS/EIR as a viable alternative.

The alternatives analysis presented in the Draft EIS/EIR (see Vol. 1 Section 3.2.2 and Vol. 3. Appendix B) explains that recycled water was evaluated as an alternative to reservoir expansion and eliminated from further study for a variety of reasons including low ability to address project objectives. One of the underlying documents supporting the alternatives analysis is the IAIR. The subsection of the IAIR (Reclamation, 2005) on Water Use Efficiency, starting on page VI-19, includes more information on why the resource management measure "Implement Additional Wastewater Reclamation" was not carried forward for further study.

The recycling measure considered in the IAIR consists of "the increased use of reclaimed wastewater from Bay Area wastewater treatment plants (WWTPs), beyond the recycling projects that are currently planned, to offset potable water demands and to increase water supply reliability, particularly in dry years." Facilities to accomplish this would include filtration and disinfection treatment systems, pump stations, distribution systems and reservoirs to ensure system reliability. Existing reclaimed water programs are acknowledged, and the projected future potential for recycled water identified in the Bay Area Water Recycling Master Plan is noted.

Factors that led to the "low" rating for potential to address project objectives are described in the IAIR as follows:

> Because recycled water is limited to non-potable applications, facilities are ideally located near end-users to reduce the cost of distribution. Further, the yield of wastewater recycling is limited by the size of the WWTP with which it is associated, and facilities are most efficient when operated continuously, such as for a base-supply. To provide meaningful water supply reliability benefits during a drought, a wastewater recycling program likely would fall under one of the following scenarios:
>
> 1. A large recycling facility would continuously serve a consumer with a high demand for non-potable water who is willing to accept recycled water in lieu of their existing supply, which would be reserved for use during dry periods, or

2. A smaller recycling facility would continuously deliver water to surface or groundwater storage, for later use during dry periods.

The substitution of recycled water as a base-supply would mean supplies that currently fill that need, such as less-costly SWP contract water, would be forgone in most years. It is likely that the most cost-effective recycling project—those located at existing, large-sized WWTPs—already are planned and/or will be included as a future condition. Consequently, it is believed that volume and efficiency of wastewater recycling projects which could be implemented as part of this measure would be very low. In addition, this measure would not contribute to other study objectives, and may result in degraded water quality to some water users. It also could be implemented independently by individual utilities or agencies. Accordingly, this measure was deleted from further consideration (Reclamation, 2005, pp. VI-19 through VI-20).

PCL further states that CCWD has the capacity and much of the infrastructure in place to recycle 44 TAF annually (CCCSD's current annual average treated wastewater discharge) working with CCCSD. CCCSD does not, however, have the plant capacity to recycle its full discharge; the permitted capacity of its recycled water plant is 3.8 MGD (about 4.3 TAF). Neither CCCSD nor CCWD has the conveyance capacity to move 44 TAF of recycled water, and demand for that quantity of recycled water has not been identified. The cost to expand CCCSD's recycled water plant capacity and extend conveyance infrastructure to recycle 44 TAF would be in the hundreds of millions of dollars.

Summary. While conservation and recycling can stretch supplies, they cannot substitute for storage of water for shortages or emergencies. The CALFED Bay-Delta program specifically created both a water use efficiency (including conservation and recycling) and a storage program. The reasons for this are discussed in detail in the CALFED Record of Decision and supporting documents (CALFED, 2000). Recently, the Public Policy Institute of California published a document correcting myths about California water that simply reiterates what the CALFED program found: water use efficiency and storage each have their own independent benefits and one cannot be substituted for the other (Hanak, et al., 2009). L_CCCSD2-02 quotes from the CALFED ROD a statement that cost effective recycling is a way to address the growing mismatch between water supply and demand due to rapidly growing urban populations and static supplies. Serving growth is not one of the purposes of the Los Vaqueros Reservoir Expansion Project. Because it is recognized that there are many cost effective recycled water projects underway or planned within the Bay Area, the recycled water alternatives considered in the alternatives development process for the expansion project looked at recycled water projects beyond those already planned by local water agencies. Likewise, none of the alternatives identified for further study would preclude completion or diminish the benefits of planned recycled water projects.

The ability of conservation and recycling to achieve the other project objectives, developing water supplies for environmental water management and improving water quality is likewise limited (see Draft EIS/EIR, Vol. 3, Appendix B, Table B-2 and Table B-3, respectively). Because environmental water is needed during the sensitive periods for aquatic species (at particular times, that cannot be predicted in advance, during winter and spring, primarily), storage, with its

inherent flexibility, can provide water during those periods when pumps must be shut down. Conservation and recycling reduce demand for water supplies either during the irrigation season (summer and fall) or uniformly over the year, but not necessarily during the "fish-sensitive periods" which limits their ability to produce environmental water at the correct time. Water quality improvement from conservation and recycling could occur for CCWD to the extent water is retained in the reservoir as a result of such programs and that water can later be used for blending. The amount of water that could be retained for blending is about 2 TAF per year (Gartrell, 2010). However, increased storage provides greater and more certain increases in the amount of water available for blending; under Alternative 4, the 160 TAF reservoir results in a 100% increase in the average amount of water available to CCWD for meeting its water quality goals during droughts. Therefore, implementing water use efficiency on a large scale is not a viable substitute for additional storage.

Refinery Project. CCCSD's comments on the Draft EIS/EIR include a proposal to integrate an industrial recycled water project (Refinery Project) into the Los Vaqueros Reservoir Expansion alternatives (see comments L_CCCSD1-02 and L_CCCSD2-03). CCCSD suggests that integrating the projects would provide water supply yield that would increase project benefits of one or both projects. As discussed above, recycled water reduces demand and stretches supplies, but it does not substitute for storage.

CCCSD has previously discussed industrial recycling with CCWD, and CCWD has elected to not participate in such a project for myriad reasons including lack of cost effectiveness. When compared to the cost effectiveness of storage, the lack of cost effectiveness of recycled water is further underscored by the additional benefits that can be obtained with storage that are not part of the Refinery Project such as operational flexibility. Increased storage provides reliability and water quality benefits across customer classes and provides resources to adapt to the uncertainties of climate change. CCWD and Reclamation also met with CCCSD on June 15, 2009 to discuss recycled water generally and CCCSD's comments on the Draft EIS/EIR, and suggested ways that CCCSD might pursue funding for the Refinery Project under Reclamation's Title XVI program.

Yield of a Recycled Water Project. CCCSD makes several references to the water yield of the Refinery Project that apparently have used incorrect assumptions. Simply substituting recycled water for surface water does not necessarily create new yield when the water being recycled is currently discharged in or above the Delta system. For example, substitution of recycled water for Delta surface water when Delta outflow exceeds the minimum requirements (i.e., when there is surplus water) does not create new yield at all unless additional water can be pumped as a result of the substitution. However, under surplus flow conditions, there is already more water in the system than can be pumped or stored, so in general there is no water yield from the project in these conditions. Surplus flow conditions occur about 50 percent of the time (more in wet years, less in dry); consequently, the yield of a recycled water project will be greatly reduced if the recycled water is provided during surplus flow conditions in the Delta.

Furthermore, no yield is created if pumping or other restrictions prevent capture of new water. Under current flow restrictions, new water, whether created by fallowing or substitution of

recycled water for Delta surface water even when there is no surplus water (balanced conditions), may not create new yield if other restrictions limit the ability of water users to divert the extra water (DWR, 2009). This occurs about 40% of the time and the combined effect with surplus flow conditions limits generation of yield to about 43% of the time (i.e., 7 months per year have either surplus flow or pumping restrictions).

Yield is only created when recycled water is substituted for *consumed* water that is not returned to the system. Water that is diverted, but not consumed, but instead returned to the system is, in essence, already "recycled" as it can be put to further beneficial use. Under CVP contracts and water rights, CVP water that is returned to the system remains in the control of Reclamation for further beneficial use. Consequently, reducing diversions and simultaneously reducing water returned to the system does not create new yield.

As a consequence of these factors, yield from a recycled water project may be much smaller than the actual amount of water recycled, just as reduced diversions due to fallowing a crop in or upstream of the Delta system seldom produces yield equal to the water consumed by the crop (DWR, 2009). As shown below, CCCSD has overstated the potential yield of the Refinery Project.

Added Benefit of Combining Projects. CCCSD further states that integrating or combining projects, such as a recycled water project and Los Vaqueros Reservoir Expansion, would increase the benefits of the Los Vaqueros Reservoir Expansion. Because of the factors discussed above (surplus flows and diversion restrictions), combining the projects does not create any new benefit beyond those achieved with the projects done separately. This is explored in more detail in the following discussion. CCWD has again considered and assessed CCCSD's Refinery Project in light of CCCSD's comments on the Los Vaqueros Reservoir Expansion Project and does not find it to be viable for the following reasons:

1. Low Water Supply Yield. CCCSD states that the proposed industrial recycled water project would yield 22 TAF of water supply. As explained generally above, and in more detail here, yield of a recycled water project does not directly correspond to recycled water use, and the yield of the Refinery Project is far less than stated.

   In order to create "yield" or "transferrable water" in the Delta, a recycled water project must 1) replace water that is consumed or lost to further beneficial use and 2) replace that water during periods in which surplus flows are not otherwise available and the water saved is available for capture. The refineries take in about 18 to 22 TAF per year on a uniform schedule over the year (CCWD, 2009) (they also discharge back to the Delta system about 60 percent of what they take in). The substitution of recycled water for water consumed during surplus flow conditions (or during conditions when water diversions are restricted) does not create new water that could be considered "yield" or "transferrable" (DWR, 2009). Since surplus flow conditions predominate about half the time (more in wet years, less in dry years), the real yield is less than half the amount suggested by CCCSD.

   When there is no surplus water available, about 60 percent of the water taken by the refineries is discharged back to the Delta. The water discharged back during non-surplus flow periods can provide a beneficial use of aiding in salinity repulsion to meet regulations

and this occurs about 25 percent and 50 percent of the time (wet years and dry years, respectively). Under CVP contracts and water rights, CVP water that is returned to the system remains in the control of Reclamation for further beneficial use.

Consequently, the amount of yield is considerably less than the 22 TAF per year suggested by CCCSD; it is generally in the range of 3 TAF to 9 TAF per year of new water, depending on the conditions for a given year (Gartrell, 2010), and averages about 5 TAF per year.

Potential yield of the Refinery Project if integrated with Alternatives 1 and 2 could also be affected by uncertainty in the availability of infrastructure to transfer the water to South Bay water agencies. With this uncertainty, the added yield of integrating the Refinery Project with Alternatives 1 and 2 would likely be less than the 3 to 9 TAF per year identified above as potential yield. There would be no additional transfer capacity to SBA agencies under Alternative 4 since there is no South Bay Connection.

The benefit to CCWD would be the same with or without implementation of any of the reservoir expansion alternatives, since the benefit would be to reduce demands in shortage periods; CCWD already has adequate water rights (over 95,000 acre-feet per year) and contract rights (195,000 acre-feet per year) to fill its share of the reservoir and adding a few thousand acre-feet in a few shortage years does not add a substantial filling benefit. Since filling is limited in most months by water quality or environmental restrictions, only a small fraction of the 3 to 9 TAF of yield could be used for filling. Consequently, adding the Refinery Project to any of the alternatives provides no added benefit to CCWD or any project partners beyond that of doing the projects separately.

CCCSD presents tables that are stated to compare yield of the Refinery Project with those of the reservoir expansion alternatives. The table incorrectly uses 22 TAF per year for the Refinery Project (it should be much less for Alternatives 1 and 2, and essentially zero added benefit when combined with Alternative 4) and then compares that figure with pieces of the yield of the alternatives instead of the overall yield. None of the information presented by CCCSD demonstrates an added benefit to integrating the projects beyond that which could be achieved through implementing them separately.

Additional Outflow for Environmental Purposes. CCCSD states that the proposed Refinery Project could provide a yield of 22 TAF per year of water that could provide additional outflow. The water that would be recycled to the refinery is currently discharged into the Delta system and already provides 22TAF per year of water flow to the system. The Refinery Project would reduce up to 22TAF of Delta diversions, but would at the same time reduce return flows back to the system by the same amount, so the net flow out the Carquinez Strait remains unchanged.

2. Limited Drought Supply Reliability Benefit. One of the primary objectives for the Los Vaqueros Reservoir Expansion Project is to improve water supply reliability, including during drought periods, for Bay Area water agencies. CCWD's interest in the expansion is primarily to improve drought supply reliability. The Refinery Project would provide only limited drought reliability.

   Under the CVP Municipal and Industrial Shortage Policy, for the most extreme shortage situation (Health and Safety), allocations include 50 gallons per person per day plus 80 percent of average commercial demand and 90 percent of average industrial demand. With the industrial recycling project, CCWD's CVP shortage allocation would also be

reduced because the average industrial demand would be less by the amount of recycled water provided to the refineries. The recycled water would meet industry demands, but would benefit other CCWD customers only marginally, if at all, under such circumstances. In other shortage periods, the recycled water may provide a benefit to the extent that it provides water supply yield that translates into increased supply, but that benefit is not substantially changed or enhanced by integrating it with Los Vaqueros Reservoir Expansion (i.e., the benefits are independent and do not increase if the projects are done together as opposed to separately).

In CCWD's experience, industries need a back-up supply to minimize production losses if the recycled water system cannot deliver for any reason. If recycled water could not be delivered during a shortage period, and CCWD received a reduced allocation based on a lower average industrial demand, the recycled water project could result in reduced drought supply reliability.

The water supply reliability benefits of a recycled water project accrue largely to one customer. The water supply reliability benefits of the reservoir expansion alternatives accrue to all customers, including the benefits of emergency storage, water availability when pumps are shut down to protect fisheries or because of an emergency, and improved water supplies in droughts.

3. Limited Water Quality Benefit. Water quality benefits from CCCSD's industrial recycled water project to CCWD's customers are limited to the small amount of water (about 2 TAF per year) that would not have to be released from the reservoir in some years, and could be used for additional water quality blending (essentially stretching the stored supplies). However, this is a benefit that is not unique to recycling but a benefit from any water use efficiency measure.

   CCCSD makes the statement (L_CCCSD2-01) that the Refinery Project would improve water quality for the industrial customers it serves because the supply of water is steady, reliable and has predictable quality. It also makes a general comment that one of the objectives of the Los Vaqueros Reservoir Expansion Project is to improve the quality of water deliveries to municipal and industrial customers in the San Francisco Bay Area, but the background of the need for the project addresses only drinking water quality for municipal customers. Chapter 1 of the Draft EIS/EIR Purpose, Need and Objectives (Vol. 1, Chapter 1, sections 1.4.6 and 1.5.2) does discuss the decline of Delta water quality and related impacts on drinking water quality without specifying impacts on industrial water supplies. The focus on drinking water quality in this section of the document is because the need for water agencies to meet increasingly stringent water quality regulations is a driving force on capital investments. However, improving drinking water quality through improving source water quality benefits all customers, including industrial customers, whether they use treated or untreated water.

   One of CCCSD's comments stated that the reservoir expansion project has a greater impact on net Delta outflow than from recycling all CCCSD's effluent (L_CCCSD2-03), and that therefore, any water quality impact related to the industrial recycled water project was not significant. This comparison is not valid and the conclusions CCCSD draws are not meaningful. In this instance, changes in outflow in one or two months under surplus flow conditions (when salinity intrusion is at a low level and not a concern), were compared with steady and continuous decreases in outflow under balanced conditions for significant periods (when outflow is already low and salinity intrusion is a concern).

4. High Costs. CCCSD states in the background section of their comment letter that they are seeking $100 to $150 million in funding for the Refinery Project. Based on past discussions with CCCSD, these funds are estimated to cover the capital costs to implement the Refinery Project, and do not include other costs such as capital and operating costs at the refineries or costs of stranded assets, all of which add to the stated capital costs. However, the stated $100 to $150 million is used in the analysis as a minimum level of required funding. Given the low level of benefit associated with the Refinery Project, adding $100 to $150 million to the estimated cost of the expansion project (ranging from approximately $985 million for Alternative 1 to approximately $120 million for Alternative 4) for a potential increase in yield of less than 9 TAF in Alternatives 1 and 2, has limited cost-effectiveness, and a very small, if any, additional yield in Alternative 4, is not cost effective.

   CCCSD states (L_CCCSD1-01) that CCWD has maintained that the cost of the Refinery Project is too great because of "lost revenues from the refineries". This is incorrect: CCWD's revenues for stranded assets are protected under existing law. CCWD has not invested in this project for the same reason that CCCSD withdrew from the project in the 1980's after significant investments had been made—it is not cost effective.

   Finally, the refineries have indicated to CCWD that they may consider, as the result of potential regulatory requirements, cutting in half the amount of water they use (CCWD, 2007). If they proceed with that water use reduction, any investment in a large 22-TAF recycled water project could result in a significantly underutilized capital asset. The actual yield would be further reduced but the capital costs would remain the same, further reducing the cost effectiveness.

   The Refinery Project as presented is neither cost effective in its own right nor as an integrated project with the Los Vaqueros Reservoir Expansion, nor does it make the Los Vaqueros Reservoir Expansion Project more cost effective.

   As presented in Chapter 2 of this document, CCWD is considering implementing Alternative 4 to address urgent water supply reliability and Delta water quality issues while potential state, federal and regional participants continue to study a larger expansion in parallel with the BDCP. Alternative 4 is preliminarily estimated to cost approximately $120 million. Integrating the Refinery Project with Alternative 4 would not result in any reduction in costs for either project, nor will it increase the effectiveness of the additional storage. Therefore, integrating the Refinery Project into Alternative 4 could more than double the cost, for little or no additional benefit.

Desalination. Two desalination alternatives (with and without new storage) were considered during both the initial alternatives development phase and the initial plan development phase, but neither was carried forward for further development as a comprehensive alternative. The assessment of these alternatives can be found in the Draft EIS/EIR at pages 3-7 through 3-11, and pages B-17 and B-25 through B-26, as well as the IAIR at pages VI-16 through VI-18 and VI-25 through VI-26. In summary, the reason for eliminating desalination from further study was lack of cost effectiveness and challenges related to brine disposal and energy use which could translate to potential greenhouse gas issues. Both DDSD (L_DDSD-02) and EBMUD (L_EBMUD-03) requested clarity regarding the assessment of desalination alternatives.

DDSD suggests that the logic used to eliminate desalination alternatives is inconsistent with the findings from their own studies and the studies of the Bay Area Regional Desalination Project. In this regard, DDSD cites the discussion on page B-27. However, the discussion cited is not about desalination, but is related to a Conveyance-only Plan introduced on page B-26. CCWD and Reclamation recognize that desalination continues to be studied by other entities and as technology advances, desalination could be a viable option to meet regional needs. The information provided by DDSD on its desalination studies is incorporated into the administrative record for the Los Vaqueros Reservoir Expansion Project, but nothing in the information provided changes the assessment of the desalination alternatives defined here. Likewise, CCWD participates in the Bay Area Regional Desalination Project which could result in implementation of a regional desalination project. DDSD has recently proposed a variant on that project. Such projects would not be an alternative to the Los Vaqueros Reservoir Expansion Project, but would be complementary to any of the alternatives to expand Los Vaqueros Reservoir.

L_DDSD-03 requests clarification of a purported statement that regional desalination is not consistent with the management objectives set forth in the CALFED ROD. Such a statement is not made about desalination; a statement on page B-27 of the Draft EIS/EIR (Vol. 3, Appendix B) says that a Conveyance-only plan is not consistent with the management objectives set forth in the CALFED ROD. Desalination is described, however, in Table B-6 as "Consistent with goals of CALFED".

EBMUD, referencing the Draft EIS/EIR page 3-11 (Vol. 1, Chapter 3), states that the summary statement of why the Desalination with Storage alternative for Bay Area Water Supply Reliability was not carried forward does not provide sufficient context and could be misinterpreted by readers to mean desalination in general should not be considered. A broader context and more detail on the evaluation of this alternative are provided in the Draft EIS/EIR Appendix B. The Bay Area Regional Desalination Project is described in Appendix B (Draft EIS/EIR, Vol. 3, pp. B-25 through B-26) as follows:

> Although desalination facilities were not carried forward as an alternative for the reservoir expansion project, the Bay Area water agencies continue to evaluate a regional desalination facility at this location to meet long-term dry-year water supply reliability needs. This project, the Bay Area Regional Desalination Project, is a cooperative effort of East Bay Municipal Utility District, SFPUC, SCVWD, and CCWD. While not yet shown to be potentially feasible, such a project may prove feasible in the future, and could complement an expanded Los Vaqueros Reservoir.

EBMUD also suggests that advancements in technology, such as ultra-efficient energy recovery devices, and engineering could resolve desalination issues related to energy use and brine disposal. The potential for such advancements to improve the feasibility of desalination is generally acknowledged in the statement above that desalination may prove feasible in the future and could complement an expanded Los Vaqueros Reservoir.

3.3.3 Additional Alternatives

Comment Summary

This section of this master response responds to all or part of the following comments:

L_SCVWD-06	L_Zone7-03	O_CFBF-01	O_CFBF-02
O_CFBF-03	O_CFBF-04		

Note: although the CCCSD comments discuss the concept of an additional alternative that combines their refinery project with an expanded reservoir, that option is considered a variation of the recycled water alternative that was eliminated from further study during project planning and is discussed above in Section 3.3.2 Alternatives Development.

Summary of Issues Raised by Commenters

- Additional alternatives should be considered to achieve broader statewide benefits.
- Evaluate a new Los Vaqueros Reservoir Expansion Project alternative that could be integrated with the new facilities being proposed in the BDCP and DHCCP.

These and related comments are also addressed in Master Response 1, Project Purpose and Description and Master Response 2, Relationship to Other Initiatives and Projects.

Response

CFBF comments that the alternatives as presented in the Draft EIS/EIR are artificially constrained by the CCWD Board Principles and the 2004 advisory vote and thus have limited statewide benefits. CFBF goes on to recommend consideration of a larger expansion (at least 500 TAF), combined with improved Delta conveyance and utilized for water supply, water quality and environmental benefits for CVP and SWP contractors as well as Bay Area water agencies. SCVWD and Zone 7 both suggest that the project should be coordinated with the new conveyance facilities being proposed in the BDCP and DHCCP, and SCVWD calls for consideration of a new integrated alternative.

As stated in Master Response 1, Project Purpose and Description (Vol. 4, Chapter 3, Section 3.1.4), while the Principles and the advisory vote recognize some policy limitations on the ultimate use of water stored in an expanded Los Vaqueros Reservoir, the limitations do not preclude operations that yield state and federal benefits. As part of the Federal Feasibility Study, Reclamation published the 2006 Initial Economic Evaluation for Plan Formulation Report which concluded that, at a concept level, there appeared to be federal interest in expansion of Los Vaqueros Reservoir and that the expansion could be implemented while meeting the CCWD Board Principles. That study looked at expansion to both 500 TAF and 275 TAF and determined that the 275-TAF reservoir project appeared to be more feasible and cost effective than the larger expansion. Based on recent engineering analysis, the existing 100-TAF dam can be raised to allow a 275-TAF reservoir using the existing dam structure (Draft EIS/EIR, Vol. 1, Chapter 2, pg. 2-3). Federal and state interests in the expansion project are summarized in the Executive Summary of the Draft EIS/EIR (Vol. 1, pg. ES-6).

The Los Vaqueros Reservoir Expansion Project is being coordinated with the BDCP and DHCCP (referred to collectively here as "BDCP") to the extent information is available. However, insufficient information is known about the capacity and operation of the potential new conveyance facilities to quantitatively analyze the effects of such conveyance on operation of the Los Vaqueros Reservoir Expansion alternatives, or to define and analyze a new integrated alternative. For example, the size of facilities and the parameters for operating the facilities are still not determined. The Final EIS/EIR analyzes a timing variant approach to implementation (see Vol. 4, Chapter 2, Section 2.4) where Alternative 4 is implemented to help meet immediate local needs while Reclamation and other potential partners continue to study the feasibility of Alternatives 1, 2, and 3 in the context of other Delta initiatives including specifically BDCP. As the BDCP progresses and new information on Delta conveyance becomes available, it will be considered in the federal feasibility process. Implementing Alternative 4 does not preclude implementing any of the other alternatives. For more information on this potential implementation sequence, see Section 2.4 (Vol. 4, Chapter 2). For more information on the relationship between the Los Vaqueros Reservoir Expansion Project and the BDCP, see Master Response 2, Relationship to Other Initiatives and Projects (Vol. 4, Chapter 3, Section 3.2.2).

3.3.4 Identification of Environmentally Superior Alternative and Overriding Public Considerations

Comment Summary

This section of this master response responds to all or part of the following comments:

L_EBRPD2-43 I_Graham-01 I_Pilkington-02

Summary of Issues Raised by Commenters

- The Draft EIS/EIR did not include identification of an environmentally superior alternative.
- Overriding public considerations for the action alternatives are not identified; only the No Action Alternative avoids significant adverse environmental impacts.

Response

EBRPD and Pilkington both commented that an environmentally superior alternative should be designated. CEQA Guidelines section 15126.6(e)(2) requires an EIR to identify an environmentally superior alternative from among the action alternatives, but the section does not specify at what point in the CEQA process such identification is required. CCWD has designated Alternative 4 as the environmentally superior alternative for the Final EIS/EIR, which is described in Chapter 2 of this Response to Comments document (see Section 2.5). The CCWD Board of Directors and other decision-makers will have this designation when considering approval of one of the project alternatives.

Even though an "environmentally superior" alternative is not identified in the Draft EIS/EIR, information on impacts and benefits are laid out in comparative tables and explained

comparatively in the text enabling the reader to understand the differences among the alternatives. The public has not been deprived of the opportunity to have meaningful input into the CEQA process because an alternative has not been designated as environmentally superior in the Draft EIS/EIR.

Graham states that overriding considerations are not included in the Draft EIS/EIR and that only the No Project/No Action Alternative avoids environmental impacts. CEQA requires decision-making bodies to make findings of overriding considerations when approving a project that has significant impacts that cannot be avoided or mitigated. All the action alternatives have significant impacts, most of which can be avoided or mitigated to less than significant levels. Each of the four action alternatives also has at least one significant impact that cannot be mitigated or avoided. When the CCWD Board considers approving one of the alternatives, it will also consider a Statement of Overriding Considerations pursuant to CEQA that balances the benefits of the project against the significant unavoidable impacts. The No Project/No Action Alternative would potentially avoid these significant unavoidable impacts, but would not meet any of the project objectives and might result in future actions that have impacts of their own.

3.4 Master Response 4: Approvals and Permits

3.4.1 Introduction

Overview

This master response addresses comments received regarding coordination with these state and local agencies and their respective permits, fees and approvals potentially needed to implement the Los Vaqueros Reservoir Expansion Project.

This master response is organized by the following subtopics:

- 3.4.2 State and Local Agency Permits
- 3.4.3 Local Agency Drainage Fee

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- California Department of Transportation – S_Caltrans
- California DWR, Division of Safety of Dams – S_DSOD
- Central Valley Flood Protection Board – S_CVFPB

Local and Regional Agencies

- Contra Costa County, Flood Control and Water Conservation District – L_CCCFC
- Contra Costa County, Public Works Department – L_CCCPW
- Reclamation District 800 – L_RD800

Organizations

- None

Individuals

- None

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Chapter 3, Project Description, Section 3.7, Permits and Approvals Needed for Alternatives, pp. 3-89 through 3-93; Vol. 1, Section 4.5, Local Hydrology, Drainage and Groundwater; and Vol. 2, Section 4.9, Transportation and Circulation.

3.4.2 State and Local Agency Coordination and Permits

Comment Summary

This section of this master response responds to all of the following comments:

S_Caltrans-01	S_Caltrans-03	S_CVFPB-02	S_DSOD-01
L_CCCFC-04	L_CCCPW-10	L_RD800-01	L_RD800-07
L_RD800-08			

Summary of Issues Raised by Commenters

- Coordination with Caltrans regarding transportation and encroachment permits.
- Coordination with California Department of Water Resources, Division of Safety of Dams (DSOD) for review and approval of enlarged dam and modifications to dam appurtenances.
- Coordination with Central Valley Flood Protection Board for necessary permits prior to commencement of construction.
- The Draft EIS/EIR should discuss the need for a permit under Contra Costa County's 1010 Drainage Ordinance related to the construction of a temporary bridge across Kellogg Creek and pipelines across Kellogg Creek, Brushy Creek and other drainages.
- RD800 proposes that all activities related to the reservoir expansion that take place within the boundaries of RD800 would be subject to the terms of the 1994 agreement between CCWD and RD800, and that the agreement would be amended as appropriate.

Response

These comments identify potential permits or approvals that might be required for the project. Draft EIS/EIR Table 3-8 (Permits and Approvals Potentially needed for Implementation of the Los Vaqueros Reservoir Expansion Alternatives) in Chapter 3, Project Description (Vol. 1, pp. 3-92 through 3-93) lists federal, state, and local permits and regulatory approvals that are expected to be necessary for project implementation, including from Caltrans, Central Valley Flood Protection Board (formerly known as the State of California Reclamation Board), DSOD, and Contra Costa County. After selection of a project alternative and prior to commencement of construction, the need for any and all permits, including those listed in Table 3-8 and those identified by the commenting agencies, above, will be determined in coordination with those agencies.

Caltrans

The Draft EIS/EIR does not identify a need for improvements to state highways or improvements that would encroach into a Caltrans right-of-way as a result of project construction or operations, and no such improvements are anticipated. Alternative 4, in particular, would not require such a permit from Caltrans as all facility improvements would occur within the CCWD watershed under this alternative; there would be no new conveyance or power utility facilities needed outside of the watershed for Alternative 4.

In the unlikely event that any needed improvements to state highways and any related work in the State's right-of-way may be identified during project design, the Caltrans encroachment permit process will be followed. It is noted that the proposed Delta-Transfer Pipeline would be constructed adjacent to (but not within) portions of State Route 4 in the reach west of Old River to Bixler Road. The Caltrans transportation permit process will be followed if project work requires the movement of oversized or excessive load vehicles on state roadways.

DSOD

As discussed in Section 4.5, Local Drainage, Hydrology and Groundwater of the Draft EIS/EIR (Vol. 1, pp. 4.5-2 through 4.5-3), DSOD would be involved in various points in the design, plan review and construction process, including review and approval of construction documents for the enlarged dam (and appurtenances) and issuance of a certificate of approval to operate the dam prior to refilling of the Los Vaqueros Reservoir. Relevant project actions will be coordinated with DSOD throughout the design and approval process to obtain the appropriate approvals and permits.

Central Valley Flood Protection Board

As acknowledged in Section 4.5, Local Drainage, Hydrology and Groundwater of the Draft EIS/EIR (Vol. 1, pg. 4.5-5), "any project encroaching into rivers, waterways, and floodways within and adjacent to federal-and state-authorized flood control projects or within designated floodways must receive approval from the state Reclamation Board," now known as the Central Valley Flood Protection Board. Relevant project actions (e.g., Delta Intake and Pump Station under Alternatives 1 and 2) would be addressed in consultation with the Board. No permit from the Board is expected to be necessary for implementation of Alternative 4, since it does not involve construction activities along Old River or otherwise affect adjacent levees.

County Permits

Table 3-8 acknowledges that the proposed project may be subject to encroachment permits from Contra Costa and/or Alameda County(s) and cities or local jurisdictions. As discussed in the Draft EIS/EIR, Section 4.7, Land Use (Vol. 2, pg. 4.7-3), under Government Code Section 53091 et seq., CCWD's water storage and transmission facilities are exempt from local zoning and building ordinances. The project's need for a permit from Contra Costa County under County Ordinance 1010 (Drainage), (related to protection of watercourses, drainages and riparian vegetation) would be determined in consultation with CCCFC upon selection of a project alternative, and determination of the type and amount of drainages and vegetation to be affected. Protection of some resources that County Ordinance 1010 seeks to protect (watercourses, drainages and riparian vegetation) would be addressed through the acquisition of federal and state resource agency permits (Clean Water Act 404/401 permits; California Fish and Game Code Section 1601 permit; and a State Water Pollution and Prevention Plan, which are listed in Table 3-8).

Reclamation District 800

CCWD agrees that Los Vaqueros Reservoir Expansion Project activities within the boundaries of RD800 would be subject to the 1994 Agreement between CCWD and RD800, as it may be

amended, or a new agreement with RD800 that specifically addresses the project, as determined appropriate by the parties. CCWD proposes to meet with RD800 prior to initiating any reservoir expansion activities within RD800 boundaries.

3.4.3 Local Agency Drainage Fee

Comment Summary

This section of this master response responds to the following comment:

L_CCCFC-06

Summary of Issues Raised by Commenters

- The project site is located within Drainage Area 109 (DA 109) and the proposed reservoir and transfer facility expansions would require drainage fees.
- The Contra Costa County, Flood Control and Water Conservation District (CCCFC) will consider waiving the drainage area fee for the reservoir water surface, provided the project includes improvements and operational criteria that mitigate the downstream flood impacts.
- Fees from the previously constructed Interpretive Center and adjacent parking lot have not been paid and are due to the CCCFC.

Response

Per CCCFC Formed Drainage Area map, the proposed reservoir and transfer facility expansions are located within Contra Costa County's DA 109 (CCCFC, 2008). The applicability of drainage fees would be determined in consultation with CCCFC upon selection of a project alternative, including the determination of the type and amount of additional impervious surface, if any, that would result from project implementation. However, the reservoir—a water storage facility that also provides flood storage capacity for the Kellogg Creek watershed and flood control benefits for areas downstream of the reservoir—and, more specifically, the reservoir water surface, does not constitute an impervious surface – neither for the purposes of the EIS/EIR analysis nor for the purposes of the County's Drainage Fee Ordinance. Drainage area fees are collected when the property owners develop a parcel or increase runoff by adding to the impervious surface of the property; CCCFC then uses these fees to construct drainage improvements (CCCFC, 2003). Expansion of reservoir surface area would not constitute development of the parcel, nor would expansion of reservoir surface area increase runoff. The existing reservoir retains runoff from areas upstream from the dam which results in attenuated flows in Kellogg Creek by doing so (Draft EIS/EIR, Vol. 1, Section 4.5, pg. 4.5-29). The expanded reservoir would provide the same function at the same capacity as the existing dam (Draft EIS/EIR, Vol. 1, Section 4.5, pg. 4.5-29 and pg. 4.5-31).

The previously constructed Interpretive Center and adjacent parking lot are not part of the proposed project. CCWD did not pay fees for the Interpretive Center and parking lot because those facilities were found to be exempt under Flood Control Ordinance Number 94-75.

3.5 Master Response 5: Delta Hydrology and Aquatic Resources

3.5.1 Introduction

Overview

This master response addresses comments on the Delta hydrologic analysis conducted for the project, including comments on modeling assumptions, project benefits and project impacts.

Additional modeling analysis was performed for the Final EIS/EIR. This analysis is described in Section 5.3 and Appendix C of the Final EIS/EIR (Vol. 4). The additional modeling was performed to update the analysis presented in the Draft EIS/EIR so that it includes the changes in Delta operations associated with the OCAP BOs issued on December 15, 2008 and June 4, 2009. Additional modifications were made in updating the model analysis for the Final EIS/EIR in response to comments received on the Draft EIS/EIR. The responses to comments presented below provide clarifying information on the analysis performed for the Draft EIS/EIR, along with description of updates in the model analysis for the Final EIS/EIR. Conclusions regarding project effects are based on the updated modeling performed for the Final EIS/EIR.

Alternative 3 was found to have significant and unavoidable fisheries impacts in modeling analysis performed for the Draft EIS/EIR, as explained in Section 4.3, Delta Fisheries and Aquatic Resources, of that document (Vol. 1). As a result of this significant and unavoidable impact, Alternative 3 would not be recommended for approval and thus was not included in the updated modeling analysis performed for the Final EIS/EIR. For more information on the status of Alternative 3, see Section 2.2 in this volume.

This master response is organized by the following subtopics:

- 3.5.2 Modeling Assumptions
- 3.5.3 Assurances
- 3.5.4 Effects on Delta Hydrology and CVP/SWP Operations
- 3.5.5 Water Quality Effects
- 3.5.6 Fisheries/Aquatic Species Effects

Comments on climate change assumptions are addressed separately in Master Response 14 Climate Change (Vol. 4, Section 3.14); legal and technical questions on water rights are discussed in the individual responses to comments from the State Water Resources Control Board (S_SWRCB) and Delta Wetlands Project (O_DWP).

Commenters

Commenters that addressed this topic include:

Federal Agencies

- Environmental Protection Agency – F_EPA

State Agencies

- State Water Resources Control Board – S_SWRCB
- California Department of Fish and Game – S_DFG

Local and Regional Agencies

- Alameda County Water District – L_ACWD
- East Bay Regional Park District – L_EBRPD
- Reclamation District 800 – L_RD800
- Santa Clara Valley Water District – L_SCVWD
- Sacramento Regional County Sanitation District – L_SRCSD
- State Water Contractors –L_SWC

Organizations

- Delta Wetlands Project –O_DWP
- Planning and Conservation league –O_PCL

Individuals

- Betty Lu Graham –I_Graham
- Corin Pilkington –I_Pilkington
- Dick Quigley –I_Quigley1

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Chapter 3, Project Description, Section 4.2, Delta Hydrology, Section 4.3, Delta Fisheries and Aquatic Resources and Appendix C, Delta Water Resources – Modeling Analysis.

3.5.2 Modeling Assumptions

Comment Summary

This section of this master response responds to all or part of the following comments:

F_EPA-01	S_SWRCB-02	S_SWRCB-07	S_SWRCB-09
L_ACWD-01	L_SCVWD-02	L_SRCSD-01	L_SRCSD-02
L_SCVWD-03	L_SWC-01	O_DWP-03	O_DWP-05
O_DWP-06	I_Pilkington-05	I_Quigley1-02	

Summary of Issues Raised by Commenters

A number of comments address the assumptions used in modeling the benefits and impacts of the Los Vaqueros Reservoir Expansion Project, suggesting additional or alternative assumptions or seeking more information on the assumptions. These comments can be organized into three

categories: 1) water operations, including where water comes from and how it moves through the system; 2) Old and Middle River reverse flows; and 3) projects included in the cumulative impact analysis. These comments are summarized in more detail in the sections below.

3.5.2.1 Water Operations

Summary of issues raised by commenters

- Identify sources of water supply, including when and how the particular sources would be used, impacts of acquiring the water supply and water right issues associated with the supplies.
- The operations model is inconsistent with Decision 1629 (SWRCB, 1994); all diversions should be limited by X2 and the impact of filling the expanded reservoir on X2 and other water quality parameters should be analyzed.
- Quantify the amount of water CCWD intends to divert through water transfers on an annual basis and assess the feasibility of acquiring this amount under current regulatory conditions.
- Clarify how Delta water surplus used in the model is quantified.
- Confirm that most of the water in Los Vaqueros Reservoir is from the CVP with only 5 to 7 percent from the local watershed.
- Use experienced Los Vaqueros and other Delta operators to help interpret the model results and translate monthly averages into daily operational implications.

Response

The modeling analysis performed for the Final EIS/EIR is presented in Chapter 5 and Appendix C of the Final EIS/EIR. Model assumptions are presented in updated Section 4.2, Delta Hydrology and Water Quality, and the updated Section 4.3, Delta Fisheries and Aquatic Resources, and in the updated Appendix C. The models used to evaluate the Los Vaqueros Reservoir Expansion Project for the Draft EIS/EIR are described in these sections. The modeling analysis for the Draft EIS/EIR is described in Appendix C3 of the Draft EIS/EIR. The models used to estimate the effects of the project alternatives are the best available tools for estimating the operations of the CVP and SWP and the Los Vaqueros Reservoir in the Sacramento-San Joaquin Delta. The modeling analyses for both the Draft EIS/EIR and the Final EIS/EIR evaluate and disclose the project effects on X2 and other water quality parameters.

The model results have been reviewed by staff in the CCWD Water Resources Group, CVP Central Valley Operations and the SWP Operations Planning Branch, which collectively have substantial expertise in water project operations in the Delta and Los Vaqueros Reservoir. The model limitations considered most important for this analysis were described in the Draft EIS/EIR, Section 4.2, pages 4.2-31 through 4.2-34. In each analysis that relied on model estimates of project operations, the results were reviewed by these experienced system operators with the model limitations in mind. The interpretation of model results in the analysis of potential impacts associated with the project alternatives included the results of this review by water system operators.

CCWD diverts water to storage in the existing Los Vaqueros Reservoir under SWRCB Decision 1629 (D1629), which includes terms and conditions for CCWD's Los Vaqueros water rights and also the Reclamation water rights associated with CCWD's CVP contract supply. These water rights are described in the individual responses to SWRCB comments (Vol. 4, Chapter 4, Section 4.2). The terms and conditions of D1629 were applied in the analysis of all alternatives under all circumstances.

The water rights associated with D1629 include a permit to divert Kellogg Creek flows to storage in Los Vaqueros Reservoir. The contribution to storage in Los Vaqueros Reservoir from the Kellogg Creek watershed is approximately 2 percent of CCWD's annual deliveries. The remainder of the stored water in Los Vaqueros Reservoir is diverted from the Delta under CCWD's CVP contract supply or CCWD's Los Vaqueros water right permit.

The water rights used for the project alternatives are described in the individual responses to SWRCB comments. In modeling performed for the Final EIS/EIR, for all project alternatives, the timing of the no fill and no diversion periods included in D1629 was modified to better coordinate water supply and fishery protection operations with CVP and SWP under the OCAP BOs, as described in the updated Section 4.2 (Vol. 4, Chapter 5). These modifications would require consultation with SWRCB, USFWS, NMFS and CDFG.

Decision 1641 of the SWRCB (D1641) imposes water quality objectives for the San Francisco Bay and Sacramento-San Joaquin Delta Estuary for the operation of the SWP and CVP, including requirements for the benefit of aquatic species on the location of X2, the 2 part per thousand isohaline (SWRCB, 1999). SWP and CVP operations to meet the X2 requirements are included in the CalSim II modeling for the Base Case and all alternatives. In addition, in CCWD's 1993 BO from the USFWS, as subsequently modified by letter agreements between CCWD, Reclamation and USFWS, the X2 restrictions imposed on filling Los Vaqueros Reservoir are more stringent than the D1641 X2 restrictions. These limitations were applied in the model simulations used for the analysis of all project alternatives in both the Draft EIS/EIR and Final EIS/EIR. Additionally, the direct delivery of water for Delta Supply Restoration in Alternative 1 and Environmental Water Supply in Alternative 2 was not allowed if X2 requirements were not met. The X2 restrictions on filling Los Vaqueros Reservoir were applied in the analysis of all alternatives under all circumstances.

Modeling performed for the Draft EIS/EIR did not include the precise OCAP BO terms because they were not available in the models used at that time, but the modeling in the Draft EIS/EIR did contain estimates of moderate and severe Old and Middle River (OMR) flow restrictions on exports in order to bracket the potential range of effects, as described in Appendix C3 of the Draft EIS/EIR. Several commenters on the Draft EIS/EIR have questioned the assumptions related to OMR restrictions, so these assumptions have been addressed separately in Response 3.5.2.2 below.

The physical source of water under the Existing and Future Without Project conditions or Alternatives 1, 2 and 4 would be diversions from the Delta, with the exception of the approximate 2 percent of annual deliveries that CCWD obtains as inflow to Los Vaqueros Reservoir from the

Kellogg Creek watershed; CCWD's water supply from Kellogg Creek would not change under any of the project alternatives. The remainder of water delivered to CCWD customers under the without project conditions and each of the with-project alternatives would either be surplus water in the Delta, which would not have previously been stored in any upstream reservoirs, or would otherwise be released from CVP reservoirs that are tributary to the Delta. The physical source of CVP deliveries to other project partners in Alternative 1 or Alternative 2 would either be surplus water in the Delta or releases from CVP reservoirs that are tributary to the Delta. The physical source of SWP deliveries to project partners in Alternative 1 or Alternative 2 would either be surplus water in the Delta or releases from SWP reservoirs that are tributary to the Delta.

In the Final EIS/EIR analysis, the diversions for Delta Supply Restoration in Alternative 1 and Dedicated Storage for Environmental Water in Alternative 2 are made only when surplus conditions occur in the Delta. These diversions would be either delivered directly to South Bay water agencies or refuges, or conveyed to storage in Los Vaqueros Reservoir for later delivery. The occurrence of surplus conditions in the Delta was determined by the CalSim II model, which evaluates hydrologic conditions and determines whether sufficient flow is present in the Delta to meet all flow and water quality standards required in D1641. If more flow is present than that required to meet the standards, surplus conditions are determined to exist. In the analysis performed for the Final EIS/EIR, the diversions for Delta Supply Restoration and Dedicated Storage for Environmental Water were not made when OMR flow requirements are controlling Delta export operations, as described in Response 3.5.2.2.

Assumptions on water rights for each of the alternatives are presented in the individual response to S_SWRCB-01.

Alternative 3 was found to have significant and unavoidable fisheries impacts in modeling analysis performed for the Draft EIS/EIR, as explained in Section 4.3 of that document (Vol. 1, Chapter 4). This alternative was considered as the Final EIS/EIR was prepared, but no improvement in environmental effects was expected with inclusion of the modified operations described above. Accordingly, Alternative 3 was not included in the updated modeling analysis performed for the Final EIS/EIR.

In the CalSim II modeling analysis, CCWD's water supply is met through a combination of CCWD's CVP contract supply diversions, diversions under CCWD's Los Vaqueros water right permit, and, when these supplies are insufficient to meet CCWD demand, through water transfers. This modeling analysis is consistent with CCWD's Future Water Supply Plan, which anticipates that water transfers plus demand management will be used to meet water supply shortfalls. While CCWD's Future Water Supply Plan also anticipates that demand management can be used to partially make up for a water supply shortfall, the modeling analysis for the Draft EIS/EIR and Final EIS/EIR did not assume such rationing would occur in the CCWD service area. This was done intentionally so that the environmental effects of a maximum level of potential CCWD diversions were evaluated in the model analysis.

The CCWD water transfers assumed in this analysis are not caused by the project alternatives; the modeling analysis shows that Alternatives 1, 2 and 4 each reduce the need for such transfers. In

the Draft EIS/EIR modeling, which did not include the updated analysis of the effects of the new OCAP BOs on CVP water supply, the average amount of such water transfers required by CCWD in any single year was estimated to be approximately 3 TAF under Existing Conditions, and approximately 14 TAF under Future Without Project conditions. In the Draft EIS/EIR analysis, the project alternatives reduced the need for transfer water by approximately 20 to 30 percent. In modeling performed for the Final EIS/EIR, which includes an updated analysis of operations of the CVP and SWP under the OCAP BOs, the average amount of this type of water transfer required by CCWD was estimated to be approximately 5 TAF under Existing Conditions, and approximately 18 TAF in the Future Without Project condition. In the Final EIS/EIR analysis, the project alternatives reduced the need for transfer water by approximately 10 percent to 25 percent. The reduction in CCWD water supply available under the CVP contract in the updated modeling for the Final EIS/EIR, as compared to that from the Draft EIS/EIR, reflects the updated analysis of the OCAP BOs in the Final EIS/EIR modeling, which results in decreased CVP water supply conditions for all CVP customers. Alternative 4 shows the most potential to reduce the CCWD need for transfer water, because it provides the most additional storage capacity for CCWD customers.

CCWD has a long-term transfer agreement with East Contra Costa Irrigation District (ECCID) for an annual transfer of approximately 8 to 12 TAF. Under CCWD's Future Water Supply Plan, additional water supply transfers could be obtained from other willing sellers in years when a water supply shortfall exists that is larger than the amount available from ECCID. CCWD's existing plans also call for rationing of up to 15 percent of demand, which would reduce demand by 25 TAF. While this combination of supply and demand management is sufficient to meet currently anticipated needs, regulatory approval of additional water transfers in the future is not certain. This uncertainty highlights the need to develop projects that help ensure water supply reliability for CCWD, such as the Los Vaqueros Reservoir Expansion Project.

3.5.2.2 Modeling Assumptions Related to Old and Middle River Reverse Flows

Summary of issues raised by commenters

- It is unclear why CCWD pumping is not included in the estimation of net flow in OMR in the modeling performed for the Draft EIS/EIR.
- The modeling analysis performed for the Draft EIS/EIR used methods to estimate net OMR flow developed by DWR and USGS; an improved method developed by Paul Hutton of MWD should be used instead.
- Increased diversions at CCWD's Old River and AIP intakes could impact the ability of the SWP and CVP to export water from the south Delta; these potential impacts are not properly evaluated in the Draft EIS/EIR.
- The analysis should be updated to include the USFWS OCAP BO and the NMFS OCAP BO.
- Water supply reliability benefits to South Bay water agencies may be overestimated in the Draft EIS/EIR.

Response

The modeling performed for the Draft EIS/EIR was developed and substantially completed prior to the issuance of the USFWS OCAP BO (December 2008) and the NMFS OCAP BO (June 2009), so it used a bracketing approach to estimate moderate and severe flow requirements in OMR based on interim measures that are similar to the final OCAP BO requirements. In the Draft EIS/EIR modeling, it was assumed that diversions at Los Vaqueros Reservoir intakes would not influence the restrictions on water exports at the SWP and CVP pumping plants in the south Delta. The modeling and assumptions used in the Draft EIS/EIR are described in Section 4.2.2 (pages 4.2-31 through 4.2-34) and in Appendices C2 and C3 of the Draft EIS/EIR. The application of OMR flow restrictions in the Draft EIS/EIR modeling is described in Appendix C3, pages C3-2 through C3-7.

Updated modeling has been performed for the Final EIS/EIR to incorporate updated modeling of the effects of OMR flow regulations from the USFWS OCAP BO and the NMFS OCAP BO, along with the other requirements of these BOs, as described in the updated Section 4.2, updated Section 4.3 (Vol. 4, Chapter 5, Section 5.3) and updated Appendix C (Vol. 4). The results of this updated modeling are also presented in these sections.

In comments on the Draft EIS/EIR, State Water Contractors (SWC) provided a method for calculating OMR net flow that was developed by Metropolitan Water District of Southern California (MWD). The MWD method for calculating OMR net flow explicitly accounts for CCWD's diversions at Old River. Modeling performed for the Final EIS/EIR used the method developed by MWD to estimate OMR net flow, with a modification so that it includes diversions at both the CCWD Old River and AIP intakes. Consequently, in the modeling performed for the Final EIS/EIR, all diversions from the CCWD Old River and AIP intakes were included in the calculated value of OMR flow that is used to limit CVP and SWP exports under the OCAP BOs. This update was included in the analysis of Alternatives 1, 2 and 4.

Although the MWD method was used, it should be noted that the predictive capability of the method is weak within the regulatory range of flows (OMR < 5,000 cfs) when compared to field measurements and that CCWD diversions do not have a discernable effect on the field measurements of OMR flow under nearly all conditions. Nonetheless, this method was chosen for use because it does specifically include CCWD's diversions in the estimation of OMR flow, which ensures that the effects of changes in CCWD operations will be included in the analysis of potential impacts of the project alternatives. This ensures that the potential effects on CVP and SWP water supply are completely captured, that environmental impacts are not understated and that estimated water supply benefits of Alternatives 1, 2 and 4 are not overstated.

To further avoid impacts to CVP or SWP exports in modeling performed for the Final EIS/EIR, diversions for Delta Supply Restoration or Dry Year Water Supply benefits for South Bay water agencies under Alternative 1 would not be allowed if OMR flow requirements were limiting CVP and SWP exports from the Delta. Similarly, in modeling for the Final EIS/EIR, diversions for Dedicated Storage of Environmental Water in Alternative 2 were not allowed if OMR flow requirements were controlling Delta exports.

Modifications to CCWD operations have been incorporated in the Final EIS/EIR modeling to improve coordination of water supply operations in the Delta under the regulatory environment imposed by the OCAP BOs on CVP and SWP. Even with this improved operational coordination, the updated assumptions on calculation of OMR net flow described above result in reduced water supply reliability benefits for South Bay water agencies in Alternatives 1 and 2 in the modeling analysis performed for the Final EIS/EIR, compared to the benefits of those alternatives as estimated in the Draft EIS/EIR. The modeling analysis for Alternative 4 indicates that inclusion of the improved operational coordination and the updated assumptions on calculation of OMR net flow results in a similar level of benefit for this alternative as estimated in the Draft EIS/EIR.

3.5.2.3 Modeling Assumptions Related to Cumulative Projects

Summary of issues raised by commenters

- Discuss whether ongoing/future Sacramento Regional County Sanitation District (SRCSD) effluent discharge to the Sacramento River should be included in the cumulative analysis.
- The Final EIS/EIR should include a discussion of the sensitivity of project benefits to changes in Delta conveyance, Delta habitat, and Delta operations requirements.

Response

The analysis of potential cumulative impacts related to water supply and water quality was performed quantitatively based upon modeling of the California water system, including the Delta. The intent of this analysis is to determine for each project alternative whether its addition would create or contribute to adverse environmental impacts. Other projects have been included in the computer modeling where sufficient information on those projects and their operations exists. The CalSim II model was used to simulate all project alternative conditions for the Los Vaqueros Reservoir Expansion Project.

In cases where model analysis of other proposed projects has not been developed or is not available, it is not possible to perform the quantitative computer modeling analysis of such projects at a sufficient level of accuracy to make the analysis meaningful. In such cases, qualitative analysis has been used to determine whether the impacts of the other project are likely to combine with the impacts of the Los Vaqueros Reservoir Expansion Project.

The hydrodynamic and operational effects of the SRCSD increased rate of discharge were included in the EIS/EIR modeling and analysis. Water quality impacts of potential increases in SRCSD's pollutant load to the system were not modeled, as both the ongoing litigation regarding the Sacramento Regional Wastewater Treatment Plant 2020 Master Plan EIR and SRCSD’s pending National Pollution Discharge Elimination System permit from the Regional Water Quality Control Board are expected to ensure that SRCSD’s future discharges will not have adverse impacts on Delta water quality.

The sensitivity to changes in Delta operation of benefits and potential impacts of the project alternatives is evaluated in the updated modeling performed for the Final EIS/EIR, in which Alternatives 1, 2 and 4 are analyzed with the updated modeling of the effects of the terms of the

OCAP BOs. The updated analysis shows that the benefits of Alternatives 1 and 2 are somewhat sensitive to changes in Delta operations. The benefits of Alternative 4 are less sensitive to these changes. The impact analyses for Alternatives 1, 2 and 4 indicate that no changes to the conclusions reached in the Draft EIS/EIR result from the changes in Delta operations. See the updated Section 4.2 and updated Section 4.3 (Vol. 4, Chapter 5, Section 5.3) for more information on benefits and impacts analysis in the Final EIS/EIR. For discussion of the BDCP and DHCCP, and the Delta Wetlands Project, see Master Response 2, Section 3.2.2.

3.5.3 Assurances

Comment Summary

This section of this master response responds to all or part of the following comments:

F_EPA-01 S_SWRCB-02 O_PCL-02

Summary of Issues Raised by Commenters

Some commenters express the concern that assurances are needed so that the benefits identified for the project alternatives would in fact be realized upon implementation. This master response discusses the assurance mechanisms proposed as part of the project. Specific issues raised by the commenters are as follows:

- There are no safeguards described in the Draft EIS/EIR to prevent both the expanded Los Vaqueros system and the CVP/SWP systems from operating at full capacity; the Final EIS/EIR should include an analysis of the impacts of both systems operating at full capacity.
- The project should include assurance mechanisms to guarantee that environmental and fishery benefits result from implementation of the project in a timely manner.
- Increased diversions would occur and are not analyzed.

Response

The analysis of the Los Vaqueros Reservoir Expansion Project performed for both the Draft and Final EIS/EIR provides that in Alternatives 1 and 2, water supply deliveries wheeled through the Los Vaqueros Reservoir facilities would be accompanied by a reduction in exports at the CVP and/or SWP facilities. This is a project feature for these two alternatives. If one of the project alternatives that includes Environmental Water Management, including this type of wheeling operation, is selected for construction, agreements between all parties involved in the operation will be executed to ensure this project feature is implemented. In Alternative 4, in which CCWD diversion capacity is not increased over the Existing Conditions, the CCWD, CVP and SWP systems are assumed to operate concurrently at full capacity, subject to all applicable regulatory constraints. All impacts associated with this assumption are analyzed and disclosed Sections 4.2 and 4.3 of the Draft EIS/EIR and in the updated Sections 4.2 and 4.3 of the Final EIS/EIR (Vol. 4, Chapter 5, Section 5.3).

3.5.4 Impacts on Delta Hydrology and CVP/SWP Operations

Comment Summary

This section of this master response responds to all or part of the following comments:

L_ACWD-02	L_ACWD-03	L_EBRPD2-17	L_RD800-02
L_RD800-05	L_SCVWD-02	L_SCVWD-04	L_SCVWD-05
L_SWC-01			

Summary of Issues Raised by Commenters

A number of commenters request clarification of the Delta hydrology analysis, or additional analysis of potential impacts of the Los Vaqueros Reservoir Expansion Project on operations of the SWP and CVP, including specific impacts on South Bay Aqueduct operations and Del Valle Reservoir operations. Other comments request more specific information on the operations of the proposed project to aid in understanding the analysis of potential impacts on other Delta diverters, including impacts on water levels in the Delta. Specific issues raised by the commenters are as follows:

- The EIS/EIR should evaluate the potential impacts to SWP and CVP operations including daily, monthly and annual delivery capacities for project and non-project (i.e., transfer) supplies for SBA agencies.
- The potential for impacts to CVP and SWP deliveries while OMR flow regulations are controlling Delta exports is not fully captured in the analysis of annual averages of delivered water.
- The EIS/EIR should address effects of the Los Vaqueros Reservoir Expansion Project on operation of Del Valle Reservoir.
- The EIS/EIR analysis of impacts on other water users appears to be limited to CVP and SWP exports and does not include in-Delta users; additional information should be provided including total annual diversions from Old River and AIP pump stations, timing of diversions at these pump stations throughout the year, and maximum flow rates at these pump stations under current and future conditions.
- The water level decrease associated with Alternative 3 could lead to devastating results for a farmer if the decrease occurred in the middle of a watering cycle and disrupted the operability of the siphon.

Response

Analysis of Delta hydrology was performed using the CalSim II and DSM2 models, as described in Section 4.2 and Appendix C of the Draft EIS/EIR. Model accuracy and limitations, including model time step issues, are also discussed in Section 4.2 of the Draft EIS/EIR. The alternatives considered for the Los Vaqueros Reservoir Expansion Project were designed to be compatible with existing operation of the CVP and SWP. Updated assumptions used in modeling for the Final EIS/EIR are described in Chapter 5 and above in Section 3.5.2, including updated assumptions related to OMR flow requirements. Alternative 1 would provide a similar or enhanced level of CVP and SWP water supply to participating South Bay water agencies, relative to the level of delivery in the Existing and

Future Without Project conditions. Alternatives 2 and 4 would not affect the total level of CVP and SWP delivery to South Bay water agencies. The delivery of water from other sources, including transfers and exchanges to receive banked groundwater, would not be affected by these alternatives.

Comments received on the Draft EIS/EIR questioned the comparison of annual averages of water deliveries in the analysis of potential impacts on other Delta water users under the OMR requirements. Monthly averages of export pumping are presented in updated Appendix C4 (Vol. 4) for all alternatives. In addition, the operational coordination that is included in the Final EIS/EIR analysis is designed to avoid potential conflicts under the OMR restrictions. The operational coordination is described in Response 3.5.2.2 above, and in the updated Section 4.2, set forth in Section 5.3 herein.

Another comment received on the Draft EIS/EIR inquired about changes in the reported level of deliveries to CVP and SWP customers for the alternatives analyzed, specifically about the values reported in Tables 4.2-9 through 4.2-14. As may be seen in these tables, the model results for annual exports by CVP and SWP vary between alternatives, and between different hydrologic year types. The variation can be positive or negative, and is generally within 0.5% of the without project condition. These small variations are considered to be within the level of accuracy of the CalSim II model, which is discussed in the updated Section 4.2, set forth in Section 5.3 herein, and in updated Appendix C2 (Vol. 4).

No changes would be required for the operation of Lake Del Valle under any of the project alternatives. Lake Del Valle is a reservoir that is connected to the South Bay Aqueduct (SBA) water supply system. It is used by the SWP to store water temporarily prior to delivery to the SWP customers on the SBA, which improves the ability of the SWP to coordinate the timing of diversions from the Delta with the timing of deliveries to SBA agencies. In addition, Lake Del Valle is used to capture local precipitation in its watershed for water supply. Lake Del Valle is also operated and managed for recreational purposes. Changes in the operation of Lake Del Valle that would cause changes in the volume of water stored in the reservoir could affect some or all of these existing operations.

Alternatives 1 and 2 provide a method of delivering SWP water to the SBA system, and additional storage in Los Vaqueros Reservoir from which to make those deliveries, but would not rely on use of Lake Del Valle. These alternatives would add the benefits of additional storage to the SBA system, but would not cause changes to the current use of Lake Del Valle. Alternative 4 does not have any potential to affect Lake Del Valle operation because it would not rely on the SBA system. See Master Response 11, Recreation, for additional discussion of recreation at Lake Del Valle.

Average annual diversions at CCWD intakes are presented in Table 4.2-3 of the Final EIS/EIR (Vol. 4, Chapter 5, Section 5.3). These diversions include pumping at Rock Slough, Old River and AIP intakes. Tables C4-6 and C4-12 were added to the updated Appendix C4 to show month by month pumping at all CCWD intakes. The maximum capacity of each intake is shown in Table 3-3 of the Draft EIS/EIR (Vol. 1, Chapter 3, pg. 3-21).

The effects of the project alternatives on Delta water levels were evaluated to assess possible effects on Delta agricultural, residential or recreational interests. The results of these analyses were presented in Section 4.2 and Appendix C of the Draft EIS/EIR. This analysis was performed again for the updated Final EIS/EIR modeling, the results are presented in the updated Section 4.2 (Vol. 4, Chapter 5, Section 5.3), and in the updated Appendix C (Vol. 4). The water level effects of the project alternatives that were estimated at the CCWD Old River Intake are representative of the effects that would be expected at RD800 agricultural siphons. Based on this analysis and on field investigations for the current diversions, adverse effects to water levels are not expected under Alternatives 1, 2 or 4.

One comment (L_RD800-05) asked about operational impacts of Alternative 3 on Delta water levels. Alternative 3 was found to have significant and unavoidable fisheries impacts in the analysis performed for the Draft EIS/EIR, as explained in Section 4.3 of that document (Vol. 1). This alternative was not included in the updated modeling analysis performed for this Final EIS/EIR (see Section 2.2 herein).

3.5.5 Water Quality Impacts

Comment Summary

This section of this master response responds to all or part of the following comments:

L_ACWD-04 L_RD800-03 L_RD800-04 L_SRCSD-03
I_Graham-09

Summary of Issues Raised by Commenters

- The EIS/EIR should include analysis of impacts to water quality in the SBA under varying hydrological conditions and should assess whether any such water quality impacts would affect the treatability of the water.
- Clarify the water quality analysis represented by Table 4.2-16 in the Draft EIS/EIR which does not appear to support the conclusion in the text.
- The EIS/EIR should address impacts to water quality at the tidal bays and interior lake circulation waters in Discovery Bay that are extremely sensitive to water quality degradation.
- The Draft EIS/EIR does not discuss potential source water quality impacts due to the proximity of the Old River and proposed new Delta intakes to the Discovery Bay wastewater outfall.
- The Draft EIS/EIR does not examine the potential impacts of the project alternatives on dissolved oxygen (DO) concentrations, water temperature or other important Delta water quality parameters.

Response

Significant changes to Delta water quality would not result from any of the project alternatives, as described in the updated Section 4.2 of the Final EIS/EIR (Vol. 4, Chapter 5, Section 5.3). The

model analysis of Delta water quality for these project alternatives is described in the updated Section 4.2 (Vol. 4, Chapter 5) and in Appendix C6 (Vol. 4). The methodology used for analysis of effects on water quality, presented in Appendix C6 of both the Draft and Final EIS/EIR, takes the issues of model limitations into account. Table 4.2-16 of the Final EIS/EIR (Vol.4, Chapter 5, Section 5.3) presents the total number of potential standards violations in the 16 year period modeled for Delta water quality analysis, for the Existing and Future Without Project conditions and for Alternatives 1, 2 and 4. A statistical analysis is performed to compare the results, as explained in the updated Section 4.2 (Vol. 4, Chapter 5, Section 5.3).

Potential standards violations were found in all model runs, including the Existing Condition and Future Without Project runs, as shown in Table 4.2-16. The apparent violations in the model results are referred to as "potential violations" because they occur in the model but would not occur in actual operations. The Delta is operated to meet water quality standards and would continue being operated to meet standards if the Los Vaqueros Reservoir Expansion Project is built.

The apparent standards violations under the Existing and Future Without Project conditions are caused solely by modeling inadequacies which are discussed in updated Section 4.2 (Vol. 4, Chapter 5, Section 5.3) and in the updated Appendix C6 (Vol. 4) of the Final EIS/EIR. Apparent violations in the project alternatives modeling could also be caused by model inadequacies, as in the Existing and Future Without Project conditions, or could reflect the impacts of proposed project operations. A statistical analysis (chi-squared test) was performed to compare the occurrence of potential violations in the Existing and Future Without Project conditions and in each of the project alternatives. This analysis shows that the potential violations do not occur more often in Alternatives 1, 2 or 4 than they do in the Existing and Future Without Project conditions.

Based on the analysis of potential water quality impacts, and on field experience with existing diversions, impacts to Delta water quality are not anticipated under Alternatives 1, 2 or 4. Impacts to water levels are not anticipated under any of these alternatives as described above in Response 3.5.4. Tidal bays and interior lakes within Discovery Bay are influenced by the tidal fluctuation of water levels in the Delta, and rely on tidally driven circulation to maintain water quality within the ponds and bays. Based on the finding that water levels in Delta channels would not be impacted by the project alternatives, adverse impacts on water quality or circulation in tidal bays or ponds at Discovery Bay are not expected to result from Alternatives 1, 2 or 4.

The influence of the Discovery Bay wastewater outfall on water quality at the CCWD Old River Intake is not expected to change under any of the alternatives. The outfall is a regulated discharge to surface water, and Delta water users including CCWD maintain levels of treatment for drinking water deliveries that are adequate to ensure protection of public health. Further, this outfall was improved to ensure protection of drinking water quality for Delta water users by adding an extension and diffuser in a project completed in 2006. Consequently, it no longer affects local diversions because the discharge is diluted and now located farther away from the diversion point.

In Alternatives 1 and 2, significant changes to the water quality delivered to South Bay water agency treatment plants are not expected, since the same characteristics of Delta water will be present in water delivered from the Los Vaqueros Reservoir as would be found in water pumped at CVP or SWP facilities. Minor improvements in delivered salinity levels to South Bay water agencies may be possible at times of year when Delta salinity is highest. Alternative 4 will not influence the quality of water delivered to South Bay water agencies.

No changes to dissolved oxygen (DO) concentrations or water temperature are expected in the Delta resulting from implementing Alternatives 1, 2 or 4 because the changes to flows and water quality caused by these alternatives do not have the potential to affect DO concentration or temperature in any significant way. The DO and temperature of surface waters can be influenced by discharges of waters with significant biochemical oxygen demand, or waters of different temperature than the surface water, respectively. Changes in circulation of surface water that would result in significant stagnation of water without mixing or contact with the atmosphere could also influence changes in DO concentrations. However, diversions from surface waters such as those considered in the project alternatives are unlikely to affect the DO concentration of the surface water; the project alternatives do not include discharges to the Delta, and the project alternatives would not cause stagnation in Delta channels. Other than possible local effects caused by discharges, Delta water temperatures are governed by regional weather, and are not influenced by water diversions considered under any of the project alternatives. Circulation of Delta water would not be changed such that changes in DO concentrations in the area of the project would be expected.

3.5.6 Impacts to Aquatic Species

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DFG-08	S_SWRCB-03	L_ACWD-05	L_SWC-01
L_SWC-02	O_PCL-06	I_Graham-08	L_SCVWD-01

Summary of Issues Raised by Commenters

- Evaluate potential impacts to the Alameda Creek watershed through introducing a new source of supply to the SBA, which may introduce invasive and/or predatory species in the watershed.
- Increased diversions (i.e. - diversions above 1994 MOU between CDFG and CCWD baseline) to fill the proposed expanded reservoir and/or increase the number of uses must be quantified as part of water availability analysis for California Endangered Species Act (CESA) and would cause significant impacts to listed fish species that should be analyzed and mitigated.
- The Draft EIS/EIR indicates direct and cumulative impacts to fisheries due to increased water diversion from the Delta for Alternative 3. It is unclear why Alternative 2 would not have the same effect.

- Evaluate flow regimes (quantity, direction, temperature, turbidity and other water quality parameters) needed at different locations and times of year to restore native aquatic species that spend all or part of their lives in Bay Delta Estuary.
- The fish screens at Old River and AIP are not benign and may not result in protecting fish and reducing fish losses.
- The fishery benefits are likely over-stated; the analysis for the expansion project should be revised to include the effect of CCWD diversions on fish movement (CCWD contribution to OMR), and should utilize screen efficiencies in the particle tracking modeling so particles are not removed from the system once screened at CCWD diversions.
- Given the level of protection in the OCAP BOs, it appears that the additional fishery benefits from the Los Vaqueros Expansion Project would be minimal.

Response

The modeling performed for the EIS/EIR considers the effects of CCWD's diversions on flows and fisheries. Hydrodynamic modeling includes the effects of CCWD's diversions on river flows, including OMR flows. Modeling for the Final EIS/EIR also includes CCWD effects on OMR flows in the CalSim II modeling. Several analyses were performed using the results of this modeling analysis to estimate the potential effects of the project analysis on Delta fisheries, as described in the updated Section 4.3 (Vol. 4, Chapter 5, Section 5.3).

The analyses for potential fishery effects include use of a particle tracking model (PTM), which incorporates the effects of flow in the Delta into an analysis of fishery effects. One limitation of PTM is that it does not allow for consideration of fish screens. The presence of positive barrier fish screens at CCWD intakes was accounted for during post-processing. To improve the analysis, and in response to comments received on the Draft EIS/EIR, the fate of particles that avoid entrainment due to the positive barrier fish screens was estimated in an additional post-processing step. The estimated fate of particles not entrained at CCWD intakes is included in the PTM results presented in the Final EIS/EIR in the updated Section 4.3. The methodology for these post-process steps is presented in the updated Appendix C7 (Vol. 4).

The model used for the Final EIS/EIR includes updated modeling of CVP and SWP operations under the OCAP BOs, as described in the updated Section 4.2 (Vol. 4, Chapter 5) and in the updated Appendix C (Vol. 4). These updates allowed model analysis of Los Vaqueros Reservoir Expansion Project alternatives to include the best available estimates of the effects of the CVP and SWP operations required under the OCAP BOs. As described in Sub-section 3.5.2.2, these updates include the OMR net flow requirements.

Alternative 3 was found to have significant and unavoidable fisheries impacts in modeling analysis performed for the Draft EIS/EIR, as explained in Section 4.3 of that document. This alternative was not included in the updated modeling analysis performed for the Final EIS/EIR (see Section 2.2 herein).

Alternatives 1, 2 and 4 were not found to have similar impacts to Alternative 3, because the operations of Alternatives 1, 2 and 4 are substantially different from Alternative 3. While Alternative 3, as evaluated in the Draft EIS/EIR, resulted in more net pumping in the Delta during

sensitive fishery periods, Alternatives 1 and 2 include fishery benefits associated with shifting the existing level of pumping to intakes with improved fish screens, and changing the timing of Delta pumping to avoid the most sensitive fish periods. Alternative 4 includes fishery benefits associated with shifting CCWD diversions out of dryer years, and providing storage for implementation of the no diversion period more reliably in extended droughts. The efficiency of the fish screens employed at CCWD intakes is accounted for in this analysis, as described in updated Appendix C (Vol. 4).

The effects of filling and operating Alternatives 1, 2 and 4 on Delta fisheries and aquatic resources are presented in the updated Section 4.3 (Vol. 4, Chapter 5). The effects of initial post-construction filling of the expanded reservoir are covered in the model analysis performed because the long-term hydrology includes several drought periods in which the reservoir is drained through water quality and water supply operations, followed by wetter years in which the reservoir is refilled. The effects of initial filling after construction would not be substantially different from these events, in which the reservoir is filled over several years based on water quality and water supply limitations.

Upon selection of a project alternative, CCWD and any project partners will proceed to obtain necessary permits for construction and authorization. This will include updates to federal biological opinions and authorization under state CESA requirements, as needed.

None of the alternatives would introduce a new physical source of supply to the SBA. Los Vaqueros Reservoir is filled with Delta water and with a small amount of water from Kellogg Creek, which is tributary to the Delta near the town of Discovery Bay. CCWD controls introduction of aquatic organisms into Los Vaqueros Reservoir by limiting the types of bait that can be used for fishing within the reservoir, and by not allowing private boats to be used on the reservoir. Thus the aquatic species present in Los Vaqueros Reservoir are the same as those present in Old River. Water users that receive Delta water, including the potential project partners on the SBA system, would not experience a change in the biological constituents of their Delta water supply if they were to receive deliveries from Los Vaqueros Reservoir instead of, or in addition to, their existing sources of Delta water supply. Any purposes for which Delta water is appropriate, including storage in Del Valle Reservoir or releases to Alameda Creek, would be appropriate uses for water delivered from Los Vaqueros Reservoir. In addition, the facilities proposed in Alternatives 1 and 2 to deliver water from the Los Vaqueros Reservoir to the SBA could be isolated from the SBA while control measures were implemented if invasive aquatic species were detected. Alternative 4 does not include deliveries to the SBA and so has no potential to introduce species into the SBA supply.

The proposed project alternatives are not intended to address Delta-wide flow regimes and water quality parameters, nor were they intended to effect full restoration of the Delta fisheries. The BDCP and DHCCP are attempting to develop a comprehensive plan for Delta operation that will be protective of fish in the Delta. This process includes evaluation of Delta flow regimes and water quality parameters that will best support the Delta fishery. CCWD is participating as a stakeholder in those efforts.

The operations that produce fishery benefits in Alternatives 1 and 2 of the Los Vaqueros Reservoir Expansion Project employ similar types of Delta fishery protection mechanisms as are required by the OCAP BOs. Specifically, both the alternatives for reservoir expansion and the OCAP BOs target reduced water supply exports at the most sensitive periods for the Delta fishery as a means of protecting fish species. Alternatives 1 and 2 were designed to benefit the Delta fishery while also maintaining water supply reliability, through improved screening of intakes and use of storage to modify timing of diversions. The OCAP BOs are intended solely to improve protection of Delta fisheries, and do not provide a mechanism to maintain water supply at former levels of export. Alternatives 1 and 2 were not designed as a complete solution to the Delta fishery decline, but were intended to provide regional water supply reliability for participating South Bay water agencies by making their Delta water exports safer for fish in the Delta, and therefore less susceptible to regulatory shutdown. Alternative 4 provides water supply reliability for CCWD and contributes to better overall fishery protection. In response to a comment received on the Draft EIS/EIR, and to avoid potentially overstating the benefits for the Delta fisheries, the entrainment indices based on salvage data were calculated for the Final EIS/EIR using total loss estimates for Chinook salmon at the CVP and SWP salvage facilities, rather than only using the proportion of loss due to exports for South Bay water agencies. The methodology for the entrainment indices based on salvage data is presented in updated Appendix C7 (Vol. 4).

The Water Supply Reliability and Dry Year Water Supply benefits for project partners in Alternative 1, and the Dedicated Storage for Environmental Water benefit in Alternative 2, and the Water Supply Reliability benefit in Alternative 4 were all designed prior to the completion of the OCAP BO requirements. The updated modeling performed for the Final EIS/EIR includes the terms of the OCAP BOs, and specifically limits the diversion of water for these purposes when OMR flow requirements are limiting exports at the CVP and SWP facilities, as described above in Response 3.5.2.2. The result of this update is that some of the water supply reliability and fishery benefits from the Los Vaqueros Reservoir Expansion Project in Alternatives 1 and 2 are reduced, while the benefits in Alternative 4 are not substantially changed. The updated model estimates of these benefits are presented in the updated Section 4.2 and 4.3 (Vol. 4, Chapter 5, Section 5.3).

This Page Intentionally Left Blank

3.6 Master Response 6: Local Hydrology and Drainage

3.6.1 Introduction

Overview

This section responds to comments suggesting potential impacts of the proposed project on hydrology, water quality, and drainage/flooding, predominantly associated with Kellogg Creek. Master Response 5, Delta Hydrology and Water Quality, addresses comments concerning hydrology, water quality, and water supply associated with the Delta, as well as SWP and CVP facilities.

This master response is organized by the following subtopics:

- 3.6.2 Stormflow and Flood Risk Along Kellogg Creek
- 3.6.3 Flood Management Procedures, Dam Safety Maps and Plans
- 3.6.4 Flow Regime Changes on Kellogg Creek
- 3.6.5 Mitigation Along Kellogg Creek for Impacts of Increased Reservoir Inundation

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- Contra Costa County, Flood Control and Water Conservation District – L_CCCFC
- Contra Costa County, Public Works Department – L_CCCPW
- Reclamation District 800 – L_RD800

Organizations

- None

Individuals

- Steven Navarro – I_Navarro

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Executive Summary, pp. ES-42 through ES-45; Vol. 1, Section 3.0, Project Description; Vol. 1, Section 4.5, Local Hydrology, Drainage, and Groundwater.

3.6.2 Stormflow and Flood Risk along Kellogg Creek

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCFC-01	L_CCCFC-02	L_CCCFC-07	L_CCCFC-08
L_CCCFC-09	L_CCCPW-01	L_CCCPW-03	L_CCCPW-07
L_CCCPW-08	L_CCCPW-09	L_CCCPW-11	L_CCCPW-12
L_CCCPW-13			

Summary of Issues Raised by Commenters

- Discuss flow capacity of Kellogg Creek.
- Quantify flood control effects or benefits of the existing Los Vaqueros Reservoir and of the project alternatives on Kellogg Creek and the communities of Byron and Discovery Bay.
- Discuss management of storm flows on Kellogg Creek and potential for downstream flooding below the reservoir during project construction. Provide flood protection during the multi-year construction period.
- Address long-term flood impacts and mitigate to a 200-year level of flood protection, potentially including improvements to Kellogg Creek. Quantify volume of storage needed to contain 200-year flood flows along Kellogg Creek.

Response

Several comments ask about the flow capacity of Kellogg Creek. The flow capacity of Kellogg Creek and the flood control benefits of the existing reservoir are discussed in Section 4.5, Local Hydrology, Drainage, and Groundwater, of the Draft EIS/EIR (Vol. 1, Section 4.5, pp. 4.5-29 through 4.5-30).

The existing Los Vaqueros Reservoir is built on Kellogg Creek. As discussed on page 4.5-8 of the Draft EIS/EIR (Vol. 1, Section 4.5), Kellogg Creek drains an area of approximately 18,220 acres, of which about 10,528 acres are located upstream of the existing Los Vaqueros dam. Downstream of the reservoir, Kellogg Creek parallels Walnut Boulevard; east of Vasco Road the creek becomes channelized and eventually enters Discovery Bay and Indian Slough in the vicinity of the communities of Byron and Discovery Bay. The Draft EIS/EIR describes the streams that are tributary to the creek upstream and downstream of the dam. All streams in the watershed are intermittent. As stated in the Draft EIS/EIR, between the mouth of Kellogg Creek and the State Route 4 bridge, below the Los Vaqueros watershed, the channel capacity ranges from 200 to 1,100 cubic feet per second (cfs).

Other comments ask about flooding along Kellogg Creek under existing and with-project conditions. The 100-year and 500-year flood potentials for lower Kellogg Creek are shown on Figure 4.5-2 (Draft EIS/EIR, Section 4.5, pg. 4.5-10), which shows the portion of the floodplain located in the Kellogg Creek watershed downstream of the existing reservoir, as revised to reflect the flood protection offered by the existing reservoir. As discussed in Impact 4.5.5 on page 4.5-29

(Draft EIS/EIR, Vol. 1, Section 4.5), the existing reservoir acts to decrease the magnitude of the 100-year peak flow event in Kellogg Creek below the dam by having the capacity to contain flood flows and by controlling the release of water downstream. Even at full operating capacity, the reservoir has been designed to have sufficient freeboard to attenuate flood flows to approximately 150 cfs in lower Kellogg Creek, which has reduced flood potential downstream of the dam compared to conditions that existed before the reservoir was constructed.

During a 100-year peak flow flood event, releases from the existing reservoir may reach up to 150 cfs. Below the existing reservoir, other tributaries contribute additional flood flows, such that total 100-year flood flows at the mouth of Kellogg Creek would be approximately 1,650 cfs. Most of the below-reservoir flood flow contributions occur along the reach of Kellogg Creek located downstream of the existing reservoir and upstream of Camino Diablo Road. At Camino Diablo Road (which crosses the creek just upstream of the flat areas between Byron and Brentwood), the existing 100-year peak flood event would produce approximately 1,560 cfs of flow along Kellogg Creek, including 150 cfs contributed from the reservoir outfall, and an additional 1,410 cfs contributed by other tributaries. An additional 90 cfs would be contributed by tributaries downstream of Camino Diablo Road, resulting in the total discharge of 1,650 cfs at the mouth of Kellogg Creek. Under the existing conditions, during the 100-year peak flow event, localized flooding can occur below Camino Diablo Road, along a five-mile stretch of Kellogg Creek between State Route 4 and the mouth of the creek, since the channel capacity in this reach ranges from 200 to 1,100 cfs (CCWD and Reclamation, 1993).

Under the project, with implementation of any of the alternatives, these peak flow conditions and downstream flooding potential during 100-year and 500-year storms (as well as 10-year and 50-year storms) would remain unchanged. As discussed on page 4.5-29 under Alternative 1 (Draft EIS/EIR, Vol. 1, Section 4.5), by design the proposed expanded reservoir would carry forward the same level of flood control benefits afforded by the existing reservoir, in order to handle the maximum flood without overtopping. DSOD sets the design criteria for dam facilities that include conservative measures to insure that the facility is prepared to handle peak storm flows at times when the reservoir is full. DSOD will review the specific design for the expanded Los Vaqueros Reservoir. CCWD can meet with County staff during the dam design review process to brief them on the DSOD requirements and design compliance. Reservoir expansion under any of the four expansion alternatives would not result in additional downstream flooding and would not increase flood risks to people or structures within the 100-year flood hazard area (as mapped by the Federal Emergency Management Agency [FEMA]) under normal or flood conditions. In addition, construction of proposed facilities as well as reservoir expansion under any of the proposed alternatives would not significantly impede or redirect flood flows, in comparison to existing conditions. Reservoir expansion would not require submission of a Letter of Map Revision to FEMA since it would not alter the floodplain downstream of the reservoir. Comments on the potential for flooding in the highly unlikely event of an emergency reservoir drawdown or outright dam failure are addressed in Response 3.6.3 below.

Two comments suggest that the Draft EIS/EIR should evaluate flood impacts and mitigate to a 200-year level of flood protection, based on recent changes to state requirements for flood

protection. Several pieces of legislation were recently passed in California that require counties, cities, and flood control agencies to implement 200-year flood protection for urban and urbanizing areas within the Central Valley and the Delta. However, as discussed above, none of the proposed alternatives would result in increased flood releases into Kellogg Creek during operation and none of the proposed alternatives would result in a significant change in flooding along lower Kellogg Creek. By design, the expanded reservoir would continue to provide flood control benefits equivalent to existing conditions. Therefore, additional analysis is not warranted and mitigation for a 200-year flood level is not required.

One comment (L_CCCFC-01) requests that a discussion regarding the flood capacity of Kellogg Creek be added to the list of Issues of Known Controversy and Issues to be Resolved in the Draft EIS/EIR (Vol. 1, Executive Summary, pg. ES-31). However, since the expanded reservoir would continue to provide flood control benefits equivalent to existing conditions as discussed above, this is not an outstanding issue to be resolved.

Kellogg Creek Peak Flow Management During Project Construction

Two commenters request additional discussion of flood flow management during reservoir construction, and request additional mitigation during that period.

As discussed on page 4.5-14 of the Draft EIS/EIR (Vol. 1, Section 4.5), under Alternatives 1, 2 and 3 (275-TAF reservoir expansion), the existing reservoir would be completely drained to allow for dam modification. Under Alternative 4 (160-TAF reservoir expansion), the reservoir water level would be reduced by approximately 60 TAF, retaining up to 40 TAF of water in storage. Drawdown of the reservoir to facilitate construction would not result in the release of additional flows to Kellogg Creek; the stored water would be drawn down over a period of six months to a year for use by CCWD and discharged through the existing CCWD water system facilities. (Draft EIS/EIR, Vol. 1, Chapter 3, pg. 3-53.) Therefore, drawdown of the reservoir under any of the project alternatives would not increase peak flow conditions in Kellogg Creek.

For construction of the necessary dam modifications required for reservoir expansion under Alternatives 1, 2 and 3, a cofferdam would be installed upstream of the dam, around the dam construction work area, to retain storm flows entering the reservoir basin from Kellogg Creek and its tributaries upstream of the dam and thereby keep the dam construction work area dry (Draft EIS/EIR, Vol. 1, Chapter 3, pg. 3-53.) This coffer dam would be designed to retain anticipated creek runoff in the reservoir basin during the construction period. Average annual inflow to the existing reservoir from Kellogg Creek is estimated to be 1.3 TAF per year, while the maximum anticipated inflow would be 8.5 TAF (Draft EIS/EIR, Vol. 1, Section 4.5, pg. 4.5-8). During the construction period, storm flows would collect within the reservoir basin behind the coffer dam and be released incrementally through a bypass around the dam area and discharged downstream into Kellogg Creek. Storm flows would be managed during construction so as not to increase the downstream flood potential. Under Alternative 4, which does not require installation of a coffer dam, some water would remain in the reservoir during the construction period. Water levels will be drawn down within the reservoir to allow for construction of the modified dam and DSOD will set interim water level requirements within the reservoir such that adequate capacity

is maintained within the reservoir to capture and store storm flows without releases downstream. Reservoir construction will not increase flood potential downstream of the reservoir.

3.6.3 Flood Management Procedures, Dam Safety Maps and Plans

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCFC-03	L_CCCFC-10	L_CCCFC-11	L_CCCPW-09
L_CCCPW-14	L_CCCPW-15	L_RD800-06	I_Navarro-03

Summary of Issues Raised by Commenters

- Discuss potential flooding hazards during an emergency reservoir water release.
- Prepare and submit revised inundation map and revised emergency evacuation plan prior to circulation of the Final EIS/EIR.
- Revise the emergency evacuation plan in consultation with the Contra Costa County Office of Emergency Services.
- Letter of Map Revision should be submitted to FEMA and FEMA flood insurance rate maps should be updated.

Response

Two commenters ask about the inundation area during emergency dam releases and associated flooding along Kellogg Creek that could occur. As discussed on page 4.5-11 of the Draft EIS/EIR (Vol. 1, Section 4.5), a portion of the area located downstream of the existing Los Vaqueros Dam is currently subject to inundation in the event that emergency releases are required to reduce water levels in the reservoir because of unsafe conditions at the dam. For the existing reservoir, emergency releases could reach up to 1,140 cfs. For Alternatives 1, 2, and 3, emergency releases could reach up to 2,430 cfs, with up to 1,500 cfs being released to Kellogg Creek, and the remainder through installed facilities via the proposed Transfer Station, to the Delta, or to Bethany Reservoir (Draft EIS/EIR, Vol. 1, Section 3.0, pg. 3-49). Floodwaters would be anticipated to spread outward to a depth of about 6 inches until an obstruction was reached, along a zone that could extend about 2,000 feet laterally from the creek channel. Under Alternative 4, which would involve expansion of the existing reservoir to 160 TAF, maximum emergency releases to Kellogg Creek would be greater than existing conditions, but at 1,430 cfs, would be less than the maximum emergency releases associated with Alternatives 1, 2, and 3. See Draft EIS/EIR, Vol. 1, sections 4.5, page 4.5-36. As discussed on page 4.5-33 of the Draft EIS/EIR (Vol. 1, Section 4.5), because the risk of occurrence for an event requiring an emergency release would remain extremely remote, the expanded reservoir would not result in a substantially greater impact due to flooding from emergency releases, as compared to the existing reservoir.

Regarding dam failure, the proposed dam under any alternative would be conservatively designed, would meet earthquake and flooding standards as adopted by the Department of Water Resources, Division of Safety of Dams, and would be subject to continuous monitoring and inspections, as explained in the Draft EIS/EIR (Vol. 1, Section 4.5, pp. 4.5-32 through 4.5-33). The existing dam has caused no failure concerns in its ten years of existence. Though the potential extent of the inundation area resulting from the failure of a larger dam would be greater than under existing conditions, because the risk of failure would remain extremely remote, this impact is Less-than-Significant.

Several comments request that a revised inundation map be submitted and that emergency evacuation procedures be updated. As discussed in the Draft EIS/EIR, California Government Code Section 8589.5 requires that an inundation map be prepared and submitted to the California Emergency Management Agency (Cal EMA), and requires development of a downstream evacuation plan for areas within the potential inundation area of a reservoir. For an expanded Los Vaqueros Reservoir, the required inundation map and evacuation plan would be completed in compliance with relevant state and federal regulations. CCWD would submit a copy of the map to Cal EMA during the project design process (Vol. 1, Section 4.5, pg. 4.5-33). The evacuation plan would be prepared in coordination with the Contra Costa County Office of Emergency Services.

Several comments request further information regarding the potential for the inundation of downstream communities in the event of emergency release or reservoir breach, potential mitigation for such releases, and concerns regarding dam failure. In the event of an unsafe condition at the dam requiring or resulting in the emergency release of water from the proposed expanded reservoir, the emergency procedures contained in the evacuation plan would be implemented. As discussed in the Draft EIS/EIR (Vol. 1, Section 4.5, pg. 4.5-33), although the potential inundation area would increase, the potential risk of dam failure and inundation along downstream areas, including Byron, Discovery Bay, and areas surrounding Brentwood, would not increase as a result of implementing the proposed reservoir expansion project. The risk of potential dam failure for both the existing reservoir and the proposed project alternatives is very remote.

As noted in Response 3.6.2 above, reservoir expansion would not require submission of a Letter of Map Revision to FEMA since it would not alter the floodplain downstream of the reservoir.

3.6.4 Flow Regime Changes on Kellogg Creek

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCFC-13 L_CCCPW-02

Summary of Issues Raised by Commenters

- Chronic hydromorphological effects of changed flow regimes, including sedimentation in Kellogg Creek, associated with the proposed project must be addressed.

Response

Two comments suggest potential hydromorphologic changes along Kellogg Creek should be analyzed. As discussed on page 4.5-8 of the Draft EIS/EIR (Vol. 1, Section 4.5), flow downstream of the existing reservoir is currently managed so as to release up to 5 cfs of water on a daily basis to meet downstream water rights. The existing reservoir is also managed in a manner that provides flood control benefits along Kellogg Creek downstream of the existing reservoir, as discussed above. These operations would not change as a result of implementing Alternatives 1, 2, 3, or 4. As a result, no change in hydrologic or hydromorphologic conditions would occur under the proposed project in comparison to existing conditions.

3.6.5 Mitigation Along Kellogg Creek for Impacts of Increased Reservoir Inundation

This section of this master response responds to all or part of the following comments:

L_CCCFC-12 L_CCCPW-16

Summary of Issues Raised by Commenters

- Raising the reservoir water surface will impact wetland, floodplain and riparian habitat; these impacts should be mitigated along Kellogg Creek.

Response

Installation of the enlarged reservoir, under each project alternative, would result in the loss of existing floodplain areas around the reservoir that would be permanently inundated with reservoir expansion. However, as discussed above, the design of the expanded reservoir under each alternative would include sufficient freeboard to maintain existing levels of storm flow retention and peak flood flow reduction along Kellogg Creek, downstream of the dam. Therefore, no additional flood control mitigation to offset loss of floodplains is warranted.

With regard to habitat in the reservoir inundation area, the EIS/EIR's study area includes the maximum inundation area plus an approximate 1,000-foot buffer around the expanded reservoir (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-1). Biological surveys show that 5.76 acres of wetland habitats, including riparian habitat, would be within the footprint of the reservoir inundation and dam under Alternatives 1, 2 and 3, and that 3.48 acres of wetland habitats (but no riparian habitat acreage) would be within that footprint under Alternative 4 (Draft EIS/EIR, Vol. 2, Section 4.6, pp. 4.6-93 through 4.6-94, Table 4.6-10). The Draft EIS/EIR accounts for acreages of both habitat previously created or restored as mitigation for the original reservoir and habitat that existed or developed naturally within the inundation areas. "Floodplain" is not a habitat distinct from the wetland and riparian habitats described above. Mitigation Measures 4.6.2a and 4.6.2b would reduce these wetland/riparian impacts to a less than significant level, in part by restoring and creating wetland habitats (Draft EIS/EIR, Vol. 2, Section 4.6, pp. 4.6-102 through 4.6-103). Whether some of this mitigation would occur along Kellogg Creek would be determined by CCWD following identification of sites by a qualified biologist in coordination with California Department of Fish

and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and/or the Regional Water Quality Control Board under Mitigation Measure 4.6.2b. For existing mitigation lands, Mitigation Measures 4.6.4a and 4.6.4b would reduce impacts to a less than significant level. (Draft EIS/EIR, Vol. 2, Section 4.6, pp. 4.6-112 through 4.6-115). The Draft EIS/EIR also includes a discussion of impacts to wetlands and stockponds previously created as mitigation (see Fig. 4.6-15, Vol. 2, Section 4.6, pp. 4.6-67 through 4.6-68, 4.6-107 through 4.6-112).

3.7 Master Response 7: Agriculture

3.7.1 Introduction

Overview

This master response addresses issues raised by two commenters regarding setting information, analysis of impacts to agricultural operations and lands, and additional mitigation measures, including siting alternatives.

This master response is organized by the following subtopics:

- 3.7.2 Setting Information
- 3.7.3 Impact Analysis
- 3.7.4 Mitigation of Agricultural Land Impacts

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- California Department of Conservation – S_DOC

Local and Regional Agencies

- East Bay Regional Park District – L_EBRPD

Organizations

- None

Individuals

- None

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Executive Summary, ES-73 to ES-75; Vol. 2, Section 4.8, Agriculture; Vol. 2, Section 4.17, Socioeconomics; Vol. 2, Section 4.20, Growth-Inducing Effects; and Vol. 3, Appendices E-1 and E-2, Alameda County and Contra Costa County Policies Relevant to Project Analysis, respectively.

3.7.2 Setting Information

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DOC-01 S_DOC-02

Summary of Issues Raised by Commenters

- Provide additional information on the agricultural setting of the project including information about the extent and location of farmlands as well as data about current and past agricultural use in the project area.

Response

The California Department of Conservation's (DOC) comments suggest that "any subsequent" CEQA document for the project include certain information. The EIS/EIR for the Los Vaqueros Reservoir Expansion Project is, however, a project-level environmental analysis, and it is unknown whether any subsequent CEQA document would be prepared. Therefore, all of DOC's comments will be addressed in the context of the Final EIS/EIR.

The Draft EIS/EIR uses the agricultural land categories recommended by the DOC's Important Farmland Inventory System and Farmland Mapping and Monitoring Program (FMMP) to evaluate impacts to Important Farmland. Important Farmland, defined as prime Farmland, Farmland of Statewide Importance, and Unique Farmland is identified in Section 4.8 (Vol. 2). As the Draft EIS/EIR states, most of the designated agricultural land in and near the project area is used for grazing rather than crops. Livestock grazing activities occur on upland areas where the topography is relatively steep and local surface or groundwater supplies are limited. Irrigated farming, used for orchards and field crops, occurs on properties to the north and east of Los Vaqueros Reservoir, and on low-lying properties in southeast Contra Costa County. The locations and extents of various types of farmland in and adjacent to the project area are provided in the Draft EIS/EIR in Figure 4.8-1 (Vol. 2, Section 4.8, pg. 4.8-6) and pages 4.8-5 and 4.8-8 (Vol. 2, Section 4.8). The approximate 22 acres of agricultural land that would be converted from agricultural to project-related land use under Alternatives 1 and 2 have recently been and are currently used for farming of various field crops as shown by the aerial photograph used for Draft EIS/EIR in Figure 3-19 Intake Facilities (Vol. 2, Chapter 3, pg. 3-56). Field crops that may be affected include alfalfa, wheat and oat hay, and orchard grasses that are typically used for horse and cattle feed (Mangini, 2009). Crop yields and gross revenue per acre for field crops in 2008 ranged from $422.28/acre for wheat/oat hay (based upon $153.00 gross revenue per ton with 2.76 tons yield per acre) to $1,061.54/acre for alfalfa (based upon $184.00 gross revenue per ton with 5.71 tons yield per acre) (Contra Costa County, 2008).

Section 4.17, Socioeconomic Effects, in the Draft EIS/EIR (Vol. 2) provides information concerning crop yields, farm revenues and agricultural jobs. Temporary or long-term reduction in agricultural resources has the potential to affect Contra Costa County's economy. As indicated in

Table 4.17-1 (Draft EIS/EIR, Vol. 2, Section 4.17, pg. 4.17-2), the County has an estimated 2,796 agricultural jobs and $1.34 billion in agricultural output, measured in 2008 dollars. The Contra Costa County Department of Agriculture 2007 Crop Report indicates that of the County's 482,000 total acres, the Land in Farms is 126,228 acres and Harvested Cropland is 26,018 Acres (Contra Costa County, 2008). As analyzed in Section 4.8 in the Draft EIS/EIR and shown in Table 4.8-5 (Vol. 2, Section 4.8, pg. 4.8-13), temporary construction activities associated with Alternatives 1 and 2 (under Power Option 1, and including the 22 acres that would also be permanently converted) could affect up to 171 acres of Important Farmland; Alternative 3 would temporarily affect up to 149 acres; and Alternative 4 would have no effect on Important Farmland. Project construction, including pipeline and transmission line construction under Alternatives 1 through 3, would occur over a period of up to 3 years, so only a portion of the acreage that would be temporarily affected would be out of agricultural production in any one year. Permanent impacts would total up to approximately 22 acres of Important Farmland (for Alternatives 1 and 2 and none for Alternatives 3 and 4 listed by project component in Table 4.8-6 in the Draft EIS/EIR (Vol. 2, Section 4.8, pg. 4.8-19). The maximum affected acreage represents less than 0.01 percent of the existing total 262,000 acres of farmland in Contra Costa County in 2006 and approximately 0.05 percent of the 41,619 acres of Important Farmland in the County (Draft EIS/EIR, Vol.2, Section 4.8, pg. 4.8-8). At $1,062 per acre, the permanent loss of 22 acres of field crops would represent $23,364 in lost agricultural output per year, or 0.00174 percent of the County's $1.34 billion in agricultural output, all measured in 2008 dollars. There would be no impact to Important Farmland under Alternative 4 as project components would not include power facilities and major pipelines occurring outside the watershed.

3.7.3 Impact Analysis

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DOC-03 S_DOC-05 L_EBRPD2-39

Summary of Issues Raised by Commenters

- Provide information about project impacts on agricultural land, including the type, amount and location of farmland conversion resulting from project implementation and growth-inducing impacts; impacts on current and future agricultural operations from land-use conflicts, increases in land values and taxes, and vandalism; and cumulative impacts.
- Provide information and discussion about Williamson Act Lands, including a map detailing the location of agricultural preserves, contracts that may be terminated in order to implement the project, and proposed uses of portions of the planning area that would continue to be under contract.
- The Draft EIS/EIR does not acknowledge a conflict between implementing the project and existing Williamson Act contracts.

Response

The Draft EIS/EIR quantifies and evaluates project impacts related to construction and operation (temporary, permanent and cumulative effects) upon Important Farmland, lands under Williamson Act contract, and nearby agricultural activities.

Type, amount and location of farmland conversion (direct and indirect). The discussion under Impact 4.8.2 in the Draft EIS/EIR (Vol. 2, Section 4.8, pp. 4.8-17 through 4.8-22) addresses the potential conversion of Important Farmland associated with the project alternatives. Table 4.8-6 (Draft EIS/EIR, Vol. 2, Section 4.8, pg. 4.8-18) presents the acres of Important Farmland that would be permanently affected by each project component, which provides an indication of the location of this farmland, under each alternative. Permanent impacts from the proposed project are shown by alternative in Table 4.8-7 (Draft EIS/EIR, Vol. 2, Section 4.8, pg. 4.8-19). Impacts related to the permanent conversion under Alternatives 3 and 4 are Less-than-Significant because these alternatives would cause no loss of Important Farmland.

DOC also refers to farmland conversion resulting indirectly from a project's inducement of growth. Section 4.20, Growth-Inducing Effects, in the Draft EIS/EIR analyzes the potential for the four project alternatives to remove water supply reliability as an obstacle to growth and, therefore, to indirectly induce growth (Draft EIS/EIR, Vol. 2, Section 4.20, pp. 4.20-2 through 4.20-12). As the Draft EIS/EIR explains, CCWD and each of the other water agencies that might benefit from the project have prepared long-term water supply plans. These plans have been designed to provide adequate water supply to meet the needs of both existing customers and the growth that has been planned in each water agency service area by the respective city and county land use agencies (Draft EIS/EIR, Vol. 2, pg. 4.20-12). It is not known whether or to what extent these agencies would in fact use the improved water supply reliability afforded by the project (particularly Alternative 1) to support future growth. It is also unknown, if improved water supply reliability did encourage a land use agency to allow future growth, whether or to what extent such growth would occur on Important Farmland. As noted in the Draft EIS/EIR's analysis of cumulative impacts (discussed below), the expectation is that Contra Costa and Alameda Counties will continue to lose agricultural land to urban and other non-agricultural uses. Given the recent fallowing of farmland throughout the state as a result of water shortages, however, it is also possible that land use agencies would decide to use increased water supply reliability to avoid fallowing more Important Farmland.

Temporary impacts on current and future agricultural operations from land-use conflicts, etc. DOC's reference to impacts on current and future agricultural operations from "land-use conflicts, increases in land values and taxes, vandalism, etc." appears to refer to off-site agricultural impacts. None of the project alternatives would cause conflicts with nearby agricultural uses, increase property values or property taxes, or increase public access to agricultural lands so as to encourage vandalism. As stated in the Draft EIS/EIR, the proposed project "would not result in further urbanization of the area, make agricultural land vulnerable to the pressures of urbanization, or lead to the additional loss of farmland to nonagricultural uses," (Draft EIS/EIR, Vol. 2, pp. 4.8-24 through 4.8-25). Rather, continued protection of the

Los Vaqueros Watershed would be compatible with nearby farming operations and would prevent encroachment of urban uses along Vasco Road.

During construction, however, Alternatives 1, 2 and 3 would temporarily affect agricultural uses within the project footprint. Temporary construction impacts to agricultural operations (Draft EIS/EIR, Vol. 2, Section 4.8, Impact 4.8.1, pp. 4.8-10 through 4.8-16) would occur on approximately 171 acres of Important Farmland for Alternatives 1 and 2, and 149 acres for Alternative 3. There would be no impact to Important Farmland under Alternative 4. Table 4.8-4 in the Draft EIS/EIR (Vol. 2, Section 4.8, pg. 4.8-11) presents the acreages of Important Farmland temporarily affected by each project component under Alternatives 1, 2, and 3, including approximately 22 acres for the new Delta Intake and Pump Station; 109 acres for the Delta-Transfer Pipeline; and 39 acres for Power Supply Option 1: Western Only. Project construction activities would cause short-term disturbance of agricultural lands during all or part of the approximate 3-year construction period. Construction activities could cause direct disturbance to agricultural lands or indirectly disrupt agricultural lands and activities – disruption of irrigation systems, soil compaction affecting drainage, dewatering, and dust generation. Measures to minimize temporary impacts are provided in Section 4.8, page 4.8-21 (Draft EIS/EIR, Vol. 2).

Cumulative Impacts. Impact 4.8.4 (Draft EIS/EIR, Vol. 2, Section 4.8, pp. 4.8-24 through 4.8-26) addresses cumulative impacts related to conversion of Important Farmland. The analysis provides an assessment of each of the alternatives in conjunction with other project area development. The Draft EIS/EIR describes Impact 4.8.4 as Significant and Unavoidable with respect to cumulative agricultural effects for Alternatives 1 and 2, and Less-than-Significant for Alternatives 3 and 4. However, with the proposed revisions to Mitigation Measure 4.8.2b (presented in the following subsection), which provides for acquisition of agricultural conservation easements, along with implementation of Mitigation Measures 4.8.1 and 4.8.2a, the cumulative farmland impacts associated with Alternatives 1 and 2 would be reduced to Less-than-Significant.

Similarly, related to the project's effect on farmland, Socioeconomic Impact 4.17.5 evaluates cumulative effects on Contra Costa County's economy as a result of conversion of agricultural land uses (Vol. 2, Section 4.17, Impact 4.17.5, pg. 4.17-20). The Draft EIS/EIR describes this impact as being Significant and Unavoidable for Alternatives 1 or 2, and Less-than-Significant for Alternatives 3 or 4 (Vol. 2, Section 4.17, Impact 4.17.5, pg. 4.17-20). However, with implementation of revised Mitigation Measure 4.8.2b along with Mitigation Measures 4.8.1 and 4.8.2a, this impact would be reduced to Less-than-Significant with Mitigation for Alternatives 1 and 2.

See Section 3.7.4, Mitigation of Agricultural Land Impact, below, for further discussion of mitigation measures and proposed revisions to Mitigation Measure 4.8.2b to address cumulative farmland and socioeconomic impacts.

Williamson Act Lands. Impacts related to Williamson Act lands are quantified by alternative and by project component under Impact 4.8.3 (Draft EIS/EIR, Vol. 2, Section 4.8, pp. 4.8-22 through 4.8-24). Figure 4.8-2 (Draft EIS/EIR, Vol. 2, Section 4.8, pg. 4.8-7) shows a map

detailing the location of Williamson Act contract lands in the project area. After construction of project facilities is complete, there would be no change from existing land uses on affected properties that are under Williamson Act contract. The majority of the land under contract that would be affected is grazing land that would be returned to grazing land. One Williamson Act property, currently used to grow crops (located along Vasco Road within the footprint of the Transfer-Bethany Pipeline alignment), would be returned to cropland. No orchards would be affected.

The discussion of impacts to Williamson Act land (Draft EIS/EIR, Vol. 2, Section 4.8, Impact 4.8.3, pp. 4.8-22 through 4.8-24) indicates that under Alternatives 1 and 2, project components and pipeline alignments would be located on or next to nine properties under Williamson Act contracts. Under Alternative 3, up to four Williamson Act properties would be affected. No Williamson Act lands would be affected by Alternative 4 Impacts to Williamson Act contract lands would be temporary impacts related to construction. The temporarily impacted lands would be restored upon completion of the project.

The Delta-Transfer Pipeline would be installed within the existing utility corridor used for CCWD's existing Old River Pipeline; therefore, although the pipeline would pass through two Williamson Act properties, no new utility corridor would be needed.

A temporary construction easement on an adjacent parcel currently under Williamson Act contract would be required. The expanded Transfer Facility would be located near one property currently under Williamson Act contract, but would not require a construction easement on that property because transfer facility construction would not extend beyond existing CCWD property lines.

The Transfer-LV Pipeline would pass by two parcels currently under Williamson Act contract and a temporary construction easement would be required.

Although the route of the Transfer-Bethany Pipeline has been planned to minimize contact with Williamson Act parcels, construction of the Transfer-Bethany Pipeline would require temporary construction easements (up to 300 feet wide) and permanent right-of-way (up to 85 feet wide) through acquisition of fee title or easement interests in active or fallowed agricultural lands that are currently under Williamson Act contract. It is possible that fee title purchase of land would be required. Whether through acquisition of fee title or permanent easement, the land would remain as grazing land. As discussed in the Draft EIS/EIR, the Williamson Act anticipates such acquisitions. As noted in the Draft EIS/EIR, proposed water facility uses on Williamson Act contracted lands are considered compatible under Section 51238.1 of the Government Code, which governs compatibility of Williamson Act preserves with nonagricultural uses (Vol. 2, Section 4.8, pp. 4.8-23 through 4.8-24).

Construction of electrical facilities under Power Option 1 (Western Only) would pass near one property under Williamson Act contract within existing utility easements. Under Power Option 2, the upgrade of an existing Pacific Gas and Electric (PG&E) transmission line would pass south of one property under Williamson Act contract, also within an existing utility easement. Therefore,

there would be no Williamson Act impacts resulting from either power option. Both PG&E and Western confirmed that they routinely allow agricultural activities like grazing and farming practices including row crops, rice fields and also orchards within their power transmission rights-of-way (Fisi, 2009; Young, 2009).

The proposed project components (pipelines) to be constructed on Williamson Act contracted lands would not change the overall agricultural character or use of the proposed project site and would not promote the future conversion of agricultural lands to urban or other uses or hinder the overall preservation of agricultural uses on lands in the surrounding area. Therefore, the project would not conflict with Contra Costa County policies regarding the commitment to preserve agricultural uses in the project area, and would not involve other changes in the existing environment that could result in the conversion of farmland to non-agricultural use.

As noted above, construction of project pipelines would require acquisition of temporary construction easements, and operation of the Transfer-Bethany Pipeline would require acquisition of permanent easement interests in grazing land or fallowed agricultural lands that are under Williamson Act contract and along the pipeline and power line alignments. Because construction and operation of underground water pipelines and overhead power lines is considered compatible with Williamson Act contracts (Oborne, 2009), and because the acquisition of easements for maintenance of such pipelines and overhead power lines would not interfere with the current agricultural uses of the overlying or underlying land, the impacts of Alternatives 1, 2 and 3 on Williamson Act lands would be Less-than-Significant. Alternative 4 would cause no impact.

3.7.4 Mitigation of Agricultural Land Impacts

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DOC-04 L_EBRPD2-38

Summary of Issues Raised by Commenters

- The Draft EIS/EIR does not consider siting alternatives that could reduce or eliminate the Project's permanent impacts to farmland.
- Mitigation measures for the loss of agricultural land do not help reduce the severity of the project's impact upon agricultural land, and omit discussion of other feasible measures (in addition to conservation easements) such as siting alternatives.
- Provide additional information on mitigation for the project including information about conservation easements, mitigation fees and other conservation tools.

Response

One comment (L_EBRPD2-38) asks whether the need to convert agricultural land for the new Delta intake under Alternatives 1 and 2 could be avoided through project modifications such as consideration and selection of a non-agricultural site for the new Delta Intake and Pump Station.

Alternative sites for the new Delta intake were evaluated as part of the project development process, which is discussed in Chapter 3, Project Description: Description of Project Alternatives, in the Draft EIS/EIR (Vol. 1). Section 3.2.4, Facilities Siting, discusses the alternatives screening process related to the evaluation of nine potential intake locations on Old and Middle Rivers in the vicinity of Victoria Island, evaluated in 2001-2002. Because the intake facility must be located on the shoreline along the river, there are no sites available to avoid farmland. Important Farmland occurs adjacent to Old River and Victoria Canal throughout the study area.

EBRPD and DOC both identify additional options for mitigation for the permanent loss of approximately 22 acres of agricultural land under Alternatives 1 and 2. In its comment letter, DOC recommends the use of permanent conservation easements to mitigate for the direct loss of agricultural land: "…the Department recommends the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land" (L_DOC-04, pg. 2 of 4, paragraph 4). DOC also recommends, however, that where "growth inducing or cumulative agricultural impacts are involved, … this ratio of conservation easements to lost agricultural land be increased." EBRDP also notes that a higher compensation ratio might better reduce the project impact.

Acquisition of agricultural conservation easements is a useful tool for regional conservation of important farmland that reduces the total amount of farmland that is available for conversion to future urban use or other non-agricultural uses. In response to these comments, the mitigation ratio for acquisition of agricultural conservation easements relative to acres of important farmland permanently impacted by the project is increased from 1:1 to 1.5:1. As revised, this measure would result in conservation of 50 percent more farmland than would be affected by Alternative 1 or 2. While this revised measure would provide a greater level of mitigation for direct project effects on important farmland, the project would still result in permanent loss of such farmland. Although Alternatives 1 and 2 affect a relatively small area of farmland (up to 22 acres), this permanent loss of farmland remains a significant and unavoidable impact. However, this revised mitigation measure does reduce the project's contribution to cumulative effects on farmland, by limiting future farmland conversion, to a less than significant level. Correspondingly, this revised measure also reduces the associated cumulative socioeconomic effects to a less than significant level as well.

Measure 4.8.2b and the corresponding impact conclusion for Impact 4.8.2 (Draft EIS/EIR, Vol. 2, Section 4.8, pp. 4.8-21 through 4.8-22) has been revised as shown below. These text changes are included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

> **Measure 4.8.2b:** CCWD will provide the following mitigation for the permanent conversion of Important Farmland:
>
> For each acre of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance that is permanently converted to nonagricultural use, 1.5 acres of agricultural conservation easement will be obtained. An agricultural conservation easement is a voluntary, recorded agreement between a landowner and a holder of the easement that preserves the land for agriculture. The easement places legally enforceable restrictions on the land. The exact terms of the easement are to be negotiated in coordination with a local agriculture land

trust, but restricted activities will include subdivision of the property, non-farm development, and other uses that are inconsistent with agricultural production. The mitigation lands must be of equal or better quality (according to the latest available FMMP data) and have an adequate water supply. In addition, the mitigation lands must be within the same county. Information presented in Table 4.8-6 indicates that this compensatory mitigation would require acquisition of easements on about ~~22~~33 acres (22 acres of impact x 1.5 acres mitigation) of Farmland of Statewide Importance or better quality farmland, preferably within Contra Costa County.

Impact Significance after Mitigation: Significant and unavoidable. These mitigation measures would reduce the impact of the proposed conversion of Farmland of Statewide Importance to nonagricultural uses, but not to a less than significant level.

As revised, this measure would result in conservation of 50 percent more farmland than would be affected by the project. Therefore, implementation of this revised mitigation measure would reduce the cumulative effects associated with Alternatives 1 and 2 on both farmland and the socioeconomic activity related to farmland activity from the previous designation of Significant and Unavoidable to Less-than-Significant with Mitigation.

Impact 4.8.4 regarding the project's contribution to cumulative impacts from conversion of Important Farmland to Nonagricultural uses (Draft EIS/EIR, Vol. 2, Section 4.8, pp. 4.8-24 through 4.8-26) has been revised as follows:

Impact 4.8.4: The project would involve changes in the environment that, due to their location or nature, could contribute to cumulative impacts from conversion of Important Farmland to nonagricultural uses. (Less-than-Significant for Alternative 4; Less-than-Significant with Mitigation for Alternatives 1, 2, and 3~~; Significant and Unavoidable for Alternatives 1 or 2~~)

Alternative 1

Text on Draft EIS/EIR page 4.8-25, final paragraph under the Alternative 1 discussion is revised as follows:

The incremental contribution of farmland conversion associated with the proposed project would be a cumulatively considerable contribution to a significant cumulative impact. This impact would be significant but would be mitigated to Less-than-Significant with implementation of Mitigation Measures 4.8.2a and 4.8.2b, which provide for minimizing construction effects on farmland during and following project construction activities as well as compensation through acquisition of agricultural conservation easements at a ratio of 1.5 to 1.

Alternative 2

Text on Draft EIS/EIR, pp 4.8-25 and 4.8-26, under the Alternative 2 discussion is revised as follows:

Under Alternative 2, which would construct the same facilities as Alternative 1, the proposed project would contribute to a significant cumulative impact with respect to the cumulative conversion of Farmland of Statewide Importance to nonagricultural use~~, even with implementation of Mitigation Measure 4.8.2a and 4.8.2b~~. The incremental

contribution of farmland conversion associated with the proposed project would be a cumulatively considerable contribution to a significant cumulative impact. Under Alternative 2, this impact would ~~therefore~~ be significant, but would be mitigated to a less than significant level with implementation of Mitigation Measures 4.8.2a and 4.8.2b, which provide for minimizing construction effects on farmland during and following project construction activities as well as compensation through acquisition of agricultural conservation easements at a ratio of 1.5 to 1.

Mitigation Measure

Implementation of Agricultural Resources Mitigation Measures 4.8.1 and 4.8.2 (a and b) would ~~minimize potential impacts under Alternatives 1 and 2; however, those measures would not~~ reduce cumulative impacts to less than significant levels for Alternatives 1 and 2. ~~The level of significance after mitigation would be a significant and unavoidable cumulative impact for Alternatives 1 and 2.~~ With Mitigation Measure 4.8.2a, Alternative 3 would not result in a cumulatively considerable contribution to a significant impact on agriculture.

Impact Significance after Mitigation: ~~Significant and Unavoidable for Alternatives 1 or 2;~~ Less-than-Significant ~~for Alternatives 3 and 4~~.

Chapter 4.17 Socioeconomic Effects, Impact 4.17.5 in the Draft EIS/EIR, Vol. 2, Section 4.17, pp. 4.17-20 through 4.17-21) is revised as follows:

Impact 4.17.5: Construction of the project alternatives, when combined with construction of other future projects, could have a potential cumulative effect on Contra Costa County's economy as a result of ~~temporary~~ permanent loss of agricultural land uses. (Less-than-Significant for Alternatives 1 – 4. ~~3 or 4; Significant and Unavoidable Less Than Significant for Alternatives 1 or and 2~~)

Alternative 1

Impact 4.17.2 indicates that the socioeconomic impacts associated with temporary loss of agricultural land use resulting from construction activities would be Less-than-Significant. Due to the small area affected by these impacts and the temporary nature of the construction activities, these impacts were determined to be negligible in relation to the overall regional economy. However, in Section 4.8, the agricultural analysis determined that the project would have significant cumulative impact on the region's agricultural resources because the project would result in the permanent reduction of Important Farmland (Impact 4.8.4).

With or without the project, the trend of land conversion from agricultural uses to urban and other non-agricultural uses (e.g., wildlife habitat enhancement) in the Central Valley would continue. It is likely that other future projects, ~~such as expansion of Discovery Bay into the Cecchini Ranch property~~ particularly large development projects that would require large tracts of land, would convert agricultural lands to non-agricultural uses; these lands may or may not be designated Prime Farmland, Unique Farmland, and Farmland of Statewide Importance and may or may not be under Williamson Act contracts.

As a number of the proposed projects listed in Appendix I, "Local Development Projects Considered in Cumulative Impact Analyses," are not yet in the environmental planning

stage, the acreage of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance that could be converted by these projects is not known. However, in general, the acreage of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance in Contra Costa County and, to a lesser degree, in Alameda County, is expected to decline. The proposed project would contribute incrementally to this decline. However, with implementation of Mitigation measure 4.8.2b, which provides for acquisition of agricultural conservation easements at a ratio of 1.5:1 to protect farmland from future development, the incremental contribution of farmland conversion associated with the proposed project would not be a cumulatively considerable contribution to an existing significant cumulative impact. This impact would therefore be Less-than-Significant ~~and unavoidable~~ with Mitigation.

Alternative 2

Under Alternative 2, which would construct the same facilities as Alternative 1, the project would result in a Less-than-Significant ~~and unavoidable~~ cumulative impact with respect to the cumulative conversion of Farmland of Statewide Importance to non-agricultural use.~~,~~ ~~even~~ with implementation of mitigation Measure 4.8.2a and 4.8.2b. The incremental contribution of farmland conversion associated with the proposed project would not be a cumulatively considerable contribution to an existing significant cumulative impact. Under Alternative 2, this impact would ~~therefore~~ be Less-than-Significant ~~and unavoidable~~ with Mitigation.

Mitigation Measure

Implementation of Agricultural Resources Mitigation Measures 4.8.1 and 4.8.2 (a and b) would minimize potential impacts under Alternatives 1 and 2~~; however, those measures~~ and would ~~not~~ reduce cumulative impacts to less than significant levels. The level of significance after mitigation would be Less-than-Significant with Mitigation ~~a significant and avoidable cumulative impact~~.

Impact Significance after Mitigation: Less-than-Significant~~ and Unavoidable for Alternatives 1 or 2; Less than Significant for Alternatives 3 and 4~~.

DOC's comment letter also mentions that information about other feasible measures such as mitigation fees, mitigation banks and approximately 30 conservation tools is available from DOC upon request. A request by CCWD for information on the approximately 30 conservation tools resulted in receipt of a 1997 Discussion Paper titled Agricultural Land Use Conservation Tools (DOC, 1997). Review of the paper indicates that purchase of Agricultural Conservation Easements is the first tool listed. Other tools such as a transfer of development rights, greenbelts, buffers and lease agreements for protecting agricultural land use show that DOC considers many different valuable mechanisms. However, it should be noted that few of these methods provide any assurance of providing in-kind farmland with provisions for "in perpetuity" mitigation compared to the purchase of a permanent agricultural conservation easement. Therefore, the provision of a permanent agricultural conservation easement as project mitigation would serve as the most effective way to mitigate project impacts and protect regional agriculture when compared with the other conservation tools listed in DOC's discussion paper.

EBRPD suggests that "remaining farmland, or an equal or greater amount of farmland, be placed under Williamson Act contract." Mitigation Measure 4.8-2b calls, however, for an agricultural conservation easement, which is more protective of mitigation lands than is a Williamson Act contract. EBRDP suggests two additional measures, which EBRPD identifies as being included in a 1990 publication by American Farmland Trust (AFT) (AFT, 1990). The first of these is "[r]equiring conversion of urban uses on former farmland back to agricultural use." However, CCWD and Reclamation lack jurisdiction over lands in urban uses, so could not require their conversion to farmland. EBRPD also suggests "[r]equiring that existing agricultural land be newly brought into production". Again, CCWD and Reclamation lack jurisdiction over any existing agricultural lands that could be newly brought into production. As a result, these types of measures are not feasible for implementation. A review of the relevant discussion in the AFT publication indicates that these mitigation measures are discussed as options for local governments to implement when considering mitigation options for a development projects in their jurisdiction (AFT, 1990, pg. 5-4). Neither CCWD nor Reclamation has the authority to require that any landowners place their land under Williamson Act contract nor can land held by a public agency be placed under Williamson Act contract. Neither CCWD nor Reclamation has the authority to require that any landowners commence agricultural activities on land that is not currently being grazed or farmed or that they discontinue existing urban uses and replace those uses with agricultural activities. For Alternatives 1 and 2, acquisition of agricultural conservation easements is the most feasible and effective mitigation measure.

3.8 Master Response 8: Biological Resources

3.8.1 Introduction

Overview

This master response addresses the issues raised by commenters about the terrestrial biological resources impact analysis and implementation of mitigation measures related to the Los Vaqueros Reservoir Expansion Project. This master response is organized by the following subtopics:

- 3.8.2 Overall Mitigation Strategy
- 3.8.3 Habitat Impacts and Mitigation
- 3.8.4 Wildlife Impacts and Mitigation
- 3.8.5 Special-Status Plant Impact Analysis and Mitigation
- 3.8.6 Wetlands and Vernal Pools
- 3.8.7 Conservation Easements
- 3.8.8 East Contra Costa Habitat Conservation Plan (HCP)/Natural Communities Conservation Plan (NCCP)
- 3.8.9 Cumulative Effects

Commenters

Commenters that address the topic of terrestrial Biological Resources include:

Federal Agencies

- Environmental Protection Agency – F_EPA

State Agencies

- California Department of Fish and Game – S_DFG

Local and Regional Agencies

- Contra Costa County, Public Works Department – L_CCCPW
- East Bay Regional Park District – L_EBRPD
- East Contra Costa Habitat Conservancy – L_ECCCHC

Organizations

- East Bay California Native Plant Society – O_EBCNPS
- Native Alliance of the Sierra Nevada Foothills – O_NASNF
- Save Mount Diablo – O_SMD

Individuals

- Betty Lu Graham – I_Graham
- Dave Fontaine – I_Fontaine
- Ralph Osterling – I_Osterling

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Executive Summary, pp. ES-45 through ES-72; Vol. 2, Section 4.6 Biological Resources, pages 4.6-1 through 4.6-188, and Vol. 3, Appendix D.

3.8.2 Overall Mitigation Strategy

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DFG-06	S_DFG-09	S_DFG-12	S_DFG-13
S_DFG-14	S_DFG-15	O_SMD-01	O_SMD-02
O_SMD-03	O_SMD-04	O_SMD-05	O_SMD-06
O_SMD-08			

Summary of Issues Raised by Commenters

- Proposed mitigation for terrestrial biological resources relies on the CALFED MultiSpecies Conservation Strategy (MSCS), which does not adequately address the issues of existing encumbrances, cumulative impacts, and changed circumstances on previously conserved lands.
- The only mitigation areas considered should be able to meet success criteria approved by the California Department of Fish and Game (CDFG), and be transferred in fee title or preserved through conservation easement or other mechanism approved by CDFG.
- Mitigation and monitoring plans should be included in the Draft EIS/EIR and should be approved by regulatory agencies before the EIS/EIR is certified. Delaying this plan until after the EIS/EIR is certified is inadequate.
- Impacts should be mitigated at the highest temporary and permanent compensation ratios based on consultation with regulatory agencies; where existing mitigation land is impacted, the mitigation ratio should be up to 20:1.

Response

Mitigation Ratios

Several comments question the adequacy of the mitigation acreage ratios identified in the Draft EIS/EIR, stating that some of these ratios are too vague or are insufficient to mitigate the impacts of project alternatives to less than significant levels. The mitigation ratios identified in the Draft EIS/EIR range from 1:1 to 5:1. They are based on extensive investigations of the habitat qualities of both the areas that would be affected by the project alternatives and the replacement habitat areas that are potentially available for acquisition; the detailed CALFED MSCS for conservation of plants, fish and wildlife that may be affected by elements of the Bay-Delta Program, issued in 2000; input from state and federal resource agencies with which Reclamation and CCWD have met over the past five years; information, policies and conservation strategies presented in the East Contra Costa County Habitat Conservation Plan/Natural Community

Conservation Plan (ECCC HCP/NCCP) (ECCCHCPA, 2006) and the professional judgment of the biologists who prepared the Draft EIS/EIR analysis (Vol. 2, Section 4.6, pp. 4.6-72 through 4.6-188).

The CALFED MSCS identifies where CALFED actions are likely to have an adverse effect on special status species are not likely to provide discernable benefit to those species. For those species, such as the San Joaquin kit fox, which are likely to be adversely affected by, and not to receive discernable benefit from the CALFED actions, the MSCS assigns a conservation goal to maintain the species and identifies conservation measures to mitigate adverse impacts and achieve the conservation goal. The MSCS identifies a range of recommended mitigation ratios, and the Draft EIS/EIR uses the MSCS as guidance to develop compensatory mitigation ratios and reflect a range of possible land acquisition requirements to compensate for project effects upon terrestrial habitats and species. Where appropriate, mitigation for the Los Vaqueros Reservoir Expansion Project incorporates the high end of the recommended compensation ratio range, as in the case of the San Joaquin kit fox. The compensation ratios identified in the mitigation measures for the project, coupled with the conservation principles identified to guide a comprehensive biological resource mitigation program for this project, reflect and reinforce the resource conservation goals and objectives identified in the MSCS, and the ECCC HCP/NCCP. The habitat compensation component of the project's overall mitigation program will preserve large areas of habitat and preserve or establish habitat linkages in the region.

CDFG states (S_DFG-06) that deficiencies in the discussion and analysis of impacts to existing encumbrances, cumulative impacts, and changed circumstances on previously conserved lands make it difficult to determine if implementation of the avoidance strategies and mitigation measures proposed in the Draft EIS/EIR will reduce impacts to a less than significant level. The analysis of the project effects identified in Comment S_DFG-06 and associated mitigation is discussed in the Draft EIS/EIR with further discussion of habitat and species-specific effects provided below in Section 3.8.4 (Wildlife Impacts and Mitigation) and Section 3.8.9 (Cumulative Effects).

Reclamation and CCWD understand that the resource agencies concerned with terrestrial biological resources may, as part of regulatory permitting processes, impose additional requirements beyond those that the lead agencies have concluded are adequate to mitigate significant impacts. These regulatory permitting processes are not required to be completed before the EIS/EIR is finalized.

One commenter (O_SMD-01 and O_SMD-08) asserts that mitigation ratios for previously conserved acreage that would be inundated due to an expanded reservoir should be up to 20:1. There is no basis in CEQA or NEPA, however, for applying a mitigation ratio of this magnitude. For the purposes of the EIS/EIR, the impacts to existing conserved lands are analyzed according to the same criteria as impacts to other habitat lands, based on the lands' habitat quality, functions and values.

CDFG Review and Approval of Mitigation Lands

CDFG's comments on specific impacts (Comments S_DFG-09, S_DFG-12, S_DFG-13, S_DFG-14 and S_DFG-15) also state generally that CDFG must approve mitigation lands for their biological suitability and that these lands must be transferred in fee title or preserved through conservation easements approved by CDFG. The Draft EIS/EIR acknowledges that both CDFG and USFWS will have key roles in helping to select mitigation lands, and selected lands would be subject to agency review and approval to ensure that they comply with relevant permit conditions. Reclamation and CCWD will continue to work with CDFG to comply with applicable environmental regulatory procedures and requirements.

Mitigation and Monitoring Plans

One comment (L_SMD-05) quotes one phrase from a fairy shrimp mitigation measure in the Draft EIS/EIR, beginning "develop and implement a mitigation, monitoring, and management plan…." The comment states that this language shows the Draft EIS/EIR postpones the full study of project impacts and that mitigation and monitoring plans for the project should be prepared prior to Draft EIS/EIR approval. The Draft EIS/EIR, however, already rigorously characterizes project impacts to sensitive resources, including wetlands, sensitive plant communities and other sensitive biological resources in the project area, and identifies extensive mitigation measures to address these impacts where appropriate. This is particularly the case with respect to fairy shrimp; the language quoted in the comment appears on the third page of detailed mitigation measures for the two fairy shrimp species that could be affected by project alternatives (Draft EIS/EIR, Vol. 2, Section 4.6, pp. 4.6-125 through 4.6-128).

Several of the detailed individual mitigation measures for biological resource impacts also call for development and implementation of site-specific and/or resource-specific implementation plans and corresponding monitoring and reporting efforts. As described in several of the mitigation measures, the plans required in some cases shall include specific provisions for the restoration, enhancement, and/or preservation of impacted resources; thresholds of success; monitoring and reporting requirements; site-specific designs for site restoration and enhancement activities; and long-term maintenance activities. The Draft EIS/EIR identifies the required performance objectives and components of the resource mitigation and monitoring plans [e.g., see Draft EIS/EIR, Section 4.6, pg. 4.6-91 (oak woodlands), pg. 4.6-103 (wetlands), pg. 4.6-106 (rare plants), pg. 4.6-113 (California red-legged frog), etc.]. Individual mitigation plans will provide specific details such as the location of off-site mitigation areas, size and functional requirements for compensatory wetlands, and requirements for oak mitigation sites and planting.

To the extent that the comment seeks completion of a CEQA mitigation monitoring and reporting program to be included in the Draft or Final EIS/EIR, this is not required. In accordance with CEQA requirements, a CEQA mitigation monitoring and reporting program (MMRP) will be prepared and submitted to the CCWD Board for adoption at the time that a project alternative is presented to the Board for adoption. An MMRP addresses how compliance with adopted mitigation measures will be monitored and confirmed during implementation of an approved project; the MMRP is part of the project approval process, not part of the EIR preparation or public review process.

3.8.3 Habitat Impacts and Mitigation

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DFG-02	L_CCCPW-04	L_EBRPD2-05	L_EBRPD2-15
L_EBRPD2_19	L_EBRPD2-20	L_EBRPD2-23	L_EBRPD2-28
L_EBRPD2-30	L_EBRPD2-32	L_EBRPD2-35	L_EBRPD2-36
L_ECCCHC-02	L_ECCCHC-03	O_EBCNPS-04	O_SMD-13
I_Graham-02	I_Graham-03	I_Osterling-01	

Summary of Issues Raised by Commenters

- The interface between new trails on the east side of the reservoir, in areas formerly designated as no public access, with adjacent undeveloped areas needs to be fully analyzed.
- The Byron Vernal Pools Preserve is not identified in Draft EIS/EIR, and it would be adversely affected by construction of the Transfer-Bethany Pipeline. The project would interfere with EBRPD planned restoration of wetlands at that location.
- The mitigation opportunities discussion does not demonstrate that it will be feasible to both replace trails within the watershed and replace habitat and associated mitigation restrictions on land that will be inundated.
- The project should prioritize local mitigation in close proximity to affected habitat.
- The Draft EIS/EIR does not fully consider the biological resource impacts of draining or refilling Los Vaqueros Reservoir.
- The Draft EIS/EIR does not consider impacts to common wildlife species and large mammals that live in the Los Vaqueros Watershed.
- The habitat categories identified in the impact and mitigation analyses are too broad and a detailed assessment of subcategories should be performed.

Indirect Effects on Wildlife Habitat of the proposed Eastside Trail

One comment (S_DFG-02) states that the Draft EIS/EIR does not adequately identify and discuss indirect adverse effects associated with the interface of the proposed developed and undeveloped areas, specifically the potential impacts to undeveloped areas located east of Los Vaqueros Reservoir resulting from development of a public hiking trail on the east side of the reservoir.

Recreation facilities can indirectly affect wildlife when recreational users alter the soil and vegetation of a particular area. For example, an assessment of high use pedestrian traffic areas near campgrounds found that these areas may experience reduced soil porosity with altered soil chemistry, reduced plant cover and density, with altered vegetation composition and spatial distribution of plants (Knight, 1995). However, within the Los Vaqueros watershed camping is not allowed and the trails do not receive the level of use that would typically be associated with a campground area. In addition, for the proposed Eastside Trail, the created facilities would use an existing maintained gravel road that is currently used by livestock managers, wind farm employees, and CCWD staff, within an area that is grazed by livestock. As identified in

Draft EIS/EIR Figure 3-28 (Vol. 1, Chapter 3, pg. 3-82), several connector roads would also be created to join the existing roads. The final trail would route recreational users away from sensitive resources such as vernal pools and seasonal ponds. Based on CCWD's experience with public use of other trails within the watershed, only limited use of the Eastside Trail would be expected. Access would be restricted to within the managed roadway, much like the Westside Trail. Finally, the Eastside Trail is proposed as a hiking only trail with no bicycle or horse use permitted. As a result, no habitat modifying effects would be anticipated, and plant and wildlife use are not expected to change in these areas following project implementation. For these reasons, as discussed in the Draft EIS/EIR, the Eastside Trail is not expected to result in significant indirect impacts to habitat or sensitive resources.

While the Draft EIS/EIR indicates that with proper siting and management the proposed Eastside Trail would be developed and used without significant impact to biological or cultural resources on the east side of the reservoir, in response to comments expressing concern about this project element, CCWD has reduced the proposed trail, eliminating all but the first short segment extending from the southern Marina area a short distance to the east. This substantially reduced trail addition would lie entirely within the Low Intensity Recreation area (shown on Draft EIS/EIR Figure 4.6-16, pg. 4.6-69), consistent with the requirements of the 1995 Biological Opinion (USFWS, 1995). Shortening of the Eastside Trail is described and evaluated in Chapter 2, and the impact assessment tables in Appendix A, of this Final EIS/EIR.

Impacts to the Future "Byron Vernal Pools Regional Preserve"

Several comments indicate that the future EBRPD "Byron Vernal Pools Regional Preserve" was not specifically identified or discussed in the Draft EIS/EIR (L_EBRPD2-14, L_EBRPD2-20, L_EBRPD2-28, L_ECCCHC-02, L_ECCCHC-03, O_EBCNPS-04). The only project component that would be constructed near the EBRPD future Byron Vernal Pools Regional Preserve is the Transfer-Bethany Pipeline in Alternatives 1 and 2. No component of Alternative 4 would be located near the preserve. In EBRPD's 2007 Master Plan Map this "future preserve area" is shown to the west of Vasco Road on the other side of the road from and approximately 1,000 feet away from the alignment for the proposed Transfer-Bethany pipeline, which is a component of Alternatives 1 and 2. (The pipeline would not be constructed under Alternatives 3 or 4). Initially, it appeared that the Byron Vernal Pools Regional Preserve would not yet be created by the time construction of the Transfer-Bethany pipeline occurred. Inquiries to the Park District during the Draft EIS/EIR preparation did not uncover the fact that the Park District was moving ahead with private property acquisition in this area or refinement/modification of its proposed preserve location until shortly before publication of the Draft EIS/EIR document. However, the lands purchased by EBRPD for this preserve had been fully surveyed and evaluated during preparation of the Draft EIS/EIR. Upon learning the preserve may be in place by the time of project implementation, CCWD moved the proposed pipeline alignment from its originally proposed location to avoid the preserve property. The biological resources on these lands are accurately shown on Figure 4.6-23 (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-98) and other figures on which the alignment is depicted.

Although the preserve is not mentioned by name, potential impacts on the Byron Vernal Pools Regional Preserve parcel were analyzed in the Draft EIS/EIR Biological Resources Environmental Consequences evaluation (Vol. 2, Section 4.6.2, pp. 4.6-72 through 4.6-128), which evaluated impacts to the area's northern clay pan vernal pool habitat (Impact 4.6.1); jurisdictional wetlands (Impact 4.6.2); and listed vernal pool fairy shrimp and their habitat (Impact 4.6.6). In regard to Comment L_EBRPD2-28, in part, the Draft EIS/EIR concluded that the installation of the Transfer-Bethany Pipeline within Armstrong Road "is not expected to indirectly affect local vernal pool hydrology in pools outside the alignment by altering surface flows, groundwater flow, or infiltration rates, or substantially reducing the quality or extent of the overall vernal pool complex outside the project alignment" (Section 4.6, pg. 4.6-124). As of February 2010, wetland creation and enhancement activities are underway at the preserve. Thus, this site is recognized as an existing feature in the Draft EIS/EIR with the addition of the following text to the Biological Resources Project Setting (Section 4.6, pg. 4.6-17, first paragraph, last sentence):

> Vernal pool conditions occur in a portion of the Transfer-Bethany Pipeline alignment on Armstrong Road near Byron Airport, and in areas farther south along this alignment, and are being created though are not yet functional at the adjacent Byron Vernal Pools Regional Preserve.

This text change is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

Once CCWD became aware of plans for protecting and restoring the Byron Vernal Pools Regional Preserve, it continued its efforts to avoid and minimize impacts by further limiting the width of the proposed Transfer-Bethany pipeline construction zone in the Armstrong Road area of the proposed preserve while also protecting other vernal pools on the Byron Airport property to the east. To the extent possible, construction activities and pipeline placement will be limited to the Armstrong Road right-of-way to avoid, minimize and mitigate impacts to the area's northern clay pan vernal pool habitat (Mitigation Measures 4.6.1a and 4.6.1b); jurisdictional wetlands (Mitigation Measures 4.6.2a and 4.6.2b); and listed vernal pool fairy shrimp and their habitat (Mitigation Measures 4.6.6a and 4.6.6b). To respond to Comment L_EBRPD2-28, in part, placing the pipeline within the road easement would minimize encroachment into the adjacent preserve's sensitive habitats. Also, the typical 85 foot wide construction right-of-way would be reduced in width such that the work area would not encroach on the preserve property or impact sensitive habitat elements on this site.

In summary, the Transfer-Bethany pipeline alignment does not cross the future preserve property. Measures to avoid, minimize and, as necessary, mitigate identified Transfer-Bethany Pipeline construction impacts along the east edge of the preserve adjacent to Armstrong Road have been identified. To further clarify the location of the Transfer-Bethany pipeline in the vicinity of the Byron Vernal Pools Regional Preserve, the text in Chapter 3 in the Draft EIS/EIR (Vol. 1, pg. 3-66) is to be corrected as shown below.

> As shown on Figure 3-21, the Transfer-Bethany Pipeline would start on the eastern side of Vasco Road near the Expanded Transfer Facility with a connection to the Delta-Transfer Pipeline and extend approximately 8.5 to 8.9 miles southeast to Bethany Reservoir. The alignment would extend southeast generally parallel to Vasco Road for about ~~3.8~~ 3.0 miles, then move away from Vasco Road to the southeast and then south for approximately 1.0 mile to connect with Armstrong Road ~~to the corner of~~ where Armstrong Road turns south. The pipeline would continue south along Armstrong Road for about 1.3 miles and then traverse southeast overland approximately 1.5 miles to a point close to the California Aqueduct. At this point, there are two options for the final southern segment of the pipeline to the Bethany Reservoir Tie-in: a Westside Option and an Eastside Option. As described below, both of these options include tunnel segments (see Figure 3-23).

This text change is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

Other mitigation measures identified in the Draft EIS/EIR that address potential impacts to biological resources from construction dust, other construction pollutants, construction noise and construction lighting will be equally applied to protect resources at the Byron Vernal Pools Regional Preserve. The potential indirect effects of the Transfer-Bethany Pipeline construction, which do not directly impact the Preserve, would be short-lived and fully mitigated through the implementation of protective measures.

Mitigation Opportunities Discussion

EBRPD (L_EBRPD2-32) expresses the opinion that the Draft EIS/EIR's discussion of mitigation opportunities for natural communities is too broad and does not represent the variety of habitat types that would be impacted by the project. As an example, the comment notes that the grassland habitat type includes such habitat as non-native annual grassland, native perennial grassland, alkali grassland and grasslands with special features like vernal pools. One comment (L_EBRPD2-15) questions whether it will be feasible to both replace trails within the watershed and replace habitat and associated mitigation restrictions on land that will be inundated.

The mitigation opportunities analysis screens land throughout the eastern Contra Costa County project region to demonstrate the existence of large areas of various habitat types in the regional project area that could be considered for acquisition and management as mitigation. To inform the Draft EIS/EIR analysis, focused habitat mapping surveys were conducted for all portions of the project within and outside the Los Vaqueros Watershed. These surveys documented that non-native annual grasslands and oak woodlands comprised the overwhelming majority of lands that would be impacted by the project, followed by riparian habitat, oak woodlands, and scrub habitat. As a result, the discussion of mitigation opportunities focused on those habitat types that could reasonably be limiting factors in the selection of mitigation lands. Impacts to other sensitive habitat types were documented in the Draft EIS/EIR (see Table 4.6-9, Section 4.6, pg. 4.6-85); however, with the relatively small magnitude of project effects to these habitat types (e.g., 1.56 acres of saltgrass; 0.93 acre of vernal pool; 0.66 acre of purple needlegrass) it was evident from the field surveys completed that adequate suitable mitigation areas for these specific habitat types

could be identified. Selected mitigation habitat types will closely match the impacted habitat, including each of the varieties of habitat subsumed in larger categories such as "grassland."

Within the Los Vaqueros watershed it is feasible to replace both trails and, to some extent, habitat impacted by the project. The existing watershed is a good example of how recreation trails and habitat mitigation can be executed and managed together successfully. As needed, CCWD will manage future recreation activities to support habitat and sensitive species management goals. An example of this is CCWD's current practice of closing trails to public use when Golden Eagle nesting occurs. As indicated above, CCWD has reduced the length of the proposed Eastside Trail which will keep public access restrictions on habitat areas east of the reservoir. While much of the habitat mitigation for the project will occur outside the reservoir, it will be feasible to replace trails and mitigate for some habitat impacts within the watershed.

Two comments (Comment I_Graham-02 and I_Graham-03, in part) state that the restoration of oak woodlands, wetlands, and riparian habitat in the Kellogg Creek Watershed is likely not feasible or achievable. While there are instances where mitigation for habitat impacts can and should occur within the watershed property, the Draft EIS/EIR also acknowledges that mitigation for project impacts will require substantial land acquisition to provide compensatory mitigation outside of the watershed property. The Draft EIS/EIR indicates that compensation for losses to wetlands and sensitive plant communities shall be provided through habitat creation, enhancement, and preservation, both within and outside the watershed (e.g., Draft EIS/EIS, Vol. 2, Section 4.6, pg. 4.6-91 and pg. 4.6-115).

Prioritization of Mitigation Sites in Close Proximity to Affected Habitat

EBRPD (L_EBRPD2-35) and CCCPW (L_CCCPW-04) comment that the Draft EIS/EIR should prioritize mitigation habitat in close proximity to affected habitat and not through a mitigation bank outside Contra Costa County. As a commenter states, the Draft EIS/EIR provides that one of the selection criteria for highest priority mitigation sites includes "lands next to or near the Los Vaqueros Watershed or other existing land reserves" (see Draft EIS/EIR, Vol. 2, pg. 4.6-187). EBRPD states that this selection criterion fails to recognize the importance of identifying suitable habitat sites near the affected habitat. The comment appears to reflect the view that the inclusion of "or other existing land reserves" in this selection criterion is unacceptable and that proximity to affected habitat should prevail over all other considerations. As the Draft EIS/EIR states, and as EBRPD notes in other comments, however, proximity to affected habitat cannot be the only criterion for identifying suitable mitigation acreage; the size and particular qualities of potential mitigation sites are also important. In consultation with the resource agencies, CCWD will evaluate suitable mitigation lands in Contra Costa, San Joaquin, and Alameda Counties, where appropriate, for inclusion in the mitigation program.

EBRPD comments (L_EBRPD2-26 and L_EBRPD2-35) emphasize the importance of maintaining regional habitat connectivity for San Joaquin kit fox between protected lands. The Draft EIS/EIR discussion acknowledges and incorporates habitat connectivity as a key kit fox conservation principle that will guide the selection and acquisition of mitigation lands for this species (see Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-183). The need to encourage kit fox

movement opportunities has also been carried through the Action Specific Implementation Plan that is currently being developed with Reclamation, CDFG and USFWS.

With regard to mitigation for burrowing owl, the requirement that mitigation areas "support burrowing owl populations in similar or greater densities to those on impacted burrowing owl habitat" (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-146), could necessitate the consideration of mitigation lands located away from the Los Vaqueros Watershed. Thus, while mitigation in the near vicinity of project impacts is preferred, the requirement that burrowing owl mitigation sites support breeding (and are available to CCWD) may enlarge the mitigation study area for this species. Based on numerous years of biological studies in the Los Vaqueros Watershed, no burrowing owl pairs would be isolated by the project.

Habitat Impacts of Reservoir Draining and Refilling

Two commenters address the potential impacts of reservoir draining and refilling before and after dam modification construction. Regarding draining alone, Comment L_EBRPD2-36 raises the concern that the Draft EIS/EIR does not adequately analyze and mitigate the biological resource impacts to birds from draining the reservoir during construction. As the Draft EIS/EIR notes, this impact does not apply to Alternative 4. Because the reservoir would only be partially drained to allow the dam modification needed for the 160-TAF reservoir expansion, some water would remain at all times in the reservoir, maintaining the reservoir water habitat for birds.

The impact of temporary draining of the reservoir on migratory birds for Alternatives 1 through 3 is discussed in detail in the Draft EIS/EIR (Vol. 2, Section 4.6, pp. 4.6-172 through 4.6-173, Impact 4.6.16). The comment's statement that 165 different species of birds are dependent on the reservoir is mistaken; instead, the Draft EIS/EIR states that 53 species of birds are at least partly dependent on the habitat provided by the reservoir (Vol. 2, Section 4.6, pg. 4.6-172). These bird species discovered the reservoir after it was created in 1998. As identified in the Draft EIS/EIR, the principal effect of reservoir draining under Alternatives 1 through 3 would be the temporary elimination of foraging and stopover opportunities that would foreseeably force the birds to use other nearby aquatic sites, which are plentiful in the region. Under these alternatives, when the expanded reservoir is refilled, these bird species would be expected to rediscover it. The Draft EIS/EIR accurately describes the scope and magnitude of the impact, which is considered Less-than-Significant.

Comment L_EBRPD2-36 also states that the Draft EIS/EIR does not properly mitigate temporary impacts to California tiger salamanders and red-legged frog habitat resulting from the draining of Los Vaqueros Reservoir. The Draft EIS/EIR provides mitigation for temporary impacts to California red-legged frog and California tiger salamander mitigation sites. The commenter is referred to Mitigation Measure 4.6.4a (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-113), which reads, "(w)here needed to maintain California red-legged frog and/or California tiger salamander breeding in existing mitigation wetlands that are presently supplemented with water, but are not directly disrupted by construction, CCWD shall continue to provide supplemental water to these ponds during and after construction according to the existing terms and conditions for these mitigation sites."

With respect to the combination of reservoir draining and refilling, Comment O_SMD-13 suggests that the Draft EIS/EIR should consider impacts to wildlife species that may move into the existing reservoir footprint when it is drawn down and could be affected once the reservoir is refilled. For the 160-TAF alternative (Alternative 4), the reservoir drawdown and refilling would represent no change from the reservoir's existing operating conditions. The existing reservoir currently undergoes substantial water level fluctuations, and in drought years, those fluctuations are very similar to the levels that would be required for Alternative 4. Under these existing conditions, wildlife has not been observed to move onto the soils exposed by reservoir drawdown. Possible reasons for this include the steep slopes and panoche soils that characterize the reservoir's shoreline; these conditions cause exposed soils to erode into the reservoir, making the exposed areas inhospitable to colonization by animals and plants.

For the 275-TAF alternatives (Alternatives 1-3), which would require full drawdown of the reservoir, wildlife would be discouraged from occupying the upper reaches by the soil conditions described above. At the lower levels of the drained reservoir, active construction work, including removing borrow materials with heavy equipment and cofferdam and dam construction, would further discourage wildlife occupation. Finally, the very slow rate at which the reservoir would refill following partial (Alternative 4) or complete (Alternatives 1-3) drawdown would allow any wildlife that had strayed into the site time to relocate. For these reasons, the process of reservoir drawdown and refill would not cause significant impacts to wildlife under any of the four project alternatives.

Impacts to Common Wildlife Species

Comment L_EPRPD2-30 states that the Draft EIS/EIR neglects impacts of the project alternatives on native species that are not special status species. The Draft EIS/EIR appropriately focuses greater attention on special status species than on common wildlife species because special status species have, by definition, been identified as suffering from difficulties that common species have not. As the comment notes, one of the questions CEQA asks is whether a project "has the potential to ... substantially reduce the habitat of a fish or wildlife species." For a special-status species whose remaining habitat is small, a small project-related habitat loss may represent a substantial reduction of habitat, whereas a larger habitat loss for a common species may not be as significant because the species' range is much larger.

As the comment also notes, one of the Draft EIS/EIR's significance criteria is not limited to special-status species; it asks whether the project alternatives would "interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory native wildlife corridors, or impede the use of wildlife nursery sites." This significance criterion is consistent with CEQA and with NEPA, which emphasizes ecosystem effects. The comment states that the Draft EIS/EIR fails to analyze the project alternatives' effects on large mammals that live in and migrate through the watershed, migratory birds that use the watershed seasonally, and small mammals that live along the edge of the water.

The Draft EIS/EIR includes an analysis of impacts to migratory birds using the watershed seasonally; none of the project alternatives would substantially interfere with movement or

migration of these species (Vol. 2, Section 4.6, pp. 4.6-172 through 4.6-173). Common large and small mammals in the watershed area are identified in the Draft EIS/EIR; these species can use a wide range of habitat types for movement, migration and nursery sites. Existing large mammal movement corridors through grassland, oak woodland and upland scrub habitat would remain intact following reservoir expansion. Accordingly, impacts to the movement, migration and nursery sites of common wildlife species would be Less-than-Significant.

Potential Conflicts Between Relocated Mitigation Areas and Recreational Trails

Comment L_EBRPD2-15 states that the Draft EIS/EIR fails to describe how mitigation areas that are created for sensitive amphibians can be created and managed without conflicting with recreational uses. As presently is the case in the watershed, many mitigation ponds that were created for California red-legged frog are located in low-lying areas that have an adjacent or nearby service road that also doubles for limited recreational use. The Resource Management Plan (RMP) that CCWD actively uses to manage the Los Vaqueros Watershed heads off potential conflicts between restored habitat and recreational users. The RMP requires that many ponds be fenced to manage livestock access. Public use of off-road, off-trail areas is prohibited with violators subject to punishment by fine. The continued application of the RMP, which separates recreational users from restoration sites, will continue to address potential conflicts between these uses.

3.8.4 Wildlife Impacts and Mitigation

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DFG-01	S_DFG-10	S_DFG-11	S_DFG-12
S_DFG-13	S_DFG-14	S_DFG-15	S_DFG-16
L_EBRPD2-15	L_EBRPD2-20	L_EBRPD2-24	L_EBRPD2-26
L_EBRPD2-27	L_EBRPD2-29	L_EBRPD2-33	L_EBRPD2-34
L_EBRPD2-36	O_EBCNPS-02	O_NASNF-01	O_SMD-04
O_SMD-07	O_SMD-09	O_SMD-10	O_SMD-11
I_Fontaine-01			

Summary of Issues Raised by Commenters

- Draft EIS/EIR maps of biological resources should identify important project components that are needed to determine wildlife impacts.
- The project does not provide adequate mitigation for loss of habitat for non-listed special-status reptile species.
- The EIS/EIR should include additional mitigation measures to address construction impacts on the San Joaquin kit fox.
- Mitigation for California tiger salamander and California red-legged frog were not adequately addressed in the Draft EIS/EIR to support a Less-than-Significant impact finding.

- Mitigation for temporary effects on California red-legged frog and California tiger salamander from reservoir draw down is insufficient.
- The project does not provide adequate mitigation for impacts to western pond turtle.
- The Draft EIS/EIR does not adequately characterize impacts to San Joaquin kit fox, their movement corridors and the continued viability of remaining grassland habitat linkages for San Joaquin kit fox.
- The burrowing owl mitigation strategy is inadequate.
- Mitigation should be provided for impacts to non-scrub Alameda whipsnake habitat
- The proposed mitigation ratio for Alameda whipsnake impacts are not high enough and improperly defers selection of a mitigation ratio.
- Proposed mitigation through habitat protection only is inadequate.
- The project does not adequately consider impacts to actively nesting birds.
- The habitat and wildlife movement corridor effects of the project could undermine EBRPD's efforts to provide habitat for such species, by eliminating movement corridors that these species use to travel to EBRPD properties near the watershed.
- The Draft EIS/EIR delegates to other agencies the authority to determine the actual mitigation ratio within an identified range to compensate for impacts to San Joaquin kit fox habitat.
- Mitigation ratios for loss of kit fox habitat are too low, in light of cumulative effects.
- Mitigation for effects on kit fox movement should include improvements to wildlife undercrossings, to be implemented in a manner consistent with scientific literature.

Maps of Impacts to Species

One comment states that three maps provided in the biological resources section of the Draft EIS/EIR are insufficient to determine project impacts. The commenter notes that Figure 4.6-11 (Vol. 2, Section 4.6, pg. 4.6-53) illustrates the regional distribution of San Joaquin kit fox, but does not include the location of any project components. The identified figure was intended to illustrate the project setting, whereby the entire Los Vaqueros Reservoir Expansion Project is within the range of the San Joaquin kit fox. Figures 4.6-15 and 4.6-16 (Vol. 2, Section 4.6, pp. 4.6-68 through 4.6-69) were intended to provide context for the impact discussed but not to provide the full extent of the detailed information used in the analysis. Detailed GIS database maps along with a series of field visits and detailed resource surveys have been used during the impact analysis process. Most of the figures included in Draft EIS/EIR Section 4.6 present information from the detailed GIS database. Figure 4.6-15 names those created wetlands and stock ponds that occur in the 275-TAF inundation zone and the 160-TAF inundation zone. Aquatic features that would be impacted by the project alternatives are identified in Table 4.6-11 (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-108).

To further address this comment, **Figures 4.6-11, 4.6-15** and **4.6-16** in the Draft EIS/EIR have been updated to provide the requested information. These updated figures are included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

Impacts on Non-listed Reptile Species

EBRPD (L_EBRPD2-33) and SMD (O_SMD-07) comment that the mitigation provided for special status reptile species, coast horned lizard and San Joaquin coachwhip, is insufficient because it does not address potential loss of habitat or explain the proposed avoidance (instead of compensatory) mitigation.

The Draft EIS/EIR states that high quality habitat for coast horned lizard occurs in association with alkali areas with sandy loam soils and alkali flats, which have limited distribution in the project area (Vol. 2, Section 4.6, pg. 4.6-43). High quality alkali flat habitat was identified in the Power Option 2 Western powerline alignment, just north of the Skinner Delta Fish Protective Facility, and would be spanned by powerlines. Thus, the minimal habitat disturbance in high quality habitat is avoided by project design and does not require the implementation of additional protective measures. This approach is consistent with the statement in Measure 4.6.14 that habitat disturbances are minimized in areas that are known or suspected to support coast horned lizard (Vol. 2, Section 4.6, pg. 4.6-168).

The San Joaquin coachwhip is known to occupy grassland and scrub areas with little tree cover. Such habitat is available throughout the regional project area, thus this species is expected to occur sporadically in low densities in annual grasslands throughout the project area as identified in Table 4.6-7 (Vol. 2, Section 4.6, pg. 4.6-75). Annual grasslands in the project area are considered to provide uniformly low to moderate quality habitat for this species. Thus, the general statement in Measure 4.6.14 (Vol. 2, Section 4.6, pg. 4.6-168) that, "CCWD shall ensure that habitat disturbances are minimized in areas that are known or suspected to support San Joaquin coachwhip…" would apply to all grasslands in the project area. This broad statement is necessary for San Joaquin coachwhip because this species could literally be encountered in any open grassland or alkali scrub habitat in the project area.

Potential habitat losses for coast horned lizard and San Joaquin coachwhip on the proposed pipeline alignments would be temporary; following construction and site restoration the habitat would approximate pre-project conditions within several years. The permanent loss of habitat would mostly occur in the Los Vaqueros Watershed in association with the expanded reservoir footprint. There is an abundance of annual grassland habitat in the local and regional project area that can support San Joaquin coachwhip with few other development pressures in the Altamont Hills. Reservoir expansion is not expected to significantly contribute to the decline of local or regional coast horned lizard populations, for which high quality habitat is largely avoided, or San Joaquin coachwhip, which occurs in grasslands throughout the undeveloped Altamont Hills. Thus, compensatory mitigation for habitat losses is not required for these species to reduce impacts to less than significant levels. However, the habitat conservation measures that will be implemented for the San Joaquin kit fox (see Measures 4.6.7b and 4.6.7c in Vol. 2, Section 4.6, pp. 4.6-139 through 4.6-140) would provide between 1,506 acres and 3,939 acres of compensatory habitat, for Alternatives 1 and 2, between 1,355 and 3,773 acres for Alternative 3, and between 819 and 2,421 acres for Alternative 4 would also be suitable for San Joaquin coachwhip and possibly coast horned lizard (see Tables 4.6-17, 4.6-18, and 4.6-19 in Vol. 2, Section 4.6, pp. 4.6-180 through 4.6-182). Mitigation that is provided to identify and relocate

coast horned lizard and San Joaquin coachwhip prior to construction is sufficient to reduce impacts to these species to less than significant levels.

Impacts to California Red-legged Frog and California Tiger Salamander

The distribution of California red-legged frog and California tiger salamander in the Los Vaqueros Watershed has been studied since the mid-1990s and is well described (see Vol. 2, Section 4.6, pp. 4.6-107 through 4.6-112). One comment from CDFG (Comment S_DFG-10) states that additional mitigation requirements should be imposed before a Less-than-Significant impact finding can be made for these species. The specific concerns raised by CDFG include the requirement to provide temporary and permanent mitigation for impacts to upland and aquatic habitat at a 3:1 mitigation ratio.

As stated in the Draft EIS/EIR, the habitat mitigation and compensation ratios presented in this Draft EIS/EIR are based on guidance provided in the MSCS with some modifications based on preliminary input provided by CDFG and USFWS staff during project meetings held at several points from 2004 to the present. The final identification of specific compensation ratios will be determined during ongoing consultation with resource agencies, as discussed in Section 3.8.2, Mitigation Strategy, above. The Draft EIS/EIR states that temporary and permanent impacts to California red-legged frog and California tiger salamander aquatic breeding sites shall be mitigated at a 3:1 ratio (Vol. 2, Section 4.6, Measure 4.6.2b, pg. 4.6-103; and Measure 4.6.4b, pg. 4.6-114), which is consistent with Comment S_DFG-10. Thus, the aquatic mitigation commitments in the Draft EIS/EIR are consistent with those identified by the commenter.

The MSCS guidelines do not specify compensation for the loss of California red-legged frog and California tiger salamander aestivation habitat, thus, direct mitigation was not presented in the Draft EIS/EIR for impacts to upland habitat. However, the Draft EIS/EIR mitigation and compensation summary (Vol. 2, Section 4.6, pg. 4.6-180) provides an allowance to compensate for upland habitat losses to California red-legged frog and California tiger salamander concurrently with mitigation that would be provided for impacts to San Joaquin kit fox grassland habitat. Thus, the majority of upland mitigation lands required for kit fox mitigation will jointly function as compensation for impacted sensitive amphibian habitat, for which permanent losses will be mitigated at a 3:1 ratio.

As the Draft EIS/EIR states, CCWD will continue to provide supplemental water to existing mitigation ponds during and following construction according to the existing terms and conditions for these mitigation sites (Vol. 2, Section 4.6, pg. 4.6-113). CDFG has requested that future mitigation for impacts to aquatic pond habitat for these amphibians provide compensatory new pond habitat that can be “hydrologically self-sustaining” without the need for a supplement water supply. CCWD will endeavor to incorporate this criterion into mitigation pond design. However, because few natural drainages in the Los Vaqueros Watershed could maintain hydrologically self-sustaining ponds, this may not be feasible; if “hydrologically self-sustaining” is deemed a more important mitigation criterion than proximity, some of the mitigation ponds may need to be located outside of the watershed (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-115).

In its comment letter, CDFG identifies numerous mitigation requirements that it may impose on the California red-legged frog and California tiger salamander mitigation strategy. These include varying requirements for both species in terms of ponding duration, presence of vegetation, and the requirement for successful reproduction and metamorphosis during multiple years. The mitigation measures identified in the Draft EIS/EIR are not inconsistent with any of these suggestions and CCWD understands that specific mitigation design criteria will be subject to CDFG approval.

Impacts to Western Pond Turtle

CDFG and SMD (O_SMD-07) comment that habitat for western pond turtle should be conserved when possible and that a habitat management plan should include provisions to provide pond turtle habitat elements in created aquatic habitat. As discussed in Impact 4.6.5, some aquatic habitat for the western pond turtle would be lost as a result of reservoir expansion (inundation and dam modification) or temporarily degraded due to dewatering during construction. For the 160-TAF expansion (Alternative 4), the project could affect approximately seven ponds along with segments of drainages. Impacts to ponds due to expanded reservoir inundation are unavoidable. This impact to aquatic habitat for the western pond turtle is similar to that described in Draft EIS/EIR Impact 4.6.4 for the California red legged frog and the California tiger salamander. Mitigation Measure 4.6.4b requiring provisional compensatory aquatic habitat would also address impacts to the western pond turtle. However, to clarify the application of this measure to the pond turtle and incorporate CDFG recommendations for pond turtle mitigation the new mitigation measure below is added.

Comment S_DFG-11 states that a habitat management plan should include provisions that benefit western pond turtle such as basking sites and woody debris in ponds. The Draft EIS/EIR presently only provides for the identification and relocation of pond turtles prior to and during construction to minimize impacts to individual turtles. The Draft EIS/EIR inadvertently failed to include western pond turtle habitat provisions in the creation of aquatic habitat. Thus, impacted aquatic sites that presently support California red-legged frog breeding will be mitigated with sites that also provide habitat elements for western pond turtles. Mitigation Measure 4.6.5 is revised as shown below-to, further mitigate and reduce aquatic habitat impacts to western pond turtle to a less than significant level.

The Draft EIS/EIR text (Vol. 2, Section 4.6, pg. 4.6-119) is revised as shown below. These text changes and all other document revisions are included in Final EIS/EIR, Chapter 5, Section 5.1, Revisions to the Draft EIS/EIR.

> **Measure 4.6.5:** Before construction activities begin, a qualified biologist[1] shall conduct western pond turtle surveys within creeks and in other ponded areas affected by the project. Upland areas shall also be examined for evidence of nests as well as individual turtles. The

[1] The term "qualified biologist" refers to an individual who has at least a minimum education and qualifications that may include a 4-year degree in a biological sciences or other specific field and training and/or experience surveying, identifying, and handling the subject species. This individual differs from a "Service-approved biologist" in that the qualified biologist may only handle species that are not listed as threatened or endangered by the USFWS. The Service-approved biologist is authorized to relocate such species.

project biologist shall be responsible for the survey and for the relocation of turtles. Construction shall not proceed until a reasonable effort has been made to capture and relocate as many western pond turtles as possible to minimize take. However, some individuals may be undetected or enter sites after surveys, and would be subject to mortality. If a nest is observed, a biologist with the appropriate permits and prior approval from CDFG shall move eggs to a suitable location or facility for incubation, and release hatchlings into the creek system the following autumn.

In addition, concurrent with mitigation commitments to create and enhance aquatic sites for California red-legged frog (Measure 4.6.4b), CCWD shall include habitat elements in the aquatic habitat and tiger salamander plan that benefit western pond turtle. Such elements may include logs or rafts for emergent basking sites where needed and the maintenance of upland areas adjacent to ponds in a relatively open condition.

~~w~~Western pond turtles shall be included in the fish rescue operation described in Mitigation Measure 4.3.3 (Alternatives 1 and 2 only).

Impacts to San Joaquin Kit Fox

Several comments (S_DFG-12, L_EBRPD2-20, and EBRPD2-26) state the Draft EIS/EIR analysis is deficient with regard to project impacts and mitigation for San Joaquin kit fox. Comment S_DFG-12 states that impacts to grasslands located west of the Los Vaqueros Reservoir and the associated isolation and reduced accessibility to Round Valley Regional Preserve are not acknowledged in the Draft EIS/EIR. The Draft EIS/EIR recognizes, however, that the project alternatives would reduce potential regional movement opportunities for San Joaquin kit fox (Impact 4.6.7, Section 4.6, pp. 4.6-128 through 4.6-138) including a significant potential movement corridor west of Los Vaqueros Reservoir. As Impact 4.6.7 discloses, the project alternatives would permanently reduce potential regional movement opportunities for San Joaquin kit fox, which is considered a significant and unavoidable project impact despite the mitigation identified in the Draft EIS/EIR. As described in the text and presented in Figure 4.6-24 (Vol. 2, Section 4.6, pg. 4.6-130) the northeastern overland kit fox movement corridor would be mostly unchanged by the project alternatives. Accordingly, one movement corridor through the watershed lands would remain.

Mitigation for annual grassland impacts would include a combination of acquiring suitable annual grassland habitat with a particular emphasis on optimizing kit fox movement opportunities, and the improvement of such lands through adaptive management. Upon acquisition, a management plan would be implemented such that preserved grasslands would be enhanced to the benefit of target species and in particular, San Joaquin kit fox. This strategy was implemented within the Los Vaqueros Watershed upon the completion of the existing reservoir with the result being a 25 percent improvement in the suitability of annual grassland habitat for native species including kit fox (based on a 1993 USFWS Habitat Evaluation Procedure suitability index score of 0.80, versus 1.0 in 2006). Thus, the long-term enhancement of protected lands is an essential part of their management following acquisition.

A detailed GIS-based slope analysis of in-watershed lands was performed to identify the suitability of the western movement corridor and northeastern movement corridor for kit fox and

evaluate whether the latter area would continue to provide habitat continuity between Los Vaqueros Watershed lands and the Round Valley Regional Preserve following project implementation. The slope analysis showed that the western corridor was moderately sloped, but has several steeper areas that would inhibit kit fox movement, especially just north of the existing marina facility. The analysis also showed that a contiguous strand of moderately sloped terrain connects the Los Vaqueros Watershed to Round Valley Regional Preserve in the northeastern area and would continue to link these areas following project implementation. Based on this analysis, it is expected that San Joaquin kit fox would be able to use the northeastern corridor following reservoir expansion. The results of this analysis are incorporated into Figure 4.6-24 (Vol. 2, Section 4.6, pg. 4.6-130) of the Draft EIS/EIR. One comment (O_SMD-02) states that because of the loss of the western movement corridor, project mitigation should include the preservation of an entire corridor in Eastern Contra Costa County. While reservoir expansion would affect the potential movement corridor on the west side of the reservoir, it would not affect the existing movement corridor area northeast of the reservoir. After reservoir expansion, the area northeast of the reservoir will continue to provide movement opportunities for the kit fox to and from the Round Valley area. In addition, the mitigation program for the reservoir expansion project includes as an objective, protecting and enhancing other existing movemement corridors in the region, outside the watershed. In consultation with the resource agencies, CCWD will identify mitigation lands for acquisition and enhancement activities that address this objective.

As stated in comment S_DFG-12 and acknowledged by the Draft EIS/EIR (Vol. 2, Section 4.6, pg. 4.6-133), kit fox movement opportunities would be diminished in the area below (northeast from) the dam during construction of the Inlet/Outlet Pipelines, which would occur over a 2-year period for Alternatives 1, 2, and 3 and a one year period for Alternative 4. At a minimum, the potential western kit fox movement corridor, identified in Figure 4.6-25 (Vol. 2, Section 4.6, pg. 4.6-131), would continue to serve as a potential movement corridor for kit fox during construction and would be widened substantially as a result of reservoir drawdown. Thus, the area that the commenter identifies as the “highest quality north to south connection through the reservoir area,” would be retained intact during construction and for a period of approximately 1 to 2 years thereafter during the period when the reservoir is being filled to capacity. During that time, lands that are affected below the dam would be restored to emulate pre-project conditions.

Commenters also state that San Joaquin kit fox mitigation lands should ideally promote movement corridors and connectivity to kit fox conservation lands, including Round Valley Regional Preserve. This principle has been incorporated into the mitigation conservation strategy for the project. CCWD will work with resource regulatory agencies throughout the permitting and mitigation implementation process to identify suitable lands for acquisition and assess their value in terms of meeting the mitigation performance objectives.

Comment L_EBRPD2-26 (in part) states that the Draft EIS/EIR defers the actual selection of mitigation ratios to the resource agencies and that the stated mitigation ratios are too low. The Draft EIS/EIR does not defer mitigation. It identifies the compensatory ratios to be used in the mitigation of impacts to terrestrial biological resources, based on the CALFED MSCS guidance as well as the results of the impact analysis for this specific project. The final determination of the

mitigation acreage required will be based on a combination of factors including the quality of affected habitat, which has been identified, and the quality of mitigation lands to be acquired which will be evaluated in detail as part of the mitigation land acquisition program. Table 4.6-17 (Vol. 2, Section 4.6, pg. 4.6-179) in the Draft EIS/EIR identifies impacts to potential San Joaquin kit fox habitat under the proposed project and identifies the range of mitigation acreages that is anticipated by the project. Identifying a range of mitigation acreages is appropriate for developing the project mitigation strategy; final acreages will be based on the location and habitat suitability of mitigation lands.

One comment states that the identified mitigation ratios are inadequate to compensate for losses to existing mitigation lands, which mitigated for the impacts of the original reservoir project. As required in Draft EIS/EIR Mitigation Measure 4.7.6c (Vol. 2, Section 4.6, pg. 4.6-140), CCWD will both replace the affected conservation easements and compensate for impacts to habitat within these easements. To mitigate for impacts to the existing conservation easements, these easements would be relocated and re-established within the watershed on a 1:1 basis to preserve the total acreage required under conservation easement in accordance with the mitigation commitment for the original reservoir. In addition, to mitigate for the loss of habitat acres within the conservation easements due to expanded reservoir inundation, CCWD will acquire, enhance as appropriate and dedicate into conservation compensatory acreage or purchase mitigation credits at the additional compensation ratios identified in Mitigation Measure 4.7.6c. This measure ensures that the original easements are replaced and, in addition, new mitigation is implemented for the loss of habitat from the expansion project.

Comment L_EBRPD2-24 indicates that Project Alternatives would interfere with HCP/NCCP biological goals, a topic that is indirectly discussed in this section. For a more complete response to this and similar comments about consistency of the Draft EIS/EIR mitigation strategy with the ECCC HCP/NCCP, see Section 3.8.8, below.

Two comments state that the project should mitigate for kit fox movement barriers at Los Vaqueros Reservoir by making improvements to wildlife undercrossings at Vasco Road. The commenter notes that substantial wildlife mortality can be attributed to Vasco Road vehicle traffic and suggests that removal of the kit fox movement corridor west of Los Vaqueros Reservoir will influence kit foxes to cross Vasco Road. As stated previously, the conservation of mitigation lands that promote regional connectivity for kit fox populations will be a priority of the project mitigation strategy for this species. Based on the analysis presented in the Draft EIS/EIR, and the slope evaluation described above, following project construction, the existing kit fox movement corridor north of the reservoir will continue to provide connectivity between the Herdlyn Watershed, Los Vaqueros Watershed, and Round Valley through lands that are located northeast of the reservoir. Vasco Road is located about two miles south and east of the reservoir. Kit fox traveling on the northeast corridor would not cross Vasco Road. Given the distance between the northeast corridor and Vasco Road, the project is not expected to change the frequency or types of interactions between kit foxes and Vasco Road. Nonetheless, the suggestion that improvements be made to the existing wildlife undercrossings of Vasco Road will be considered, in consultation with the resource agencies, as one way to protect and enhance regional movement opportunities for the kit fox and other wildlife as part of the project mitigation program.

One comment suggests that construction impacts to kit foxes are not adequately mitigated and that the project should include construction-period provisions to ban pets and firearms, cover open pipes, and restrict the use of pesticides in areas where kit foxes are known to occur. These are common recommendations that USFWS requires for projects, as identified in their *Standardized Recommendations for Protection of the San Joaquin Kit Fox* (USFWS, 1999), and these measures will be included in the more detailed plans developed to implement the project mitigation measures.

One commenter (O_EBCNPS-02) states that the description of the western movement corridor in the Draft EIS/EIR as a potential *undocumented* (emphasis added) movement corridor for San Joaquin kit fox is inconsistent with other CCWD references such as annual kit fox reports, the website and outreach publications. The distribution of kit foxes and their habitat use in the local and regional project vicinity is first presented in the Affected Environment section of Section 4.6 in the Draft EIS/EIR (Vol. 2, pp. 4.6-52 through 4.6-55), which states in regard to the potential western movement corridor:

> *The corridor is interrupted in two locations by oak woodlands that measure roughly 80 feet and 300 feet in width with gentle to moderate topography. Although a potential movement corridor, kit fox use has not been documented in this area* (Vol. 2, Section 4.6, pg. 4.6-54).

This statement is also repeated in the cumulative impact discussion (Vol. 2, Section 4.6, pg. 4.6-176). Both statements are fully consistent with CCWD kit fox surveys that have been performed annually in the watershed since 1998, and published biological studies describing the watershed. The Draft EIS/EIR recognizes that the western corridor is valuable habitat, even though kit fox have not been documented in that location.

Impacts to Burrowing Owl

Impacts to the burrowing owl are described in the Draft EIS/EIR (Vol. 2, Section 4.6, pp 4.6-140 through 4.6-145). Comment S_DFG-13 suggests burrowing owl mitigation measures for the project. The suggested compensation ratio (a minimum 2:1 ratio) is presently provided in the Draft EIS/EIR (Measure 4.6.8b, Vol. 2, Section 4.6, pg. 4.6-146) with an allowance for the purchase and enhancement of a permanent conservation easement on burrowing owl mitigation lands. As suggested by the commenter, mitigation lands would be conveyed to a managing agency or institution in perpetuity (Measure 4.6.8b, Vol. 2, Section 4.6, pg. 4.6-146).

The burrowing owl mitigation strategy presented in Measure 4.6.8a (Vol. 2, Section 4.6, pg. 4.6-145) uses the most recent Burrowing Owl Consortium multi-phase approach, which was specifically recommended for use by CDFG. Consistent with Comment S_DFG-10 and the Burrowing Owl Consortium recommendations, the Draft EIS/EIR states that “artificial nesting burrows would only be provided as a temporary measure when natural burrows are lacking” (Measure 4.6.8a, Vol. 2, Section 4.6, pg. 4.6-146).

Comment S_DFG-13 indicates that the “presence and abundance of host burrowers will be measured as part of the site's success criteria.” The majority of temporary grassland impacts would occur on private lands in association with pipeline construction for Alternatives 1 and 2.

While the Draft EIS/EIR provides for vegetative restoration of temporarily impacted lands with an appropriate assemblage of native vegetation suitable to the area (Measure 4.6.4a, Vol. 2, Section 4.6, pg. 4.6-112), no commitments were provided for the enhancement of private, non-CCWD owned lands to monitor the status of California ground squirrel or other burrowing owl host burrowers. This is appropriate as CCWD does not have control of the long-term management or monitoring of lands that are privately owned. The burrowing owl mitigation strategy, as described in the Draft EIS/EIR (Measure 4.6.8b, Vol. 2, Section 4.6, pg. 4.6-146), relies on habitat acquisition to compensate for burrowing owl habitat losses (based on the above specified ratios). Burrowing owl mitigation lands will be subject to CDFG review and approval. Thus, during the site selection and CDFG approval process, CCWD anticipates that mitigation lands will be subject to minimum requirements regarding the presence and abundance of host burrowers such as California ground squirrel. With regard to facility siting, none of the known burrowing owl locations in the Los Vaqueros Watershed occur near proposed facilities, including the Eastside Trail and Westside Trail alignments.

Impacts to Non-scrub Alameda Whipsnake Habitat

CDFG states (Comments S_DFG-01 and S_DFG-14) that the proposed mitigation measures do not adequately reduce impacts to Alameda whipsnake to a less than significant level. This statement is based on recent findings that show that Alameda whipsnake use substantially more non-scrub (i.e., "non-core") upland habitat than was known when the 2000 CALFED Guidelines were finalized. The Draft EIS/EIR adequately characterizes the extent of non-scrub habitat impacts within 1,000 feet and 2,500 feet of high quality scrub habitat, which may support Alameda whipsnake. As the Draft EIS/EIR states, Project Alternatives 1, 2, and 3 would impact about 457 acres of non-scrub upland habitat and Alternative 4 would impact about 159 acres of non-scrub habitat within 2,500 feet of upland scrub habitat (see Table 4.6-16, Vol. 2, Section 4.6, pg. 4.6-154). However, consistent with CALFED Guidelines, the Draft EIS/EIR did not propose compensatory mitigation.

In addition, the present standard for Alameda whipsnake mitigation, as embraced by the ECCC HCP/NCCP, does not directly provide compensation for upland habitat losses near upland scrub habitat that supports Alameda whipsnake. Instead, mitigation strategies emphasize the acquisition and preservation of core and movement habitat to preserve primary habitat and create important linkages. For example, the ECCC HCP/NCCP seeks to generally expand public lands north of Morgan Territory Regional Preserve to include patches of chaparral/scrub habitat as well as grasslands and oak woodlands (ECCCHCPA, 2006). Thus, the ECCC HCP/NCCP generally acknowledges and emphasizes the conservation of Alameda whipsnake movement habitat without being tied to a specific habitat compensation ratio.

The specific circumstances within the Los Vaqueros Watershed that support the mitigation ratio and compensation package proposed in the Draft EIS/EIR for Alameda whipsnake include:

1. Project location relative to designated critical habitat. The Los Vaqueros Project is not located within and does not affect designated critical habitat for Alameda whipsnake.

2. Previous USFWS and CDFG Alameda whipsnake mitigation. The USFWS and CDFG have consistently used 500 feet as a standard distance for determining impacts to non-scrub Alameda whipsnake movement habitat. Using the 2006 ECCC HCP/NCCP as a basis for comparison, this analysis modeled impacts to Alameda whipsnake "perimeter" or "movement" habitat using a distance of 500 feet (ECCCHCPA, 2006). Using this approach, non-scrub Alameda whipsnake impacts in the entire inventory areas were estimated to be only 341 acres.

3. Project effects to scrub habitat. The Los Vaqueros Project's impacts to high quality upland scrub habitat are small (less than 1.0 acre) and are adequately mitigated by Measure 4.6.10b following CALFED guidelines. Also, the expanded reservoir would not separate or isolate any upland scrub areas from one another.

4. Use of the correct metric as a basis for mitigation. The 1,000-foot and 2,500-foot study buffers used in the Draft EIS/EIR analysis were identified "for informational purposes that are not intended to inform project mitigation requirements." (Section 4.6, pg. 4.6-154). These buffer distances were selected because they acknowledge the recent understanding that whipsnakes may utilize areas greater than 500 feet from core habitat. The importance of these areas to the long-term conservation of Alameda whipsnakes, however, is still being assessed.

CDFG's suggested mitigation ratio of 3:1 for non-scrub habitat impacts is high in light of the project-specific information summarized above. The CALFED MSCS process does not address potential impacts to non-scrub Alameda whipsnake habitat. The concept of including impacts to non-scrub Alameda whipsnake habitat was developed during consultation with CDFG and USFWS from 2007 to 2009. Given the above considerations and the fact that Alameda whipsnake habitat is under minimal development threat in the Los Vaqueros Watershed region, the 2,500 foot study buffer area was coupled with a 1.1:1 mitigation ratio to develop the non-scrub Alameda whipsnake mitigation commitment. Consistent with the ECCC HCP/NCCP approach and based on the recent and developing scientific understanding of Alameda whipsnake habitat use, Mitigation Measure 4.6.10b is revised as follows to reduce impacts for potential losses to Alameda whipsnake movement habitat to a less than significant level. The following text change is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

> **Measure 4.6.10b:** Consistent with MSCS guidelines, CCWD shall provide compensation for permanent and temporary loss of upland scrub habitat that may support Alameda whipsnakes by either (1) compensating for permanent habitat losses by acquiring, protecting, and managing 2 to 5 acres of existing occupied habitat for every acre within the same area of occupied habitat that would be affected, and/or (2) enhancing or restoring 2 to 5 acres of suitable habitat near the affected areas for every acre of occupied habitat affected (CALFED, 2000).
>
> Concurrent with other project requirements to mitigate for impacts to grasslands and oak woodland habitat, as summarized in Table 4.6-17, a portion of the total grassland and oak woodland mitigation requirement shall be chosen and preserved in perpetuity to provide linkages between other chaparral and scrub habitat, or to serve as foraging and movement habitat for Alameda whipsnake near existing scrub habitat patches. Mitigation shall be provided at a 1.1:1 mitigation ratio for all areas within 2,500 feet of core scrub habitat. Therefore, under Alternatives 1, 2 and 3, about 503.1 acres of the total grassland and oak

woodland mitigation commitment would be located within 2,500 feet of areas that are considered to provide core Alameda whipsnake habitat. Under Alternative 4, about 173.8 acres of grassland mitigation lands would be provided for this purpose.

Mitigation for Alameda Whipsnake

One commenter (L_EBRPD2-29) suggests that the proposed mitigation ratios for Alameda whipsnake impacts are unsupported and the mitigation for impacts to the whipsnake improperly defer selection of a final ratio. The mitigation ratios and selection criteria identified in the Draft EIS/EIR are based on CALFED MSCS guidelines.

In compliance with CEQA Guidelines and consistent with CALFED recommendations, the Draft EIS/EIR provides specific habitat-based compensation to provide for the replacement of impacted scrub habitat. As noted above, the Draft EIS/EIR commits to the replacement of impacted scrub habitat "by either (1) compensating for permanent habitat losses by acquiring, protecting, and managing 2 to 5 acres of existing occupied habitat for every acre within the same area of occupied habitat that would be affected and/or (2) enhancing or restoring 2 to 5 acres of suitable habitat near the affected areas for every acre of occupied habitat affected." (Measure 4.6.10b, Vol. 2, Section 4.6, pg. 4.6-158). The anticipated impacts to scrub habitat are clearly presented in the Draft EIS/EIR, consisting of 0.5 acres of temporary impact and 6.9 acres of permanent impact to scrub habitat under Alternatives 1, 2, and 3 and 0.3 acres temporary and 6.4 acres permanent impact under Alternative 4 (Section 4.6, Vol. 2, pg. 4.6-153 through 4.6-156). The mitigation requirements identified in the document include the range of possible mitigation requirements based on CALFED MSCS scrub replacement guidance (2:1 to 5:1), which total 14.0 to 34.8 acres of replacement scrub habitat under Alternatives 1 through 3 and 13.1 to 33.5 acres for Alternative 4 (see Tables 4.6-17, 4.6-18, and 4.6-19, Section 4.6, Vol. 2, pg. 4.6-180).

The majority of scrub habitat that would be impacted by the project (5.8 of 7.0 acres) is relatively low quality habitat that became established on the borrow site for the existing dam. This habitat is about 2 miles distant from other scrub habitat in the watershed. This area would likely be compensated at the lower presented mitigation ratio (i.e., 2:1), thus creating a need for 11.6 acres of compensation habitat. The remaining areas (1.2 of 7.0 acres) are native scrub on the west side of the reservoir that would likely be mitigated at the highest ratio (5:1), with a requirement for 6.0 acres of upland scrub habitat. Thus, anticipated area of upland scrub replacement lands would be 11.6 + 6.0 acres, or 17.6 acres. As with habitat on the existing borrow site, it is anticipated that the expanded borrow site will also support scrub habitat.

Comment L_EBRPD2-29 states that "even the high end of the range, a 5:1 ratio, is not high enough to account for the unique characteristics of scrub and chaparral habitat that make it difficult to replicate successfully." Given the recent and spontaneous origin of the upland scrub habitat, which established on its own on the former borrow site, the suggested mitigation ratios (5:1 to 10:1) would not apply to this site. The comment further notes that "the Draft EIS/EIR does not provide any examples of successful creation of scrub and chaparral habitat to support the feasibility of the proposed mitigation." The current presence of scrub habitat on the existing borrow site demonstrates the feasibility and suitability of lands within the Los Vaqueros

Watershed for the creation of scrub habitat. With the implementation of site enhancement, it is anticipated that the expanded borrow site will support similar scrub and chaparral to the existing borrow site within ten years following project implementation.

Proposed Mitigation through Habitat Protection

One commenter (L_EBRPD2-26 and 27) states that the proposed mitigation for California tiger salamander, California red-legged frog, Alameda whipsnake, Swainson's hawk, and San Joaquin kit fox through the acquisition and preservation of mitigation lands does not adequately mitigate the loss of habitat. The regional recovery objectives for special status plant and wildlife species presented in the Draft EIS/EIR are guided by the habitat compensation requirements and recommendations specified by CDFG and USFWS. For California tiger salamander and California red-legged frog the USFWS has concluded that the 3:1 replacement of impacted aquatic habitat with a suitable upland buffer is, in most cases, sufficient to mitigate for project impacts to aquatic habitat and is consistent with the recovery of these species. The created ponds will be subject to long-term management and monitoring, as identified in the Draft EIS/EIR (see Draft EIS/EIR Measures 4.6.4a and 4.6.4b, Vol. 2, Section 4.6, pp. 4.6-112 through 4.6-115.

For Alameda whipsnake, a portion of the applicable CALFED MSCS protection measure for the species states that acquiring, protecting and managing upland scrub habitat is sufficient to mitigate habitat losses. The measure further states that enhancing or restoring habitat may also be performed to mitigate habitat losses (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-158).

The Draft EIS/EIR mitigation strategy for Swainson's hawk came from the most recent (1994) CDFG mitigation guidelines for this species and is consistent with CDFG mitigation requirements. As stated in the Draft EIS/EIR, a specific allowance is provided for the acquisition and restoration of lands according to CDFG requirements: "CCWD shall acquire and/or restore foraging habitat for Swainson's hawks and golden eagles in accordance with CALFED and CDFG guidelines" (DEIS/DEIR, Section 4.6, pg. 4.6-153). The specific CDFG requirement is, "(t)o mitigate for the loss of (Swainson's hawk) foraging habitat…, the Management Authorization holder/project sponsor shall provide Habitat Management (HM) lands to the Department…" and provide a nominal management endowment fee per acre (CDFG, 1994). The loss of Swainson's hawk foraging habitat would only occur under Alternatives 1, 2 and 3 and would be limited to less than 0.1 acre of agricultural land due to the footprint of numerous small (less than 0.002 acre) vaults on the Delta-Transfer Pipeline. CCWD would comply with CDFG guidance to ensure that the needed mitigation lands (up to approximately 0.15 acre of agricultural land) meet State acquisition and management requirements.

For the San Joaquin kit fox, the resource agencies have concluded that a 3:1 mitigation ratio, which would ultimately preserve 75 percent of remaining kit fox habitat (3 units preserved for each 1 unit developed), is generally sufficient and consistent with the recovery of this species.

EBRPD (L_EBRPD2-27) and CDFG (S_DFG-16) comment that the Draft EIS/EIR provides for the protection of existing habitat for California tiger salamander, California red-legged frog, Alameda whipsnake and Swainson's hawk without providing for the creation of new habitat or

improvement of existing habitat. However, habitat creation, enhancement and compensation is identified for each of these species in Vol. 2, Section 4.6 in the Draft EIS/EIR as follows: Measure 4.6.4b (pg. 4.6-114) specifies that aquatic breeding habitat for California red-legged frog and California tiger salamanders be created at a 3:1 replacement ratio; Measure 4.6.10b (Vol. 2, Section 4.6, pg. 4.6-158, as amended above) specifies the replacement and/or enhancement or restoration of scrub habitat at a 2:1 to 5:1 ratio based on the quality of impacted habitat, and the conservation of upland non-scrub habitat within 2,500 feet of core scrub areas; and Measure 4.6.9b (Vol. 2, Section 4.6, pg. 4.6-153) requires acquisition and/or restoration of foraging habitat at a ratio of 1:1 for permanent impacts to Swainson's hawk foraging habitat.

SMD (O_SMD-07) asserts that mitigation for certain species (i.e., the western pond turtle, the San Joaquin coachwhip, the coast horned lizard, the American badger, the San Joaquin pocket mouse, and special status bat species) did not include compensation (the Draft EIS/EIR considered avoidance to be sufficient), which is not considered supportable by the commenter. Several species (the western pond turtle, the San Joaquin coachwhip, the coast horned lizard) have been specifically addressed in Section 3.8.4 above. For the others (the American badger, the San Joaquin pocket mouse, and special status bat species) the avoidance and minimization of impacts to the species and their habitat are a recognized form of mitigation for biological impacts. Existing habitat, potential impacts (Impact 4.6.15) and mitigation of these species is discussed in the Draft EIS/EIR (Vol. 2, Section 4.6, Table 4.6.6, pg. 4.6-28 and pp. 4.6-56 through 4.6-58, and pp. 4.6.169 through 4.6-172). The Draft EIS/EIR indicates that prior to mitigation, project effects to American badgers, special status bats, and San Joaquin pocket mice would be potentially significant, and that the implementation of Mitigation Measures 4.6.15a and 4.6.15b would reduce this impact to Less-than-Significant.

Mitigation Measure 4.6.15a includes Measure 4.6.7b which would provide habitat conservation for temporary and permanent impacts on annual grasslands that may support San Joaquin kit fox; this compensatory mitigation would also benefit American badgers and San Joaquin pocket mouse.

The Draft EIS/EIR states that the loss of maternal roosting sites for special status bat species could be a potentially significant impact (Vol. 2, Section 4.6, pg. 4.6-169). While Mitigation Measure 4.5.15b would protect any active roosting sites during the roosting period, no measures were identified to mitigate for this habitat that could be lost as a result of the proposed project. However, Mitigation Measure 4.6.1b requires the preservation and/or restoration of valley oak, blue oak woodlands, and Fremont cottonwood series. These habitat types could also be used by special status bats as maternal roosting sites. The following text has been added to Mitigation Measure 4.6.15b after the second bullet:

> Implementation of Mitigation Measure 4.6.1b requires the creation, enhancement and preservation of a variety of habitat types, including valley oak, blue oak woodlands and Fremont cottonwood series. These habitats and this mitigation would additionally benefit special status bats and provide potential roosting habitat.

This text change is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

Impacts to Actively Nesting Birds

CDFG comments (Comment S_DFG-15) that the project does not adequately mitigate for lost nests of birds that have high nest site fidelity, such as burrowing owl, red-shouldered hawk, Swainson's hawk, and others. This comment states that mitigation for such impacts should include the protection and enhancement of known nesting sites on mitigation lands that would be protected in perpetuity. This requirement has been stipulated in the Draft EIS/EIR for burrowing owl (Measure 4.6.8b, Vol. 2, Section 4.6, pg. 4.6-146), though no active burrowing owl nests sites have been identified that would be directly impacted by the project. No Swainson's hawk nests have been identified that would be directly impacted by the project. A single Swainson's hawk nest is known within a cottonwood tree located 300 feet from the Delta-Transfer Pipeline alignment, as identified in the Draft EIS/EIR; however, project activities for Alternatives 1, 2 and 3 would not directly impact this nest and Alternative 4 would not include this pipeline. Golden eagle nests are surveyed for annually and monitored by CCWD staff to inform the closure of trails to public access. Based on data provided by CCWD staff in support of the Draft EIS/EIR, no golden eagle nests would be directly impacted by the project under any alternative. In addition, there are no documented red-shouldered hawk, red-tailed hawk, ferruginous hawk or barn owl nests in the project area. Based on surveys and data provided by CCWD staff in support of the Draft EIS/EIR, no nests for these species would be directly impacted by the project under any alternative.

With respect to new nests that may appear, comment S_DFG-15 recommends performing preconstruction raptor surveys within 15 days prior to ground-disturbing or construction activities. The Draft EIS/EIR (Vol. 2, Section 4.6, pg. 4.6-163) provides for a qualified wildlife biologist to conduct preconstruction surveys of all potential nesting habitat within 30 days of ground-disturbing or construction activities. The 30-day period presented in the Draft EIS/EIR is consistent with CDFG preconstruction breeding bird survey guidance. Additionally, construction activities will employ a qualified on-site biological monitor to allow clearance for burrowing owls (Measure 4.6.8a, Vol. 2, Section 4.6, pg. 4.6-145), Alameda whipsnake (Measure 4.6-10a, Vol. 2, Section 4.6, pg. 4.6-158), San Joaquin kit fox (Measure 4.6.7a, Vol. 2, Section 4.6, pg. 4.6-139) and other protected species. These additional required preconstruction surveys also provide survey coverage for nesting birds that may occur in the project area.

Save Mount Diablo comments (Comment O_SMD-10) that an avian mortality monitoring plan should be reviewed and adopted with the Draft EIS/EIR. Sufficient mitigation protection has been provided in the Draft EIS/EIR (e.g., Measure 4.6.12a – 4.6.12c, Vol. 2, Section 4.6, pg. 4.6-162) that impacts to nesting birds would be avoided and minimized by the project. Existing measures that are proposed in the Draft EIS/EIR are sufficient to protect nesting birds.

Comment O_SMD-11 requests that the analysis include a study of the ways in which birds may use surrounding bodies of water during project construction. The Draft EIS/EIR provides an adequate analysis of anticipated project impacts on waterfowl and shorebirds. As stated in the Draft EIS/EIR, during dam construction for Alternatives 1, 2, and 3, water dependent migratory birds are expected to use other nearby reservoirs and water bodies as foraging and stopover locations (Impact 4.6.16, Vol. 2, Section 4.6, pg. 4.6-173). These include large aquatic features

such as the Delta and Clifton Court Forebay, but also local reservoirs such as Lake Del Valle, the Livermore Chain of Lakes, San Antonio Reservoir, San Leandro Reservoir, Suisun Bay, and San Francisco Bay. This analysis does not include the California Aqueduct or the hundreds of livestock ponds that occur throughout the Altamont Hills, which provide additional habitat. As explained in the Draft EIS/EIR, surrounding water bodies are considered to have ample capacity to support birds that may be displaced during project construction under Alternatives 1, 2, and 3. Under Alternative 4 the reservoir water level would be drawn down but not completely drained. The lowered water level in the reservoir during the construction period would be similar to levels reached at times during drought period operations. Water remaining in the reservoir during construction of the 160-TAF reservoir under Alternative 4 would continue to provide habitat for waterfowl and shorebirds.

Comment L_EBRPD2-20 generally states that there will be significant destruction of habitat and wildlife movement corridors that wildlife species use to travel to EBRPD lands located near the Los Vaqueros Reservoir Expansion Project impact areas. The commenter does not specifically identify EBRPD lands by name, but is presumably referring to the potential loss of the west side movement corridor that is discussed in the Draft EIS/EIR and potential effects on wildlife movement into the EBRPD Round Valley Regional Preserve. Potential project effects to this and other wildlife movement corridors and the continued viability of movement corridors into Round Valley Regional Preserve, are discussed in the Draft EIS/EIR (Vol. 2, Section 4.6, pp. 4.6-129 through 4.6-132) and are further analyzed in Final EIS/EIR Sections 3.8.3 Habitat Impacts and Mitigation, Response 3.8.4 Wildlife Impacts and Mitigation; and Response 3.8.9 Cumulative Effects. These analyses indicate that remaining movement corridors will continue to provide access to the Round Valley Regional Preserve. Other EBRPD properties in the Los Vaqueros region are the Morgan Territory Regional Preserve, Brushy Peak Regional Preserve and Vasco Caves Regional Preserve. The Los Vaqueros Reservoir Expansion Project would not eliminate or substantially modify wildlife movement corridors that are used to access these EBRPD lands.

Comment L_EBRPD2-20 goes on to discuss potential impacts to the Byron Vernal Pools Regional Preserve, however does not provide any further information about where habitat and wildlife movement corridors could be affected as a result of the project. As discussed above in Section 3.8.3 (Habitat Impacts and Mitigation), the pipeline alignment was relocated to Armstrong Road to avoid the preserve property. Under Alternatives 1 and 2, the proposed Transfer-Bethany pipeline construction zone would remain within Armstrong Road right of way, to the extent possible, to avoid existing and proposed wetlands in the Preserve. In this manner, pipeline construction impacts to the proposed EBRPD Byron Vernal Pools Regional Preserve would be avoided or minimized and, if necessary, mitigated. Wildlife movement would be temporarily affected in the vicinity of active construction; however, the project would not contribute to a significant destruction of habitat and wildlife movement corridors in or near the proposed preserve under either Alternative 1 or 2, as the commenter identifies. Alternatives 3 and 4 do not include the Transfer-Bethany Pipeline and so no impact to the Byron Vernal Pools Regional Reserve would occur.

3.8.5 Special-Status Plant Impact Analysis and Mitigation

Comment Summary

This section of this master response responds to all or part of the following comments:

L_EBRPD2-31 O_EBCNPS-04 L_CCCPW-04

Summary of Issues Raised by Commenters

- Special-status plant surveys on the Transfer-Bethany Pipeline, Delta-Transfer Pipeline and Power Options 1 and 2 alignments were conducted during spring months when Congdon's tarplant, big tarplant and other late season plant species would not be evident or identifiable. The EIR eliminated these species from further analysis of potential impacts.
- The Draft EIS/EIR should identify and provide mitigation for impacts to habitat that was created or restored as mitigation for the original reservoir.
- Potential surveys and reports did not take into account locally rare, unusual or significant species.

Response

Timing of Special-status Plant Surveys

EBRPD and EBCNPS question whether the special-status plant surveys were appropriately timed to characterize the presence or absence of Congdon's tarplant, big tarplant and other rare late season plant species in the project area. The commenters are correct that botanical surveys on the Transfer-Bethany Pipeline, Delta-Transfer Pipeline and Power Options 1 and 2 alignments were conducted during the month of April (2008), which was the only period that these private lands were accessible. This is because access to the majority of lands on the Transfer-Bethany Pipeline alignment was achieved through court order. As acknowledged in the Draft EIS/EIR, this survey window was not adequate for rare plants that are identifiable only during summer months, thus Mitigation Measure 4.6.3a required that additional surveys be conducted prior to construction in limited areas.

Based on the ESA's 2008 rare plant survey report, which is a component of the project record, the plant surveys were appropriately timed for the majority of special status plants that occur in the regional project vicinity (ESA, 2008). Stated differently, most species reach their peak flowering, or are otherwise identifiable in a vegetative state, within the period that botanical surveys took place. However, as explained in ESA's 2008 botanical survey report, several species including big tarplant do not become identifiable until later in the season. The 2008 botanical survey report stated that an additional survey was required to identify the distribution of big tarplant, the distribution of which in the Transfer-Bethany Pipeline, Delta-Transfer Pipeline and Power Options 1 and 2 alignments would be ascertained by a subsequent summer survey; however, this conclusion was inadvertently not carried forward into the Draft EIS/EIR.

Unlike big tarplant, Condon's tarplant was one of the species that was characterized in ESA's 2008 botanical survey report. Based on survey findings, the report stated that the botanical survey window was adequate to determine the presence/absence of Condon's tarplant, which is identifiable in late spring. The full list of plant species considered during surveys is provided in ESA's 2008 botanical survey report, which includes all California Native Plant Society List 1 through 4 species as well as locally rare, unusual, or significant species.

Measure 4.6.3a provides that, prior to final design of pipelines and power options, late season botanical surveys shall be completed on out-of-watershed alignments following CDFG and USFWS special-status plant survey guidelines. In the event that special status plants are identified during surveys, Measure 4.6.3b shall be implemented to avoid and minimize impacts to the identified population. No modifications are required to the Draft EIS/EIR to identify potential impacts to late season plant species, or to avoid and minimize protect impacts to identified plant populations.

Note the Transfer-Bethany pipeline, the Delta-Transfer pipeline, and Power Options 1 and 2 only comprise components of Alternatives 1 and 2 and that Alternative 3 does not include the Transfer-Bethany pipeline and Alternative 4 does not include any of these facilities.

Impacts to Created and Restored Habitat

Comment L_CCCPW-04 states that the EIR should identify mitigation for habitat lost due to raising the reservoir water surface elevation, as well as the loss of habitat that was created or restored to mitigate the original Los Vaqueros Reservoir project. The issue of potential impacts to habitat that was created or restored following the creation of the original Los Vaqueros Reservoir is discussed in the Draft EIS/EIR. As discussed in the Draft EIS/EIR, these habitats are limited to ponds and other aquatic features that were created to offset wetland losses (see Table 4.6.10 in Vol. 2, Section 4.6, pg. 4.6-93 through 4.6-94) and oak tree mitigation plantings (Table 4.6.9 in Vol. 2, Section 4.6, pg. 4.6-85 through 4.6-86). Impacts to mitigation ponds that were created to benefit California red-legged frog following the creation of Los Vaqueros Reservoir are discussed in Impact 4.6.4 and presented in Table 4.6-11 (Vol. 2, Section 4.6, pg. 4.6-108). Thus, the Draft EIS/EIR accounts for acreages of both habitats previously created or restored as mitigation for the original reservoir and habitat that existed or developed naturally within the inundation areas. Whether some of this mitigation would occur along Kellogg Creek would be determined by CCWD following identification of sites by a qualified biologist in coordination with CDFG, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and/or the Regional Water Quality Control Board under Mitigation Measure 4.6.2b. For existing mitigation lands, Mitigation Measures 4.6.4a and 4.6.4b would reduce impacts to a less than significant level (Draft EIS/EIR, Vol. 2, Section 4.6, pp. 4.6-112 through 4.6-115). The Draft EIS/EIR also includes a discussion of impacts to wetlands and stockponds previously created as mitigation (see Fig. 4.6-15, Vol. 2, Section 4.6, pp. 4.6-67 through 4.6-68, 4.6-107 through 4.6-112).

3.8.6 Wetlands and Vernal Pools

Comment Summary

This section of this master response responds to all or part of the following comments:

F_EPA-02 S_DFG-07

Summary of Issues Raised by Commenters

- Impacts to vernal pools on the Transfer-Bethany Pipeline should be considered permanent.
- Wetland mitigation should be consistent with the new Clean Water Act Section 404 Final Compensatory Mitigation Rule of April 20, 2008, which seeks to ensure permanent protection of all compensatory mitigation project sites.
- Acreage estimates must include CDFG jurisdictional areas addressed in Fish and Game Code Section 1600 et. seq., not just U.S. Army Corp of Engineers (USACE) wetlands.
- Temporary impacts at the new Delta Intake and Pump Station would not be eliminated by site restoration and by removal of the cofferdam at the completion of in-channel work.
- Avoidance strategies must include siting access vaults, manholes, and blow off valves for the pipelines outside of CDFG jurisdictional areas and where they will minimize impacts to sensitive habitat for native species. Since the draft EIR does not specifically prohibit the location of these facilities in jurisdictional areas, an impact estimate should be provided in the EIR.

Response

Wetlands Impacts and Mitigation

The U.S. Environmental Protection Agency (EPA) comments that vernal pool impacts along the Transfer-Bethany Pipeline alignment should be considered permanent (F_EPA-02) and that wetland mitigation should follow the new federal Clean Water Act guidance issued on April 20, 2008. Another comment (S_DFG-07) asserts that temporary impacts are those that last less than one season and that occur in areas where in-site restoration is reasonably expected to restore the area to pre-project conditions. The Draft EIS/EIR (Vol. 2, Section 4.6, pg. 4.6-88) presently states that up to 0.86 acre of northern claypan vernal pool habitat would be impacted by the pipeline alignment and that these areas would be restored following construction. The Draft EIS/EIR inadvertently presents this impact as temporary in Table 4.6-9, Sensitive Plant Community Impacts by Project Component (Vol. 2, Section 4.6, pg. 4.6-84), but it is correctly presented as permanent in Table 4.6-10 Wetland Impacts by Project Component (Vol. 2, Section 4.6, pg. 4.6-93). The 0.86 acre of impact to vernal pools is considered permanent because the features will be affected in total, thus requiring the creation of replacement features. As stated in the Draft EIS/EIR (Vol. 2, Section 4.6, pg. 4.6-100), "Installation of the pipeline would result in an estimated temporary impact to 3.03 acres of wetland and *permanent impacts* [emphasis added] to twelve seasonal pools or topographic depressions totaling 0.86 acre that occur in or next to the Transfer-Bethany Pipeline." The **revised Table 4.6-9**, below, has been updated to reflect that these vernal pool impacts are permanent, not temporary. (Revised Table 4.6-9 and all other document revisions are included in Final EIS/EIR, Chapter 5, Revisions to the Draft EIS/EIR.)

REVISED DRAFT EIS/EIR TABLE 4.6-9
SENSITIVE PLANT COMMUNITY IMPACTS BY PROJECT COMPONENT (ACRES)[a]

	Alternatives 1 and 2			Alternative 3			Alternative 4		
Project Component	**Temporary**	**Permanent**	**Total**	**Temporary**	**Permanent**	**Total**	**Temporary**	**Permanent**	**Total**
In-Watershed Facilities									
Reservoir Inundation Footprint and Dam									
Blue oak series	0.00	68.61	68.61	0.00	68.61	68.61	0.00	17.55	17.55
Bulrush-cattail series	0.00	2.50	2.50	0.08	2.50	2.50	0.00	1.95	1.95
Fremont cottonwood series	0.00	0.94	0.94	0.00	0.94	0.94	0.00	0.00	0.00
Purple needlegrass series	0.00	0.34	0.34	0.00	0.34	0.34	0.00	0.00	0.00
Saltgrass series	0.00	0.08	0.08	0.00	0.08	0.08	0.00	0.08	0.08
Valley oak series	0.00	29.15	29.15	0.00	29.15	29.15	0.00	16.42	16.42
Valley oak mitigation plantings	0.00	128.03	128.03	0.00	128.03	128.03	0.00	128.03	128.03
Blue oak mitigation plantings	0.00	9.02	9.02	0.00	9.02	9.02	0.00	9.02	9.02
Subtotal	**0.00**	**238.67**	**238.67**	**0.08**	**238.67**	**238.67**	**0.00**	**173.04**	**173.04**
Other In-Watershed Facilities [b]									
Bush seepweed series	0.38	0.00	0.38	0.38	0.00	0.38	0.38	0.00	0.38
Blue oak series	5.73	18.79	24.53	5.73	18.79	24.53	3.25	11.84	15.09
Bulrush-cattail series	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09
Fremont cottonwood series	0.02	0.05	0.07	0.02	0.05	0.07	0.02	0.07	0.09
Purple needlegrass series	0.09	0.23	0.32	0.09	0.23	0.32	0.04	0.08	0.12
Valley oak series	0.31	0.64	0.95	0.31	0.64	0.95	0.43	0.94	1.37
Valley oak mitigation plantings	0.00	4.1	4.1	0.00	4.1	4.1	0.00	0.00	0.00
Subtotal	**6.53**	**19.71**	**26.25**	**6.53**	**19.71**	**26.25**	**4.12**	**13.02**	**17.14**
Delta Intake Facilities									
Bulrush-cattail series	0.08	0.22	0.30	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	**0.08**	**0.22**	**0.30**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Delta-Transfer Pipeline									
Saltgrass series	0.30	0.00	0.30	0.30	0.00	0.30	0.00	0.00	0.00
Valley oak series	1.63	0.00	1.63	1.63	0.00	1.63	0.00	0.00	0.00
Subtotal	**1.93**	**0.00**	**1.93**	**1.93**	**0.00**	**1.93**	0.00	0.00	0.00
Transfer-LV Pipeline									
Bulrush-cattail series	0.24	0.00	0.24	0.24	0.00	0.24	0.00	0.00	0.00
Fremont cottonwood series	0.11	0.00	0.11	0.11	0.00	0.11	0.00	0.00	0.00
Saltgrass series	0.22	0.00	0.22	0.22	0.00	0.22	0.00	0.00	0.00
Valley oak series	0.10	0.00	0.10	0.10	0.00	0.10	0.00	0.00	0.00
Subtotal	**0.67**	**0.00**	**0.67**	**0.67**	**0.00**	**0.67**	**0.00**	**0.00**	**0.00**

REVISED DRAFT EIS/EIR TABLE 4.6-9
SENSITIVE PLANT COMMUNITY IMPACTS BY PROJECT COMPONENT (ACRES)[a]

	Alternatives 1 and 2			Alternative 3			Alternative 4		
Project Component	**Temporary**	**Permanent**	**Total**	**Temporary**	**Permanent**	**Total**	**Temporary**	**Permanent**	**Total**
Transfer-Bethany Pipeline									
Bulrush-cattail series	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00
Bush seepweed	0.22	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Saltgrass series	0.95	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00
Northern claypan vernal pool	~~0.86~~ 0.00	~~0.00~~ 0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**~~2.26~~ 1.40**	**~~0.00~~ 0.86**	**2.26**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Power Option 1[c]									
Northern claypan vernal pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulrush-cattail series	<0.1	0.00	<0.1	<0.1	0.00	<0.1	0.00	0.00	0.00
Bush seepweed	0.0	0.00	0.0	0.0	0.00	0.0	0.00	0.00	0.00
Subtotal	**<0.1**	**0.00**	**<0.1**	**<0.1**	**0.00**	**<0.1**	**0.00**	**0.00**	**0.00**
Power Option 2 [c]									
Northern claypan vernal pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulrush-cattail series	<0.1	0.00	<0.1	<0.1	0.00	<0.1	0.00	0.00	0.00
Bush seepweed	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont cottonwood	**<0.1**	0.00	**<0.1**	**<0.1**	0.00	**<0.1**	0.00	0.00	0.00
Subtotal									
Total Impacts to Sensitive Habitats									
Bush seepweed series	6.73	1.32	8.05	6.50	1.32	7.82	0.38	0.00	0.38
Blue oak series	5.73	87.40	93.14	5.73	87.40	93.14	3.25	29.39	32.64
Bulrush-cattail series	1.40	2.72	4.11	1.40	2.72	4.11	0.00	2.03	2.03
Fremont cottonwood series	0.18	0.99	1.18	0.18	0.99	1.18	0.02	0.07	0.09
Northern claypan vernal pool	~~0.93~~ 0.07	~~0.00~~ 0.86	0.93	0.07	0.0	0.07	0.00	0.00	0.00
Purple needlegrass series	0.09	0.56	0.66	0.09	0.56	0.66	0.04	0.08	0.12
Saltgrass series	1.48	0.08	1.56	0.52	0.08	0.60	0.00	0.08	0.80
Valley oak series	2.03	29.79	31.83	2.04	29.79	31.83	0.43	17.36	17.79
Valley oak mitigation plantings	0.00	132.13	132.13	0.00	132.13	132.13	0.00	132.13	132.13
Blue oak mitigation plantings	0.00	9.02	9.02	0.00	9.02	9.02	0.00	9.02	9.02

[a] "Temporary" impacts, as used in this analysis, include habitats that would be degraded or similarly impaired, with features being restored *in situ* to emulate pre-project conditions. "Permanent" impacts are those that would permanently destroy features, with compensatory mitigation provided in alternate locations.

[b] Other in-watershed facilities under Alternatives 1, 2, and 3 include the marina, marina access road, borrow area, picnic areas, trailhead parking, westside access road, eastside trail, stockpile area, and parking areas. Facilities under Alternative 4 include the above facilities, and 160 TAF borrow area.

[c] Note that plant community impacts for Power Supply Infrastructure do not include the acreage of features that will be avoided by facilities or spanned by powerlines.

SOURCE: ESA unpublished data, 2006-2008

Two comments (F_EPA-02 and S_DFG-07) state that compensatory wetland mitigation sites must be protected in perpetuity. The mitigation strategy will comply with the new Clean Water Act rule, which provides that aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms, and that any provisions necessary for long-term management, including compliance monitoring, must be addressed in the original permit or instrument.

CDFG also states (S_DFG-07) that wetland impact estimates must include CDFG jurisdictional areas, consistent with CDFG code (not just USACE wetlands). The Draft EIS/EIR states that both CDFG and the Regional Water Quality Control Board (RWQCB) regulate wetlands and waters at the state level while the Corps regulates wetlands and waters at the federal level. For purposes of preparing the EIS/EIR impact analysis, field assessment and preliminary wetland delineations were completed at all potential facility sites to allow analysis of the nature and magnitude of potential wetland impacts under both wetland regulatory schemes. Reported "wetlands" in the Draft EIS/EIR are those wetlands that are regulated by the Corps (See Draft EIS/EIR Vol. 2, Section 4.6, Table 4.6-10, pg. 4.6-93). CDFG jurisdiction will cover some additional area within its definition, "bank to bank". The streambed width and areas of riparian cover are also analyzed in the Draft EIS/EIR impact analysis and addressed as part of the assessment of impacts to riparian habitats. Because the majority of wetland features that would be affected by the project are created ponds and semi-permanent marshlands, it is expected that the additional area within CDFG's jurisdiction will be minimal and will include the banks of Adobe Creek and Kellogg Creek in the watershed, and the banks of Brushy Creek and other drainages that would be traversed by pipeline alignments. The areas affected by pipelines outside the watershed are not applicable to Alternative 4, which does not include construction of facilities outside of the CCWD watershed. During the project permitting process, detailed delineations will be prepared in accordance with each of the appropriate state and federal requirements to reflect more detailed project design information and the mitigation requirements identified in the Draft EIS/EIR will be implemented in accordance with the verified acreages of wetland impact.

This comment also states that the temporary impacts at the new Delta Intake and Pump Station (associated with Alternatives 1 and 2 only) would not be eliminated by site restoration and by removal of the cofferdam at the completion of in-channel work, as stated in the wetland impact summary (see Summary for Alternative 1, Vol. 2, Section 4.6, pg. 4.6-101). This comment does not identify specific issues or concerns at this site. Jurisdictional wetlands that would be affected at the new pump station site principally include freshwater emergent cattail vegetation and open water. The Draft EIS/EIR impact analysis utilizes a "study zone" site assessment method that characterizes the type and area of wetlands present within a broad study area much larger than the proposed facility. Thus, the impact values presented indicate the upper expected level of impact. The proposed intake facility was purposefully sited in a deepwater area that supports only a sparse and narrow fringe of wetland vegetation. The shallow water point bar that occurs between the existing and new intake facilities, on the inside bend of Old River, was avoided during siting of the new intake (Figure 4.6-18, Vol. 2, Section 4.6, pg. 4.6-83). Siting the new intake in deep water habitat, where less emergent vegetation is present, is preferred because it minimizes the

need for long-term facility maintenance such as dredging near the intakes. This also serves to reduce impacts to aquatic habitat and sensitive fish species. With the proposed mitigation, Measure 4.6.2a (Vol. 2, Section 4.6, pg. 4.6-102), which seeks to avoid and minimize effects to wetlands and other waters to the greatest extent practicable and Mitigation Measure 4.6.2b (Vol. 2, Section 4.6, pg. 4.6-103), which provides compensation for impacts through wetland restoration or creation, temporary impacts to wetlands would be reduced to a less than significant level. The comment states that temporary impacts to wetlands and waters should be mitigated at a ratio of 1.1:1. Such a ratio is consistent with the ratios identified in Mitigation Measure 4.6.2b.

One comment (S_DFG-07) states that avoidance strategies must include the siting of permanent pipeline features such as blow-off valves, vaults and manholes outside of CDFG jurisdictional areas. As a matter of refining the project description, the Draft EIS/EIR (Vol. 2, Section 4.6, pg. 4.6-99) correctly states for the Delta-Transfer Pipeline that, "no access vaults would be installed within the jurisdictional drainages that occur along the pipeline corridor. Thus, installation of the pipeline would result in … no permanent impacts to potential jurisdictional features." This statement was inadvertently omitted for the Transfer-Bethany Pipeline and Transfer-Los Vaqueros Pipeline. Thus, Mitigation Measure 4.6.2a is revised as shown below. This text change is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

> **Measure 4.6.2a:** Final project design shall avoid and minimize the fill of wetlands and other waters to the greatest practicable extent. No access vaults would be installed within the jurisdictional drainages that occur along any pipeline corridors. Areas that are avoided shall be subject to best management practices under the General National Pollutant Discharge Elimination System Permit, as described in Measure 4.5.1. The fill of wetlands at the proposed Western substation site shall be avoided by siting facilities within the study area so as to avoid impacts to such areas.

3.8.7 Conservation Easement

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DFG-03	S_DFG-05	L_EBRPD2-26	L_EBRPD2-37
O_SMD-01	S_DFG-16		

Summary of Issues Raised by Commenters

- The Draft EIS/EIR does not explain how the Lead Agencies intend to extinguish the existing conservation easement for kit fox habitat.
- The Draft EIS/EIR does not discuss wind leases or wind rights on the Los Vaqueros Watershed lands that may be proposed as conservation areas.

Response

Impacts to Existing Conservation Easement

Several comments discuss the legal mechanisms that are required to modify or extinguish a conservation easement. CDFG discusses possible procedures for accomplishing the necessary revisions to the existing conservation easement. CCWD will work with CDFG as needed to implement the appropriate steps to modify the existing easement, and to mitigate the new impacts to the areas currently subject to the conservation easement. Steps to modify the existing conservation easements would include one or more of the following: CCWD and CDFG may agree to amend the boundaries of the watershed lands that are subject to the easement; CCWD and CDFG may agree to exchange easement lands; or CCWD may initiate condemnation proceedings, while also providing a replacement easement to CDFG. In all cases, CCWD would ensure the amount and quality of the land subject to the conservation easement are consistent with the easement's purpose and requirements.

One comment states that the project's inconsistency with the existing conservation easement established to protect habitat is itself a significant impact. CEQA requires that a lead agency consider and evaluate all potentially significant impacts to the physical environment. As is discussed and evaluated in the Draft EIS/EIR, the potentially significant impact associated with modification of the existing easement is the impact that could occur to San Joaquin kit fox from loss of grassland habitat. The mitigation for this impact described in the Draft EIS/EIR requires that CCWD replace any acreage subject to the conservation easement that is affected by the project with an equivalent amount of acreage suitable for use by the kit fox, thereby assuring that the amount and quality of habitat subject to the protection of the easement is maintained (Mitigation Measure 4.6.7c). Further, the Draft EIS/EIR requires that CCWD compensate for new impacts to areas protected by the conservation easement, as well as other grassland areas affected by the project, at a ratio of up to 3:1 (Mitigation Measure 4.6.7c). Given that high quality lands are available within and outside the watershed for acquisition or transfer and that the project will be required to ensure that lands are preserved and enhanced for the benefit of the species in an amount that is sufficient to ensure that the loss of potential kit fox habitat will be fully offset, this impact is considered less than significant after mitigation.

Existing Wind Farm Easements

One comment (Comment S_DFG-05) states that the Draft EIS/EIR does not discuss wind leases or wind rights on Los Vaqueros Watershed lands that may be proposed as conservation areas, and that if lands with these or other potentially incompatible encumbrances exist on lands that Reclamation and CCWD propose to use for habitat management, the encumbrances need to be disclosed and outstanding issues must be resolved with CDFG. Some lands within the watershed contain existing wind farms and others are potential sites for such farms. Such lands tend to be in the southern area of the watershed; it is likely that habitat management lands would be in the northern area. Reclamation and CCWD agree that existing and potential wind farms on lands proposed to be used for habitat management would be considerations to discuss and resolve with CDFG.

3.8.8 East Contra Costa HCP/NCCP

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCPW-04	L_EBRPD2-21	L_EBRPD2-22	L_EBRPD2-23
L_EBRPD2-24	L_EBRPD2-25	L_ECCCHC-01	O_SMD-12

Summary of Issues Raised by Commenters

- The EIS/EIR should further address consistency of the Draft EIS/EIR mitigation strategy with the ECCC HCP/NCCP.
- By competing for mitigation land in the region, the project has the potential to affect the activity of the HCP/NCCP to achieve its recovery goals.
- CCWD should compensate the ECCC HCP/NCCP for impacts outside of the Los Vaqueros Watershed

Response

Consistency of the Mitigation Strategy with the ECCC HCP/NCCP

Several comments (L_EBRPD2-21, L_EBRPD2-24 and L_ECCCHC-01) indicate that the Draft EIS/EIR should further identify and evaluate inconsistencies between the proposed project and the ECCC HCP/NCCP. As discussed in the Draft EIS/EIR (Vol.2, Section 4.6.2, Impact 4.6.17, pg. 4.6-174), the Los Vaqueros Watershed lies within the biological inventory area of the ECCC HCP/NCCP, but outside of the action area and defined mitigation areas. The ECCC HCP/NCCP preparers were well aware of the potential expansion of Los Vaqueros Reservoir and therefore previously included the expansion project in the regional analysis of biological resources.

The HCP/NCCP does not prohibit projects that are approved outside of its coverage from causing impacts to biological resources. The HCP/NCCP was developed with the full understanding that the Los Vaqueros Reservoir Expansion Project was advancing and would occur during the permitting lifetime of the HCP/NCCP. As such, the HCP/NCCP considered potential project impacts in its analysis (ECCCHCPA, 2006). Thus, it was understood during the development of the HCP/NCCP that mitigation would occur locally for the Los Vaqueros Reservoir Expansion Project. Many of the areas that were prioritized for acquisition in the HCP/NCCP were identified because their permanent loss would have lasting effects on sensitive species, and in particular San Joaquin kit fox. Mitigation that is implemented for the Los Vaqueros Reservoir Project will further the same goals and objectives as the HCP/NCCP. However, unlike the HCP/NCCP, habitat protection for the Los Vaqueros Reservoir Expansion Project can be implemented on a fully regional scale that includes Alameda County and areas further south where appropriate.

A commenter (L_EBRPD2-22) states that the Los Vaqueros Reservoir Expansion Project will compete with the ECCC HCP/NCCP for available mitigation lands and has the potential to affect the ability of the HCP/NCCP to meet its recovery goals. However, the Mitigation Lands

Opportunities analysis performed to determine the availability of regional mitigation lands (see Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-185 through 4.6-187) demonstrates that there is ample habitat in Contra Costa County to satisfy mitigation requirements under any of the project alternatives, while being consistent with the HCP/NCCP goals and land acquisition program. The HCP/NCCP identifies considerably more mitigation lands in Contra Costa County than would be needed to meet its land acquisition and preservation goals. In addition, the Los Vaqueros Reservoir Expansion project may also conserve suitable mitigation lands in nearby northeastern Alameda County and San Joaquin County, thus providing additional locations to support the conservation goals of the ECCC HCP/NCCP, which is limited to available lands in eastern Contra Costa County.

Comment (L_EBRPD2-25) requests that the lead agencies for the reservoir expansion project further explain how they will coordinate with the East Contra Costa Habitat Conservancy as the ECCC HCP/NCCP and Los Vaqueros Reservoir Expansion Project are implemented. The lead agencies (for the Los Vaqueros Project) and ECCC HCP/NCCP participants have coordinated on land issues for many years, and will continue to do so throughout implementation of the reservoir expansion project. The CCWD Watershed and Lands Department is responsible for securing land and property rights for CCWD projects. The Department Manger maintains routine contact and coordination with land managers at the East Contra Costa County Habitat Conservancy and East Bay Regional Park District.

One comment (Comment SMD-12) states that CCWD should pay ECCC HCP/NCCP fees to mitigate for impacts outside the watershed (approximately 267 acres). The Los Vaqueros Reservoir Expansion project was not included as a covered activity in the ECCC HCP/NCCP. While it may be possible for projects not included in the HCP/NCCP to "buy in" or otherwise pay to mitigate for their impacts, mitigation measures have been identified in the Draft EIS/EIR to fully mitigate for the impacts of the Los Vaqueros Reservoir Expansion Project under any of the four alternatives, such that it is not necessary for the project to seek mitigation coverage via the HCP/NCCP.

3.8.9 Cumulative Effects

Comment Summary

This section of this master response responds to all or part of the following comments:

S_DFG-01	S_DFG-04	L_EBRPD2-22	L_EBRPD2-40
L_EBRPD2-41	O_EBCNPS-06	O_SMD-04	O_SMD-14
I_Graham-04	O_NASNF-04		

Summary of Issues Raised by Commenters

- The Draft EIS/EIR discussion of potential cumulative effects to wildlife corridors and habitat linkages does not consider a number of additional projects in the East Contra Costa and Alameda County areas.

- The cumulative impact analysis should have included impacts from past reservoir construction.
- The analysis of cumulative effects on potential wildlife movement corridors is incomplete.
- The analysis of cumulative effects on individual species should explain why mitigation of project impacts also will reduce the project's contribution to cumulative impacts to a less than significant level.

Analysis of Cumulative Biological Resource Impacts

Some commenters state that the discussion of cumulative project impacts does not consider the full breadth of existing past, present and reasonably foreseeable future projects or impacts. Projects that were specifically identified by commenters include the Mountain House Residential Development in the City of Tracy, the Delta College Tracy Campus, Vasco Road Improvements, Pittsburg Hillsides Development in Pittsburg, Cypress Corridor in Brentwood, the Aviano Adult Community project in the City of Antioch, and the Roddy Ranch project in Antioch, which the commenters state could each potentially affect kit fox movement corridors. The Byron Vernal Pool Regional Preserve project was also identified by EBRPD as a potential source of cumulative biological resource impacts. The cumulative effects analysis in the Draft EIS/EIR Biological Resources section analyzes the effects of the Mountain House Community in northwestern San Joaquin County, which includes the Delta Tracy Campus (Vol. 2, Section 4.6, pg. 4.6-177); the Zone 7 Altamont Water Treatment Plant and Pipeline (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-177), which would result in the permanent loss of fewer than 40 acres of annual grasslands habitat near the terminus of Dyer Road in Alameda County; the California Department of Water Resources South Bay Aqueduct Enlargement project, presently under construction in northern Alameda County; and regional Road Safety Improvement and Widening projects. The following discussion was presented in the Draft EIS/EIR regarding the potential cumulative effects of the Mountain House Project:

> This phased, 5,000-acre residential and commercial development project, which is identified in the San Joaquin County Multiple Species Habitat Conservation Plan, occupies annual grasslands and former agricultural lands that presumably provided moderate to high habitat values for San Joaquin kit foxes. This project could present a barrier to north-south kit fox movement through agricultural portions of the Valley floor. The environmental reviews conducted for the Mountain House Specific Plan considered direct project effects upon occupied kit fox denning and foraging habitat; however, effects to movement corridors were not identified (County of San Joaquin, 2008). Because the Los Vaqueros Reservoir Project is over 10 miles from the Mountain House Community, and would not affect the same area of potential kit fox movement, the two projects would not result in a significant cumulative impact to kit fox movement corridors. (Draft EIS/EIR, Vol. 2, Section 4.6, pg. 4.6-177)

As indicated in Draft EIS/EIR, Vol. 1, Section 4.1, Table 4.1-2, Projects Considered in the Analysis of Cumulative Effects on Land-Side Resources, analysis of Road Safety Improvement and Widening projects included the Vasco Road project and the State Route 4 Improvement projects. These road improvement projects are identified in the Biological Resources cumulative analysis as the State Route 4 Highway Widening project, but also included an analysis of Vasco

Road improvements. As identified in the cumulative analysis, these improvement projects are expected to have only a minor, temporary impact on kit fox habitat and movement, principally because the improvements would be limited to the existing corridor and any improvements would be accompanied by corresponding modifications, upgrades or maintenance to existing wildlife undercrossings that are used by kit foxes.

The Pittsburg Hillsides Development and other Pittsburg projects were considered to be too far away and outside the geographic scope of the cumulative analysis. The Cypress Corridor in Brentwood was considered in the cumulative analysis, along with other projects approved in Brentwood (see Draft EIS/EIR, Vol. 2, Section 4.1, Table 4.1-2, pp. 4.1-11 through 4.1-13).

The Aviano Adult Community project, located in the mostly undeveloped southeastern outskirts of the City of Antioch approximately 7 miles north of the Los Vaqueros Watershed, is not analyzed in the Draft EIS/EIR cumulative analysis. The Aviano project EIR was reviewed, however, for this FEIR analysis. The cumulative analysis for that project found that the overall cumulative loss of wildlife and plant habitats as a result of the Aviano project was considered Less-than-Significant under CEQA for listed shrimp species, California tiger salamander, California red-legged frog, and San Joaquin kit fox. This conclusion was based on the fact that grasslands in the southern portion of the site and the site creek would remain undeveloped following project implementation (LSA, 2008). The Aviano Project is located at the northernmost extent of the San Joaquin kit fox range, on the edge of the City of Antioch and does not alter or interfere with any San Joaquin kit fox movement corridors. This project is sufficiently distant from the Los Vaqueros Reservoir Project that any cumulative impacts on kit fox habitat loss and movement would be Less-than-Significant.

The Roddy Ranch project, located in the City of Antioch, about 6 miles north of the Los Vaqueros Watershed, was not included in the Draft EIS/EIR cumulative analysis. This proposed project would develop 392 acres of residential, recreation, resort and hotel uses on a 540-acre site. The project is proposed within one of three valleys that provide the principal movement corridor for San Joaquin kit fox between Black Diamond Mines Regional Preserve and Cowell Ranch State Park. The Roddy Ranch project EIR concluded that the project would restrict wildlife movement through Horse Valley, but the adjacent Deer Valley and Lone Tree Valley would continue to provide potential wildlife movement corridors (Circlepoint, 2009). When taken into consideration with future development in Deer Valley that is anticipated by the City of Antioch General Plan, the Roddy Ranch EIR states, without specifically identifying the San Joaquin kit fox, that the project would substantially restrict potential wildlife movement and contribute to the ongoing loss of biological resources and habitat (Circlepoint, 2009).

The EBRPD Byron Vernal Pools Regional Preserve was recently established between Armstrong Road and Vasco Road and construction is underway at this site. The EBRPD (Comment L_EBRPD2-40) commented that the preserve project was not listed in the developments that were analyzed for cumulative effects and could be affected by the Los Vaqueros Reservoir Expansion Project. While the preserve parcel was still being acquired by the EBRPD at the time the Draft EIS/EIR was finalized, the biological resources on this site were fully characterized for

the Draft EIS/EIR analysis. The Transfer-Bethany Pipeline alignment does not cross the preserve parcel but does follow Armstrong Road adjacent to the property. The preserve site supported few wetland features, and construction of the proposed project would not adversely impact surface or groundwater hydrology or other characteristics of the preserve. The pipeline right-of-way, within Armstrong Road, is specifically designed to minimize impacts to the preserve parcel and similar sensitive habitat areas located east of Armstrong Road. Thus, the preserve site has been evaluated for direct and indirect impacts that could occur as a result of project construction. Based on a review of preliminary wetland creation schematics for the preserve, which show that wetland features would not be created or enhanced immediately adjacent to Armstrong Road, impacts to natural resources on this site and in particular, created wetlands, are not expected to change as a result of future conditions resulting from wetland creation.

The ECCC HCP/NCCP identified four potential San Joaquin kit fox movement routes or habitat linkages between Black Diamond Mines Regional Preserve and the Los Vaqueros Watershed. The ECCC HCP/NCCP (ECCCHCPA, 2006) identifies these kit fox movement corridors as: 1) the Round Valley corridor that includes annual grasslands that connect Round Valley to Black Diamond Mines Regional Preserve, measuring 7.5 to 8 miles in length; 2) the Briones Valley corridor that runs through Briones Valley and is approximately 4.5 miles long; 3) the Deer Valley corridor through Deer Valley that is about 4 miles long and includes the Roddy Ranch Golf Course; and 4) the Horse and Lone Tree Valleys that together form a corridor between Black Diamond Mines Regional Preserve and Cowell Ranch State Park. The ECCC HCCP/NCCP (ECCCHCPA, 2006) discusses the potential for the Roddy Ranch Golf Course facility to inhibit regional kit fox movement. The ECCC HCP/NCCP states that the Roddy Ranch Golf Course is not considered a barrier to kit fox because annual grassland is interspersed between the greens and fairways and kit fox are known to use golf courses in the southern part of their range.

Wildlife movement corridors provide connectivity between two or more non-contiguous habitat patches and function to facilitate wildlife movement. Corridors can exist as continuous strips or as a stepping stone arrangement of separated natural habitat. Such movement corridors are used locally by San Joaquin kit fox and other wildlife species, and are generally considered vulnerable to incremental effects. As stated in the project Draft EIS/EIR, the Los Vaqueros Reservoir Expansion project would reduce regional wildlife movement opportunities along the southern pathway into Round Valley Regional Preserve, which were already impacted by the existing Los Vaqueros Reservoir, through the elimination of the wildlife movement corridor located west of Los Vaqueros Reservoir (Vol. 2, Section 4.6, pg. 4.6-129). The analysis provided in the Draft EIS/EIR analysis states that additional north to south movement corridors exist on lands located north and east of Los Vaqueros Reservoir (Figure 4.6-24, Vol. 2, Section 4.6, pg. 4.6-130). Other than the Los Vaqueros Reservoir Expansion project, no other projects have been identified that would modify or otherwise affect wildlife movement corridors into Round Valley. The Roddy Ranch project and others considered in the cumulative analysis are distant from the Los Vaqueros Reservoir Expansion project. Of these, only the Roddy Ranch project was identified to have cumulative effects on wildlife movement. Because the Los Vaqueros Reservoir Expansion project would not alter or otherwise affect the wildlife movement corridors that would be impacted by the Roddy

Ranch project and the projects are relatively distant from each other, the projects together would not cause a significant cumulative impact on a regional wildlife movement corridor.

One comment (O_SMD-14) requests further cumulative analysis of Tres Vaqueros Wind Ranch and the Tamayo-Nunn minor subdivision adjacent to the CCWD Transfer Station, because sensitive biological resources could be affected. The impact analysis for these projects has not been released for review by the applicable lead agencies; thus it is difficult to identify potential cumulative project effects. The Tres Vaqueros project is a repowering project located generally south of the Los Vaqueros Watershed, though a few turbines would be replaced within the watershed. As the commenter indicates, the project would create new unpaved roads where the existing roads cannot accommodate access to the new turbines. Existing roads and tower sites in the Tres Vaqueros wind farm area that are abandoned as part of the project would be restored to annual grasslands, thus retaining the overall character of the project area. Because new towers would generally be constructed on hilltops and ridgelines, the Tres Vaqueros wind farm would have nominal effects on wetlands. Following construction, the use of roads and facility maintenance would be similar or less than existing road use. As a result, this project is not expected to have long-term effects on terrestrial wildlife species and no cumulative effects are anticipated.

In consideration of the Tamayo-Nunn Project, the CCWD Transfer Station would be constructed within the fence line of the existing Transfer Station facility. The effects of this Transfer Station facility are minimal, less than 2 acres in size, and no special-status plants or wildlife are known or expected to be impacted by this facility. Site fencing generally inhibits kit fox access to the existing Transfer Station facility. Because specific details on the Tamayo-Nunn Project area not available, it is unknown what impacts that development project will have on those biological resources identified by the commenter. However, because the proposed Transfer Facility improvements would have few, if any, effects on habitat and biological resources, these projects are not expected to have a significant cumulative effect on biological resources located in the same geographic area.

With respect to the past effects of the original Los Vaqueros Reservoir construction and operation on biological resources in the project area, these effects are reflected in the existing conditions both within the watershed and in the surrounding area. The existing conditions baseline used in the evaluation of biological resource impacts for the reservoir expansion project in accordance with CEQA reflects the past actions in the project area. The setting section describes the current condition of habitats and wildlife use in the project area and project impacts are assessed in light of the current condition and quality of biological resources. Evaluating the effects of the proposed project, in combination with the anticipated effects of other projects proposed in the area on top of the current environmental conditions effectively addresses impacts from past, present and future projects.

Another comment (L_EBRPD2-41) criticizes the Draft EIS/EIR analysis and conclusions related to cumulative impacts, stating that the EIS/EIR must explain why project mitigation measures are adequate to mitigate both project-specific impacts and the project's contribution to cumulative impacts since both types of impacts must be considered. As discussed above, the cumulative

analysis of project effects upon wildlife movement corridors is considered Less-than-Significant because the Los Vaqueros Reservoir Expansion Project is relatively distant from other projects that could affect similar resources, (e.g., the Roddy Ranch Project, which is located greater than six miles to the north), and the proposed project would not alter or otherwise diminish the quality of wildlife movement corridors that could be affected by other projects.

3.9 Master Response 9: Transportation and Circulation

3.9.1 Introduction

Overview

This master response addresses issues raised by two commenters about project-generated construction traffic including increased traffic congestion and potential hazards associated with haul trucks dropping debris.

This master response is organized by the following subtopics:

- 3.9.2 Traffic Impacts and Mitigation Measures

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- Contra Costa County, Department of Conservation and Development – L_CCCDCD

Organizations

- None

Individuals

- Steven Navarro – I_Navarro

Draft EIS/EIR Section References

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Executive Summary, pp. ES-75 through ES-76; Vol. 2, Section 4.9, pp. 4.9-12 through 4.9-19; and Vol. 3, Appendix H, Table H-1.

3.9.2 Traffic Impacts and Mitigation Measures

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCDCD-03	L_CCCDCD-04	I_Navarro-04
I_Navarro-05	I_Navarro-01	

Summary of Issues Raised by Commenters

- Onsite use and offsite disposal of excavated soil from project construction sites and traffic assumptions for offsite transport should be clarified.
- The geographic distribution of construction traffic should ensure that such traffic does not overwhelm rural roads.
- Construction-related traffic hazards should be addressed.
- Impacts to commute-time traffic conditions should be addressed.

Response

Transport of Excavated Soils. As discussed in the Draft EIS/EIR, two elements of the project involve substantial removal of soils and associated materials: partial removal of the existing dam at Los Vaqueros Reservoir under all alternatives, and the excavation for pipeline installation in Alternatives 1, 2 and 3. As the Draft EIS/EIR states, most of the material from the existing dam would be reused and any minor amounts of remaining material would be disposed of onsite within the reservoir inundation area (Vol. 2, Section 4.9, pg. 4.9-13). Although not expected to occur, based on experience from construction of the original dam, any spoils or waste not suitable for the reservoir inundation zone would be hauled to a suitable location for recycling or disposal, depending on the type and volume of material to be disposed. Types of solid waste that would be removed include a minor amount of construction debris, including miscellaneous wood scraps, metals, and packaging materials for equipment that would likely be hauled offsite to materials recycling facilities.

With respect to the pipeline trenches for Alternatives 1, 2 and 3, up to 75 percent of the materials removed from the trenches would be reused as backfill or spread out over adjacent grazing land, reducing the number of truck trips needed to haul this material offsite for disposal or to import additional backfill materials (Draft EIS/EIR, Vol. 2, Section 4.9, pg. 4.9-13). Clean excavation materials could be accepted for use at other construction sites; or stored at existing sand and gravel facilities until (re)used as clean fill; or sent to one of 19 regional construction materials recycling facilities. It is not anticipated that earthen materials would be disposed of in a landfill (Draft EIS/EIR, Vol. 2, Section 4.12, pg. 4.12-19).

One comment (L_CCCDCD-03) points out that on page 4.9-9, the Draft EIS/EIR states that "[a]n estimated 25 percent of the excavated soil would be hauled away from the work sites for disposal or reuse elsewhere." Although subsequent language on page 4.9-13, as mentioned in the previous paragraph, indicates that this sentence refers to the pipeline work sites rather than all project work sites, the first sentence could be clearer. Accordingly, this sentence (from the Draft EIS/EIR, Vol. 2, Chapter 4.9, pg. 4.9-9) is revised in Chapter 5 of this document to read:

> An estimated 25 percent of the excavated soil would be hauled away from the <u>pipeline</u> work sites for disposal or reuse elsewhere.

The comment also requests the details of the final destinations, routes and numbers of trucks for any off-site soil transport. As discussed in Vol. 1, Chapter 3.0, Project Description, a more

precise inventory of what final disposal areas would in fact be used would depend on the type and volume of material to be disposed (pg. 3-53). In addition, it is not known at this time what other construction sites might be available during the project construction timeframe to receive clean fill material from the pipeline trenches. While final disposal locations and haul routes are not known at this time, the number of truck trips and the main roadways that haul trucks would use to access the project area are presented in the Draft EIS/EIR.

As indicated above, one of the assumptions identified in the Draft EIS/EIR is that an estimated 25 percent of the soil excavated for pipeline installation under Alternatives 1-3 would be hauled away from the work sites for disposal or reuse elsewhere (Vol. 2, Section 4.9, pg. 4.9-9). Table H-1, Los Vaqueros Construction Traffic Assumptions, in Appendix H of the Draft EIS/EIR indicates the total number of equipment and materials haul trucks estimated for each facility component for the four build alternatives (Vol. 3, Appendix H, Table H-1). For the purposes of the impact analysis, it was assumed that construction activity would be occurring at all facility sites at the same time, representing a peak construction scenario. Construction characteristics, including proposed labor and equipment, location of construction, and rate of construction, were used to conservatively estimate the manpower level and number of vehicles that would be required for facilities installation.

Impacts to Rural Roads and Commute-time Traffic Conditions. As described in Section 4.9, Transportation and Circulation, of the Draft EIS/EIR, project construction activities would intermittently and temporarily increase traffic congestion on area roadways (Impact 4.9.1), including a substantial increase in traffic and congestion conditions during morning and evening peak commute hours during the construction period on four main roads that access from the highway system to the project area (Vasco Road, Byron Highway, State Route 4 (SR 4), and SR 4 Bypass) (Vol. 2, Section 4.9, pp. 4.9-12 through 4.9-17). Construction is expected to take about three years to complete for Alternatives 1, 2, and 3, and about two years for Alternative 4. The majority of construction traffic for the project is expected to access the project area via Interstate 5 (I-5), Interstate 205 (I-205), and Interstate 580 (I-580) with some construction workers and trucks delivering equipment and materials, accessing the project area from the west, using Interstate 680 (I-680), I-580, and/or SR 4. The main roads providing access from the highway system to the project area and access to specific facility sites include Vasco Road, Byron Highway, SR 4 and the SR 4 Bypass. The discussion in the Draft EIS/EIR addresses construction traffic impacts on these roadways during peak commute hours and concludes, using the conservative simultaneous-construction scenario described above, that impacts during peak commute hours would be significant without mitigation for Alternatives 1, 2 and 3 (Vol. 2, Section 4.9, pp. 4.9-12 through 4.9-17).

The Draft EIS/EIR determines that this impact would be Less-than-Significant with Mitigation for Alternatives 1, 2, and 3 and Less-than-Significant for Alternative 4. Impacts under Alternative 4 would be substantially less than those analyzed under Alternative 1 because Alternative 4 involves construction of a smaller reservoir expansion and upgrade, but not expansion of the Transfer Facility, and does not include any of the other major intake or pipeline facilities proposed under Alternative 1. Under Alternative 4, construction activity would occur

primarily within the Los Vaqueros Watershed, and the main access roads used would be Vasco Road and Walnut Boulevard, with some use of Byron Highway, SR 4, SR 4 Bypass, and Camino Diablo also expected.

The Draft EIS/EIR considers and acknowledges the potential temporary effects of the proposed project on area roadways and includes the following mitigation measures, applicable to Alternatives 1, 2, and 3, to minimize project construction traffic during peak commute hours (Vol. 2, Section 4.9, pg. 4.9-17).

> **Measure 4.9.1a:** Schedule project-generated construction truck trips on Vasco Road, Byron Highway, SR 4, and SR 4 Bypass outside the peak morning and evening commute hours such that the frequency of construction truck trips on these roads would be no greater than one every two minutes (i.e., 30 trucks per hour) during these peak commute periods.
>
> **Measure 4.9.1b**: Develop and implement a construction truck hauling plan that designates specific routes to be used to access the various project facilities when multiple facility sites are under construction concurrently so that project-generated construction traffic is dispersed over a number of roads in the project area.

Mitigation Measure 4.9.1a provides the mechanism by which project-generated construction-related truck trips would be limited and temporally distributed to reduce delays associated with truck traffic on main roads during peak commute hours. The effect of temporal spacing of trucks entering a specific roadway would be similar to that of metering on-ramps for major roadways. Mitigation Measure 4.9.1a would have the following effect:

Vasco Road. As discussed in the Draft EIS/EIR (Vol. 2, Section 4.9, pg. 4.9-15), under Alternative 1[2], the estimated number of total (worker and trucks) additional project-generated trips on Vasco Road would be approximately 200 trips per hour. Implementation of Mitigation Measure 4.9.1a would, under the worst-case scenario, reduce the maximum number of truck trips to 30 trips per hour during peak commute times.

SR 4 (between Old River and Byron Highway). As discussed in the Draft EIS/EIR (Vol. 2, Section 4.9, pg. 4.9-15), under Alternative 1, the estimated number of total (worker and trucks) additional project-generated trips on this segment of SR 4 would be approximately 78 trips per hour. Implementation of Mitigation Measure 4.9.1a would, under the worst-case scenario, reduce the maximum number of truck trips to 30 trips per hour during peak commute times.

Walnut Boulevard (between the north entrance of the Los Vaqueros Watershed and Vasco Road). As discussed in the Draft EIS/EIR (Vol. 2, Section 4.9, pg. 4.9-15), Walnut Boulevard carries a similar but slightly lower volume of existing daily traffic compared to Vasco Road. Some construction workers and haul trucks would use this road for some project construction-related trips, though not to the extent expected to use Vasco Road. Project construction traffic impacts to Walnut Boulevard would be similar but less than that described above for the peak project construction traffic scenario for Vasco Road.

---

[2] Project-related traffic estimates for Alternative 1 are used in this response since Alternative 1 would be expected to generate the highest number of project-related construction trips (Draft EIS/EIR, Vol. 2, Section 4.9, pp. 4.9-14 – 4.9-17).

***Byron Highway*.** As discussed in the Draft EIS/EIR (Vol. 2, Section 4.9, pg. 4.9-15), under Alternative 1, the estimated number of total (worker and trucks) additional project-generated trips on Byron Highway would be approximately 125 trips per hour. Implementation of Mitigation Measure 4.9.1a would, under the worst-case scenario, reduce the maximum number of truck trips to 30 trips per hour during peak commute times.

***SR 4 Bypass*.** Segment 3 of the SR 4 Bypass provides access to the Los Vaqueros Watershed from the north via its transition to Vasco Road at Marsh Creek Road and Vasco Road's subsequent connection to Walnut Boulevard. This roadway segment has been operational since late 2008. It can be expected that traffic volumes on the partial segment of the SR 4 Bypass between Walnut Boulevard and Marsh Creek Road are similar those for Vasco Road since these are, in fact, the same roadway; therefore, implementation of Mitigation Measure 4.9.1a would be expected to have similar effects on this roadway segment as those described for Vasco Road, above.

Assessment of the short-term effect that project construction traffic could have on local and regional roads included review of existing traffic volume information and consideration of both the percentage increase the project construction traffic would contribute over existing conditions and the capacity of the road to handle the additional traffic. Commute time alone does not figure into any of the established significance criteria in Appendix G of the CEQA Guidelines, on which the significance criteria in the Draft EIS/EIR are, in part, based.

The Draft EIS/EIR recognizes that "construction traffic to and from the eight different project facility sites would be distributed on each of the roads" (Vol. 2, Section 4.9, pg. 4.9-14) due to the different physical locales of these facility sites, and that different roadways would be used by construction vehicles to reach these different locations. Mitigation Measure 4.9.1b, above, provides the mechanism by which project-generated construction traffic, when multiple facility sites are under construction concurrently, would be geographically distributed so as to not overwhelm the rural roadways in the project area.

The suggestion that a new public roadway from Brentwood to Livermore be constructed for the purposes of mitigating temporary traffic congestion associated with the project is not warranted. The mitigation measures identified in the Draft EIS/EIR would mitigate the project's construction traffic impacts to Less-than-Significant and would not involve the environmental impacts or feasibility issues inherent in constructing an entirely new road.

Construction-related Road Hazards. One comment expresses concern about potential damage to vehicles and vehicle windshields due to construction trucks dropping rocks and other debris from their beds. The State of California Vehicle Code (Section 23114) states that

> *"… a vehicle shall not be driven or moved on any highway unless the vehicle is so constructed, covered, or loaded as to prevent any of its contents or load other than clear water or feathers from live birds from dropping, sifting, leaking, blowing, spilling, or otherwise escaping from the vehicle (DMV, 2009)."*

The Draft EIS/EIR includes the following element as part of Measure 3.9.1 (Section 4.10, pp. 4.10-28 through 4.10-29), applicable to all build alternatives, to comply with Section 23114 of the State Vehicle Code:

- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

The same commenter expresses concern about construction-related activities resulting in greater road hazards and unsafe driving conditions along Vasco Road. Vasco Road in general consists of one 12-foot lane in each direction with 6 to 8 foot outside shoulders. There are two three-lane sections for truck climbing and passing in the southbound direction, however none in the northbound direction. The posted speed limit is 55 mph (MTC, 2008).

Construction activities associated with the Transfer-Bethany Pipeline (Alternatives 1 and 2) would occur along approximately 3.0 miles of Vasco Road and would generally consist of excavation of trenches, pipeline installation, and backfill of open trenches. Because there are no homes or other structures along this portion of Vasco Road, these activities are expected to occur along the roadside in a construction easement and within the road right-of-way, and outside of the highway travel lanes. Vasco Road pipeline construction would be limited to the 3.0 mile distance between SR 4 and where the pipeline alignment moves southeast to meet with Armstrong Road. Note that this component is not included in Alternative 4.

As discussed in the Draft EIS/EIR Project Description (Vol. 1, Chapter 3, pg. 3-68), construction of the Transfer-Bethany Pipeline would proceed at a pace of about 120 feet per day. Accordingly, construction is estimated to occur over approximately 132 working days or approximately 4.5 months, assuming a six-day work week. Since construction equipment and workers would be accessing the pipeline work from Vasco Road, there is potential that, as discussed under Impact 4.9.2 (Vol. 2, Section 4.9, pp. 4.9-17 through 4.9-18), Alternative 1 or 2 would result in intermittent construction related delays in the project area due to construction activities. However, with implementation of Mitigation Measure 4.9.2a-c (Vol. 2, Section 4.9, pg. 4.9-19), this impact would be Less-than-Significant. Note that this component is not included in Alternative 4.

The Draft EIS/EIR considers and acknowledges the potential temporary effects of the proposed project on area roadways by construction-related traffic and construction activities adjacent to roadways within the project area, including Vasco Road. In response, the Draft EIS/EIR includes the following mitigation measure, applicable to Alternatives 1, 2, and 3, to minimize traffic hazards related to construction-related activities (Vol. 2, Section 4.9, pg. 4.9-19).

> **Measure 4.9.2c:** Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. This measure includes the use of signage to alert motorists of construction activities, potential hazards and travel detours as well as the use of flaggers when appropriate.

Since 2003 there have been a number of signing, striping and other road improvements made to Vasco Road, and more are planned for the future. Improvements made to date include signing and

striping, adding no passing zones, shoulder grading to remove sight distance obstruction, and adding additional vertical delineators in the median, and adding rumble strips along the shoulder (MTC, 2008).

It should be noted that Contra Costa County's (County) Capital Road Improvement & Preservation Program (program) includes the Vasco Road Safety Improvement Project (CCCPW, 2007). The project includes the installation of a median barrier on Vasco Road at selected locations between Camino Diablo and the Contra Costa/Alameda county line. The median barrier is expected to be installed along approximately 2.5 miles of Vasco Road in an area of Vasco Road where prior improvements have not occurred near Brushy Creek. The County has completed the federal and state environmental processes[3] for this project, and has received federal stimulus funds to provide a solid median barrier (k-rail) to replace the vertical delineators, a new truck passing lane in the area approximately three miles north of the Alameda County line, and turn pockets along the northbound (one-lane) roadway (Lai, 2010). The County expects to receive final approvals in the next few months and install this portion of the median barrier starting in April 2010 and continuing through 2011. Funding for the remainder of the project is still being sought (Carlson, 2009). In addition, the County implemented a roadway overlay (re-paving) project on Vasco Road, generally between Camino Diablo and the Contra Costa/Alameda county line in 2009 (Carlson, 2009). Therefore, safety features have already been designed and constructed and additional features will soon be completed.

[3] Federal process = National Environmental Policy Act; state process = California Environmental Quality Act.

This Page Intentionally Left Blank

3.10 Master Response 10: Hazardous Materials/Public Health and Utilities

3.10.1 Introduction

Overview

This master response addresses issues raised by commenters regarding the potential for existing hazardous materials and the locations of historic and existing utility pipelines in the project area.

This master response is organized by the following subtopics:

- 3.10.2 Hazardous Materials
- 3.10.3 Chevron Facilities and Operations

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- None

Organizations

- Chevron Environmental Management – O_CEMC

Individuals

- Gary Collier – I_Collier

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses hazardous material-related topics in the following locations: Vol. 1, Executive Summary, ES-83 and ES-84; and Vol. 2, Section 4.13, pp. 4.13-1 through 4.13-22. Utility- related topics are addressed in these locations: Vol. 1, Executive Summary, ES-80 through ES-83; and Vol. 2, Section 4.12, pp. 4.12-1 through 4.12-23.

3.10.2 Hazardous Materials

Comment Summary

This section of this master response responds to all of the following comment:

I_Collier-01

Summary of Issues Raised by Commenter

- The Draft EIS/EIR did not identify or address polychlorinated biphenyls (PCBs) and radioactive nucleotides in the project vicinity from releases at former military facilities such as McClellan Air Force Base.

Response

The comment states that numerous military facilities have purposely released PCBs and radioactive nucleotides, with the worst violator being McClellan Air Force Base. However, no military facilities are currently or were historically located within the proposed Los Vaqueros Reservoir Expansion Project vicinity, and McClellan Air Force Base is located northeast of the City of Sacramento and approximately 70 miles from the nearest segment of the Los Vaqueros Reservoir Watershed boundary.

Based upon the Environmental Data Resources, Inc. (EDR) review of regulatory agency environmental databases in March 2007 (see Table 4.13 from Draft EIS/EIR, Vol. 2, Section 4.13, pg. 4.13-6), no PCBs or radioactive nucleotides were identified and no superfund sites were found (as indicated by a search of the National Priority List database) to occur in the project vicinity. The project vicinity includes southeastern Contra Costa County, California, and a portion of eastern Alameda County, California. Figures 3-1 and 3-2 in the Draft EIS/EIR (Vol. 1, Chapter 3, pp. 3-17 through 3-18) show the project area graphically.

Water quality in the Delta is monitored for a variety of constituents (see the regulatory setting for Section 4.2, Delta Hydrology and Water Quality in the Draft EIS/EIR, Vol. 1, Section 4.2, pp. 4.2-1 through 4.2-11). As noted in the discussion of the Clean Water Act (Draft EIS/EIR, Vol. 1, Section 4.2, pg. 4.2-1), Delta waterways are included on the Central Valley Regional Water Quality Control Board's list of 303(d) impaired waterways for a several constituents; the list of constituents does not include PCBs or radioactive nucleotides.

Furthermore, per Contra Costa Water District's (CCWD) most recent Annual Water Quality Report, sanitary surveys of the watershed that provides CCWD water are conducted every five years by CCWD, with the most recent updates conducted in 2006 and 2007. These surveys indicate that the Delta could be affected by contamination from multiple sources. The surveys concluded that potential contamination is regularly mitigated by the natural flushing of the Delta, controls at the contamination sources, existing water treatment practices, or the Los Vaqueros Reservoir serving as a ready supply of high quality water for blending or direct use (CCWD, 2008).

Unforeseen hazardous conditions are addressed in the Draft EIS/EIR (Vol. 2, Section 4.13, pg. 4.13-15). Existing federal, state and local worker safety and emergency response regulations (Draft EIS/EIR, Vol. 2, Section 4.13, pp. 4.13-1 through 4.13-4) require that if any unforeseen hazardous materials are discovered during construction, the contractor coordinate with the appropriate agencies for the safe handling, sampling, transportation, and disposal of encountered materials. Alameda and Contra Costa counties have adopted County Hazardous Materials Area Plans (for their respective jurisdictions) that outline the procedures that county regulatory and response agencies will use to coordinate management, monitoring, containment, and removal of hazardous materials in the event of an accidental release. The contractor would also be required to comply with Cal-OSHA worker health and safety standards that ensure safe workplaces and work practices. In the event that PCBs, radioactive nucleotides or other previously undiscovered hazardous materials are found during project construction or operation, these measures would be used to address unexpected hazardous conditions.

3.10.3 Chevron Facilities and Operation

Comment Summary

This section of this master response responds to all of the following comments:

O_CEMC-01 O_CEMC-02

Summary of Issues Raised by Commenters

- Chevron Environmental Management Company (CEMC) representatives request that information concerning its historical and current pipelines to be added to the EIS/EIR record because the proposed Delta-Transfer Pipeline would intersect both historical and active pipelines.
- There is the potential for subsurface soil along and near the historical pipeline right of ways to be affected by undocumented residual weathered crude oil; therefore the commenter also requests that CCWD notify them of any future updates and ongoing developments concerning the project.

Response

Information provided by CEMC on Chevron's historical and current pipelines will be used to update the EIS/EIR and project planning information. The CEMC letter includes information on two historical and two active pipelines, three of which (the Active Kettleman - Los Medanos Pipeline, the Historical Old Valley Pipeline and the Historical Tidewater Associated Oil Company Pipeline) are not included on the Draft EIS/EIR map of potential utility crossings (Vol. 2, Section 4.12, pg. 4.12-3, Figure 4.12-1).

In order to include the information provided by CEMC, as described above, Figure 4.12-1, Potential Utility Crossings, and the description of existing utility infrastructure located to the northeast of the Los Vaqueros Reservoir watershed has been revised as follows :

Utility Infrastructure

Major utility infrastructure within the Los Vaqueros Reservoir watershed includes three buried natural gas pipelines; an overhead PG&E electricity transmission line; two buried PG&E gas lines; and a buried fiber-optic communications line operated by Sprint. To the northeast of the Los Vaqueros Reservoir watershed lie several irrigation lines owned by BBID, ~~two~~ multiple buried petroleum pipelines (active and historical) owned and operated by Chevron/Unocal and Kinder Morgan, a few Sprint fiber-optic cable lines, a PG&E natural gas line, and an overhead electricity line operated by Western.

In order to include the information provided by CEMC, as described above, the description of existing pipelines that may potentially be disrupted during construction of Alternatives 1 and 2 (Draft EIS/EIR, Vol. 2, Section 4.12, pg. 4.12-5 and pg. 4.12-12) has been revised as follows:

As shown in Figure 4.12-1, the Delta-Transfer Pipeline would cross as many as six BBID irrigation lines; three active petroleum pipelines (Chevron's Kettleman-Los Medanos Pipeline, Chevron's Bay Area Products Line, and one Kinder Morgan pipeline) and two historical petroleum pipelines (Chevron's double Tidewater Associated Oil Company Pipeline and Old Valley Pipeline); a Sprint fiber-optic cable line; a Western transmission overhead line; and two PG&E 500 kV overhead transmission lines. The Delta-Transfer pipeline would also cross the Union Pacific Railroad tracks. As described in Section 3.5.2, Pipeline Construction, the bore-and-jack method would be used to pass under the railroad crossing.

These text changes and the updated Figure 4.12-1 are included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

The potential for intersecting known and/or previously unidentified utility pipelines or other utility facilities during construction is addressed in the Draft EIS/EIR in Vol. 2, Section 4.12, Utilities and Public Services Systems. A comparison of the pipelines evaluated in the Draft EIS/EIR impact analysis and newly identified pipelines cited by the commenter indicates that there is no new information that would change the conclusion for Impact 4.12.1, which addresses the project's potential to result in disruption to utilities and public service systems (Draft EIS/EIR, Vol. 2, Section 4.12, pp. 4.12-9 through 4.12-15). The Draft EIS/EIR determined that this impact would be Less-than-Significant with Mitigation for all four action alternatives. Implementation of Mitigation Measure 4.12.1a would avoid or minimize potential utility disruptions or conflicts identified in Impact 4.12.1. This mitigation measure would apply to the CEMC pipelines that were emptied, cleaned and decommissioned in the early 1970s as indicated in the CEMC letter as well as to the pipelines identified in the Draft EIS/EIR.

The CEMC comment also describes the potential for subsurface soil along and near the historical pipeline right of ways to be affected by undocumented residual weathered crude oil. CEMC indicates in their comment letter that "[g]overnment agencies agreed with the testing and analytical results from human health risk assessments performed at several known historic pipeline release sites, which confirm that soils affected by the historic release of production from the pipelines is non-hazardous, and does not pose significant health risks." As discussed in Section 3.10.2 above, unforeseen hazardous conditions, such as unidentified materials, are addressed in the Draft EIS/EIR (Vol. 2, Section 4.13, pg. 4.13-15), which discusses how, in the

event unforeseen hazardous materials are discovered, the contractor will coordinate with appropriate agencies in conformance with the relevant County Hazardous Materials Area Plan.

As identified in the Draft EIS/EIR and above, the Delta-Transfer Pipeline, which is a component of Alternatives 1, 2 and 3, could cross as many as three active petroleum pipelines. The Draft EIS/EIR also acknowledges construction of project components would disturb subsurface soils and that some of the project components could be in or near areas with a history of hazardous materials use (Vol. 2, Section 4.13, Impact 4.13.1, pg. 4.13-14). The historical petroleum pipelines and possibility of the presence of residual crude oil in subsurface soils, as discussed in CEMC's letter, do not constitute different types of hazardous materials that have not been discussed in or would not be addressed by the actions and regulations already identified in Section 4.13 of the Draft EIS/EIR (Vol. 2, pg. 4.13-4 and pg. 4.13-15).

CEMC also requests that CCWD notify them of any future updates and ongoing developments concerning the project. To comply with this request, the CEMC representatives listed in the letter have been added to the project mailing list in order to be automatically notified of project developments.

This Page Intentionally Left Blank

3.11 Master Response 11: Recreation

3.11.1 Introduction

Overview

This master response addresses the issues raised by commenters about potential effects upon recreational facilities resulting from closure of the Los Vaqueros Reservoir watershed during project construction; replacement of recreational facilities within the watershed; the inclusion of additional multi-use trails in the watershed; and applicability of Reclamation and EBRPD reports upon the operation of recreational facilities.

This master response is organized by the following subtopics:

- 3.11.2 Closure of Recreational Activities within Los Vaqueros Watershed during Project Construction
- 3.11.3 Effects on other Recreational Facilities/Areas
- 3.11.4 Replacement of Recreational Facilities Within the Los Vaqueros Watershed
- 3.11.5 Construction of New Recreational Trails in the Los Vaqueros Watershed
- 3.11.6 Applicability of U.S. Bureau of Reclamation Recreation Manual and EBRPD Master Plan

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- Contra Costa County, Department of Conservation and Development – L_CCCDCD
- Contra Costa County, Public Works Department – L_CCCPW
- East Bay Regional Park District – L_EBRPD
- Richmond Community Redevelopment Agency – L_RCRA

Organizations

- Delta Peddlers Bicycle Club – O_DPBC
- East Bay Area Trails Council – O_EBATC
- East Bay Bicycle Coalition – O_EBBC
- Save Mount Diablo – O_SMD

Individuals

- Mark Birnbaum – I_Birnbaum
- Michael Desmond – I_Desmond
- Dave Fontaine – I_Fontaine
- Joyce Gunn – I_Gunn
- Adrienne Harris – I_Harris
- Dr. Brian L. Horejsi – I_Horejsi
- Bob Mankin – I_Mankin
- Dick Quigley – I_Quigley
- Michael Sagehorn – I_Sagehorn
- Mike Vandeman – I_Vandeman

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations:

Draft EIS/EIR Vol. 1, Executive Summary, pg. ES-32, pp. ES-85 through ES-86 (Table ES-7), Vol. 1, Chapter 3, pp. 3-81 through 3-87; and Vol. 2, Section 14.15, pp. 4.15-1 through 4.15-20.

3.11.2 Closure of Recreational Activities within Los Vaqueros Watershed during Project Construction

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCPW-06 L_EBRPD2-08 L_EBRPD2-09 I_Fontaine-02 I_Mankin-02

Summary of Issues Raised by Commenters

- Clarify the duration of the project construction period, distinguishing the time period that the reservoir would be drained and out of service as well as the time period for closure of the watershed, in order to ascertain recreation-related construction impacts.
- Keep areas of the watershed and reservoir not directly involved in dam construction open for recreation during project construction.
- Avoid or minimize killing of existing fish in the reservoir before draining.

Response

Recreational Restrictions and Closures during Construction

As stated on page 3-46 of the Draft EIS/EIR (Vol. 1, Chapter 3), for Alternatives 1, 2 and 3, the existing reservoir would need to be drained prior to construction. It would remain drained and out of service throughout the estimated 3-year construction period and would be refilled following construction completion. Later on page 3-53, the Draft EIS/EIR states that the reservoir would be out of service for about four years from the time the reservoir was completely drained through

refilling. The Draft EIS/EIR notes that the time needed to refill the reservoir would be dependent on hydrological conditions and Delta water quality; however, for purposes of the Draft EIS/EIR, it was assumed to take approximately one year. Therefore, to clarify the anticipated closure of the reservoir under Alternatives 1, 2 and 3, the following text has been modified on page 3-46.

> The existing reservoir would need to be drained prior to construction, which is projected to take 6 months to one year to accomplish. During the reservoir draining period, recreation activities at the reservoir would be increasingly restricted as water levels drop. The reservoir~~It~~ would remain drained and out of service throughout the estimated 3-year construction period. ~~and refilled f~~ Following construction completion, the reservoir would be refilled, which would take approximately one year. During this refilling period, recreation activities would be reopened in phases in response to the increasing water levels. The process of draining the reservoir is described below (see "Construction").

Similarly, the text on (Draft EIS/EIR, Vol. 2) page 4.15-12 under Summary is modified as follows:

> Alternative 1 has the potential to impact recreational opportunities and experiences in the short-term due to the 3-year closure of the watershed, additional 1-year reservoir draining period when recreation activities at the reservoir would be increasingly restricted and 1-year refilling period when recreation activities would be reopened in phases, ~~2-year restriction on water-related activities are restricted (i.e., water recreation would be closed a total of 5 years to allow for reservoir drainage, dam modification construction and expanded reservoir refill)~~, and a potential …

And the text on page 4.15-19, immediately under Impact 4.15.3, is modified as follows:

> As described under Impact 4.15.1, the project under Alternatives 1, 2, and 3 would result in a short-term reduction of recreational opportunities during ~~the~~ reservoir ~~drawdown~~ construction ~~and subsequent refilling~~ due to the need to close the Los Vaqueros Watershed and all recreational activities to public use, and during the 1-year pre-construction draining period and 1-year post-construction refill period when recreation activities would be restricted.

Regarding the statement on page 3-54 that "construction of the 275 TAF reservoir dam, including appurtenant facilities, is estimated to require 24 to 30 months" (Draft EIS/EIR, Vol. 1, Chapter 3), this time table is specifically related to construction of the dam and appurtenant facilities and does not included other activities required to prepare the site for construction activities and/or implement recreation or habitat restoration activities upon completion of dam construction.

For Alternatives 1, 2 and 3, during the draining and refilling of the reservoir, water-related recreational activities would be restricted. During the 3-year active construction period the reservoir and the watershed would be closed to recreational visitors and non-essential CCWD staff, with the exception of a short segment of the Miwok Trail to maintain connectivity between Round Valley and Morgan Territory Regional Preserves (Draft EIS/EIR, Vol. 2, pg. 4.15-9). Draining the reservoir would be accomplished primarily by the planned release of the water into the Transfer Pipeline, which could take six months to one year to accomplish. Impact 4.15.1 in the Draft EIS/EIR discussed the short-term effects on recreation related to closure of the

watershed to the public during the construction period (Draft EIS/EIR, Vol. 2, Section 4.15, pp. 4.15-9 through 4.15-15). As stated on page 4-15.9, water-related activities (i.e., boating and fishing) would be restricted during the 1-year period prior to the start of construction activities when the reservoir would be drawn down as well as during the 1 year after project completion when the reservoir would be filled.

For enlargement of the reservoir to 160 TAF under Alternative 4, partial draining of the reservoir would be accomplished similar to the manner as described above for Alternatives 1, 2, and 3 by the planned release into the Transfer Pipeline. During the partial draining of the reservoir and refilling of the reservoir, water-related activities would be restricted. However, it is anticipated that shoreline fishing opportunities would be available, and boating may be available depending on the water level retained after draw down, up until the watershed is closed during facility construction. Determination of the drawdown level would be made through consultation with the California Department of Water Resources' Division of Safety of Dams during the final design (Draft EIS/EIR, Vol. 1, Chapter 3, pg. 3-46). As under Alternatives 1, 2, and 3, during the 2-year active construction period the reservoir and the watershed would be closed, with the exception of a short segment of the Miwok Trail to maintain connectivity between Round Valley and Morgan Territory Regional Preserves (Draft EIS/EIR, Vol. 2, pg. 4.15-9). Access to water-related activities would be reinstated in phases during refilling.

While CCWD understands that some commenters would like CCWD to further minimize or avoid the need to close the watershed to public access as well as the restrictions on water recreation by allowing some recreation to continue during project construction, as discussed on page 4.15-9 of the Draft EIS/EIR (Vol. 2, Section 4.15), restriction of public access and use is necessary for public safety during the construction period due to the substantial amount of construction activity that would be occurring within the watershed.

On-going construction activities would include daily commute and work travel by construction crews, delivery of large pipeline segments and/or other large volumes of materials, movement of heavy equipment and materials between stockpile areas and the dam site, excavation for borrow materials and some blasting near the dam site. By closing the watershed to public access during construction, work would occur unimpeded by non-construction activities and the duration of construction will be kept to a minimum time period. In addition, these access restrictions help to protect worker safety and maintain site security. Finally, it is unlikely that the contractor would be willing to assume the liability of allowing visitors near or in an active construction site.

Reservoir Fisheries Management during Construction

Prior to draw down or draining of the reservoir, the ongoing fish stocking activities will be modified and recreational fishing will continue, thus reducing the number of fish in the reservoir. The reservoir is not considered habitat for any special-status fish species and the project does not propose to transfer any fish stock prior to the initiation of draining or construction. For Alternative 4, reservoir water quality will continue to be monitored during construction to maintain adequate conditions for the fish that remain in the reservoir.

3.11.3 Effects on other Recreational Facilities/Areas

Comment Summary

This section of this master response responds to all or part of the following comments:

L_EBRPD2-08	L_EBRPD2-10	L_EBRPD2-11	L_EBRPD2-12
L_EBRPD2-13	L_EBRPD2-18	O_EBATC2-04	

Summary of Issues Raised by Commenters

- The Draft EIS/EIR should substantiate its conclusion that the number of anglers is relatively small and that they would disperse over a wide geographic area. Nearby EBRPD facilities, like Del Valle Reservoir, could face operational conflicts and management costs, which CCWD should mitigate by committing to fund measures to protect or restore natural resources at facilities affected by recreational demand displaced from the reservoir.
- The project would result in a temporary loss of recreational opportunities for residents of the region who cannot afford private recreational alternatives and therefore CCWD should contribute funds during the construction period to provide offsite recreational facilities.
- The EIS/EIR should explain how water operations would affect recreation at other reservoirs, such as Del Valle, that receive water from Los Vaqueros.
- Notifying the public of recreational closures does not mitigate the temporary loss of recreational facilities during construction, and could burden the operators of other recreational facilities near the reservoir.

Response

Effects on Anglers

All of the project alternatives would necessitate closure of Los Vaqueros Reservoir during project construction and water-related recreation would be restricted during the 1-year reservoir draining and refilling periods. As stated in the Draft EIS/EIR (Vol. 2, Section 4.15, pg. 4.15-15), "Data gathered between September 2001 and June 2002 show 15,292 cars entering at both the north and the south entries and show that 74 percent of the visitors to the reservoir use the south entry. Visitor data, documenting attendance by month over a 7-year period (July 2001 through June 2008), indicates that annual attendance ranges by year from 28,966 (year ending June 30, 2002) to 23,717 (year ending June 30, 2008) with most visitors to the watershed during the spring (March to May) and autumn (September and October)."

Review of the data gathered by CCWD to respond to comments brought to light a minor error on page 4.15-16 in the Draft EIS/EIR (Vol. 2, Section 4-15), which is corrected as follows:

> According to CCWD staff, in 2002, about 90 percent of Los Vaqueros visitor use was for fishing (Nuzum, 2002). More recently, during the 2007-2008 fiscal year, 17,913 ~~20,237~~, or 75 ~~85~~ percent of the visitors to the reservoir, purchased daily fishing access pass permits.

Over the last 4-year period, use of the watershed for fishing varied from 65 to 80 percent of the annual visitors (Mueller, 2008). Assuming that 90 percent of the visitors recorded in the highest use year (i.e., 26,069 anglers in 2002) use the watershed for fishing, this would result in an average of 71 users per day[4]. However, most fishing occurs during the cooler spring and fall months, and some periods shortly after restocking of fish are especially busy. Marina records indicate that as many as 300 anglers per weekend (i.e. – 150 per day) purchase fishing permits during the busiest 10 to 20 days of the season. Therefore, a range of about 71 anglers per day (averaged over a year) to about 150 anglers per day during peak days could seek other fishing facilities during closure of the reservoir (Mueller, 2010). Data collected during October 2001 from 1,000 cars showed that 51 percent of the watershed users came from CCWD's service area, 17 percent from the Livermore-Pleasanton-San Ramon Tri-Valley area, 20 percent from the South Bay, 7 percent from the Peninsula, and 5 percent from other areas (Mueller, 2008). This data shows that these users travel from a wide variety of locations in order to take advantage of the recreational opportunities at the Los Vaqueros Watershed. Accordingly the 71-150 daily anglers displaced by closure of Los Vaqueros Reservoir would be expected to seek similar fishing opportunities from a similarly wide variety of locations.

There are numerous fishing opportunities within Contra Costa and Alameda Counties. This includes 11 lakes and reservoirs with 25 lake fishing docks, in addition to over 25 miles of Bay/Delta shoreline with 5 bay/river fishing piers owned or operated by the East Bay Regional Park District (EBRPD). EBRPD plants catchable rainbow trout (fall through spring) and channel catfish (summer) in cooperation with CDFG at Del Valle (Livermore), Lake Chabot (Castro Valley/San Leandro), Shadow Cliffs (Pleasanton), Horseshoe Lake at Quarry Lakes (Union City/Fremont), Contra Loma (Antioch), Don Castro (Hayward), and Lake Temescal (Oakland). Other public fishing sites/access in Contra Costa County include the City of Antioch's Municipal Boat Ramp and Fishing Pier on the San Joaquin River, the California Department of Water Resource's Clifton Court Forebay in Italian Slough; Frank's Tract State Recreation Area (fishing from boats only); the City of Pittsburgh's Riverview Park on the Sacramento River; and East Bay Municipal Utility District's San Pablo and Lafayette Recreation Areas. Further, as illustrated in the Alameda County Parks, Recreation and Historic Sites Directory (Alameda County, 2003), public fishing is allowed at the Berkeley Marina, Emeryville Marina; Oakland's Estuary Park, Lakeside Park/Lake Merritt, Middle Harbor Shoreline Park, Portview Park and McCrea Memorial Park; Fremont's Central Park/Elizabeth Lake and Niles Community Park; as well as other areas within the County including the Marina Park near San Leandro; Bethany Reservoir State Recreational Area; Cull Canyon, Garin/Dry Creek Pioneer, and Tilden/Lake Anza Regional Parks; Hayward, Martin Luther King Jr., and Oyster Bay Regional Shorelines; Robert Crown Memorial State Beach; Temescal Regional Recreational Area, as well as land along the 300 miles of the Bay Trail.

[4] Visitor numbers for year ending June 30, 2002 were 28,966. Ninety percent of total visitors is approximately 26,069. This calculates to approximate 71 per day based on 365 days.

Assuming that all the anglers that come to the Los Vaqueros Watershed (i.e., a range of 71 to 150 anglers per day) would choose other venues within Contra Costa and Alameda Counties, they would have 35 recreational areas, many miles of shoreline, and access from hundreds of miles of trails to choose from for fishing. It is reasonable to assume that given the existing Los Vaqueros users' location of origin, users would disperse to a variety of facilities, including many not listed above. As a result, no one facility would be expected to experience substantial increase in use such that its facilities would be deteriorated. Please see Table 3.11-1 for additional information about fishing opportunities in Contra Costa and Alameda Counties. Therefore, as stated in the Draft EIS/EIR, the increase of users at other facilities, including Del Valle, would result in a Less-than-Significant impact.

Public Notification of Temporary Closure

Comment L_EBRPD2-13 states that "notifying the public of the closure does nothing to mitigate the temporary loss of recreational opportunities onsite". The intent of notifying the public in advance of activities that may affect public access to recreational facilities or opportunities within the watershed is to enable users to plan ahead by choosing other facilities, rather than traveling to the reservoir, only to be turned away, potentially resulting in a missed recreational opportunity. These notices typically include information about the construction period, closure and re-opening dates, and other recreational opportunities in the area, thus allowing potential visitors the choice to pursue activities at other facilities or to pursue other activities altogether. Further, by listing numerous other locations, the notices decrease the likelihood that a substantial number of Los Vaqueros users will choose to use a single alternative facility.

Effect on Availability of Regional Park and Recreation Areas

To respond to comments about the effect on availability of regional park and recreation areas, CCWD researched information on federal, state and local recreational facilities within Contra Costa and Alameda Counties, as summarized in Section 3.11.3, Table 3.11-1. It should be noted that the regional recreational opportunities that are available are comparable in cost to the Los Vaqueros Watershed and, in many instances, are free. Therefore, temporary closure of Los Vaqueros would not disproportionately disadvantage people who cannot afford private recreational alternatives.

Operational Effects on Recreational Reservoirs

EBRPD raised the concern that other reservoirs, specifically Lake De Valle, which could receive water from an expanded Los Vaqueros Reservoir via the South Bay Connection and the existing SBA system, might be affected by operational changes or differences in water movement or water availability that, in turn, would adversely affect recreation at these facilities. Project Alternatives 1 and 2 are designed to deliver water to project participants in a manner that is more reliable and results in less environmental impact to Delta water and aquatic resources. Project participants could include DWR and one or more of its South Bay water agency contractors and thereby deliver water through the SBA to Del Valle Reservoir. Project operating objectives and assumptions, described in Chapter 3 of the Draft EIS/EIR and analyzed in Section 4.2, are based on the delivery needs of the South Bay water agencies served by the SBA. By design, and as

substantiated in the Draft EIS/EIR, Project Alternatives 1 and 2 would deliver water to the SBA system on a schedule based on current and projected system demands and with improved reliability. The project would not change the SBA system demands. There would be no effect on water storage volumes or water levels in Del Valle Reservoir as a result of the project, and no related adverse effect on recreation at this park.

Alternative 4, the 160-TAF reservoir expansion, does not include the South Bay Connection and would not be designed to deliver water directly to DWR's SBA system. Alternative 4 would not adversely affect reservoir storage or water levels in Del Valle Reservoir or other area reservoirs.

3.11.4 Replacement of Recreational Facilities Within the Los Vaqueros Watershed

Comment Summary

This section of this master response responds to all or part of the following comments:

L_CCCDCD-01 L_CCCDCD-02 L_CCCPW-06 L_EBRPD2-15

Summary of Issues Raised by Commenters

- The EIS/EIR should describe the inundation of recreational facilities and recreational opportunities lost due to the project as a significant impact, and identify the replacement of such facilities as a mitigation measure.
- Considering the information in the Draft EIS/EIR regarding growth-inducing effects, recreational facilities should be replaced at greater than a 1:1 rate.
- The EIS/EIR should examine whether it will be feasible to both replace trails within the watershed and replace habitat and associated mitigation restrictions on land that will be inundated.

Response

Impact Summary

The replacement of recreational facilities that will be lost due to inundation caused by expanding the reservoir is part of the project description for each of the alternatives (Draft EIS/EIR, Vol. 1, Chapter 3, pp. 3-81 through to 3-87). Table 3-5 (Draft EIS/EIR, Vol. 1, Chapter 3, pg. 3-81), describes all of the existing recreational facilities in the watershed that would be affected by the project, including: shoreline hiking trails, marina facility, fishing piers, and parking and picnic areas. Under all alternatives, existing recreational facilities within the Los Vaqueros Watershed that are disturbed or displaced by the reservoir expansion project would be relocated or replaced (Draft EIS/EIR, Vol. 1, Chapter 3, pg. 3-20). Proposed recreational facilities are included in each of the project alternatives to replace the recreational facilities that would be displaced by reservoir expansion and, in some cases, to enhance recreational opportunities (Draft EIS/EIR, Vol. 1, Chapter 3, Section 3.5.5, pp. 3-81 through 3-86). Proposed recreational enhancements for Alternatives 1, 2, and 3 include additional fishing access areas, trails, and an expanded Marina

TABLE 3.11-1
RECREATIONAL OPPORTUNITIES IN CONTRA COSTA AND ALAMEDA COUNTIES SIMILAR TO THOSE OFFERED AT THE LOS VAQUEROS WATERSHED

	Location (City)	Owned/Operated by	Hours	Boat Launch	Boat Launch Fee	Fishing Permit/ Fee	Parking Fee	Dog Fee	Boat Rental Available
Los Vaqueros Reservoir & Watershed									
Los Vaqueros Reservoir & Watershed	Near Byron	Contra Costa Water District	Open seven days a week; hours change with the season; summer hours are 6am to 8pm	Private boats not allowed on reservoir; rental boats are available at the marina.	Private boats not allowed on reservoir; rental boats are available at the marina.	CA State Fishing License & a CCWD Daily Fishing Permit ($3.75 per day for persons age 16 and older)	$6 per vehicle; $5 per vehicle for seniors; $4 per vehicle for CCWD residents; $12 daily per van/bus (10-20 passengers); $20 daily per van/bus (21+ passengers)	No dogs allowed	Yes
Contra Costa County									
Antioch Municipal Marina (Boat Launch and Fishing Pier)	Antioch	Antioch	Sunrise to Sunset	No boat launch at marina; boat launch located ~1mile up the San Joaquin River	No fee	CA State Fishing License	Free parking	No fee	No
Antioch/Oakley Regional Shoreline	Antioch	EBRPD	5am-10pm; pier open 24 hours a day	No boat launch	N/A	CA State Fishing License	No fee	No fee	No
Brannan Island State Recreation Area	South of Rio Vista	California State Parks Department	Sunrise to Sunset	The park has a 6-lane launch ramp.	$6 per boat	CA State Fishing License	$5 per vehicle per day	Beaches off-limits to dogs; dogs allowed in the picnic area	No
Clifton Court Forebay – Italian Slough	Near Byron	California Department of Water Resources	No vehicle access	No boat launch	N/A	CA State Fishing License; no defined fishing spot – can fish from banks and levees	No fee; no parking inside of gates	No fee	No
Contra Loma Regional Park	Antioch	East Bay Regional Park District (EBRPD)	Jan: 7am-5:30pm Feb: 7am-6pm Mar: 7am-7pm Apr: 6am-8pm May-Labor Day: 6am-8:30pm Sept: 6am-8pm Oct: 7am-7pm Nov: 7am-6pm Dec: 7am-5:30pm	Visitors may launch boats of up to 17 ft.; electric motors only; no gasoline-powered engines are permitted; personal watercraft not permitted	$4 per day trailered boat (electric motors only); $2 per day car-top or inflatable; $1 per day windsurf board; windsurfers must take a shower and wear a wetsuit	CA State Fishing License & an EBRPD Daily Fishing Permit ($4 per day for persons age 16 and older)	$5 per vehicle; $4 per trailered vehicle; $25 per bus	$2 per dog	No
Franks Tract State Recreation Area	NE of Antioch	California State Parks Department	Sunrise to Sunset	No boat launch	N/A	CA State Fishing License	Only accessible by boat via Brannan SRA	Beaches off-limits to dogs	No
Lafayette Recreation Area	Near Lafayette	EBMUD	Jan: 6:30am-5:30pm Feb: 6:30am-6pm Mar: 6am-6:30pm Apr: 6am-8pm May: 6am-8:30pm Jun: 6am-9pm Jul: 6am-9pm Aug: 6am-8:30pm Sept: 6:30am-7:30pm Oct: 6:30am-6:30pm Nov: 6:30am-5:30pm Dec: 6:30am-5:30pm	Multiple launching docks	$4 per day; $45 annual for boats; $4 per day for float tubes; $50 season pass for float tubes	CA State Fishing License; $4 per day fishing access permit	$6 per vehicle; $120 per season (new); $110 per season (renewal); $17 per van (10-20 passengers); $31 per bus (21+ passengers)	No fee	Yes
Riverview Park	Pittsburg	Pittsburg	8am-6pm	No boat launch	N/A	No fishing	No fee	No fee; dogs must be on leash	No
San Pablo Recreation Area	Between Orinda & El Sobrante	East Bay Municipal Utilities District (EBMUD)	Feb: 6:30am-5pm Mar: 6am-5:30pm Apr: 6am-6pm May: 6am-7:30pm Jun: 6am-8pm Jul: 6am-8pm Aug: 6am-7:30pm Sept: 6:30am-7:30pm Oct: 6:30am-6pm	One paved, 8-boat launch ramp; only 4-cycle engines using MTBE- free gasoline allowed	$4.50 per day motor boat launch; $3.50 per day kayak/skull/car top launch; $4 per day float tube launch	CA State Fishing License; Fishing Access Ticket: $4.50 per day	$6.50 per vehicle; $2 per vehicle after 4pm; $4 per vehicle for 4 hrs; $17 per van (10-20 passengers); $31 per bus (21+ passengers)	$2 per dog	Yes

TABLE 3.11-1
RECREATIONAL OPPORTUNITIES IN CONTRA COSTA AND ALAMEDA COUNTIES SIMILAR TO THOSE OFFERED AT THE LOS VAQUEROS WATERSHED

	Location (City)	Owned/Operated by	Hours	Boat Launch	Boat Launch Fee	Fishing Permit/ Fee	Parking Fee	Dog Fee	Boat Rental Available
Alameda County									
Berkeley Municipal Pier at the Berkeley Marina	Berkeley	Berkeley	Open 24 hours a day, 7 days a week	No boat launch	N/A	No fees or permits required	No fee	No dogs allowed pier	No
Bethany Reservoir State Recreation Area	Northeast of Livermore	CA State Parks Department	8am-Sunset	Public boat launch facility	$5 per boat per day	CA State Fishing License	$5 per vehicle	No fee; dogs must be on leash	No
Central Park & Lake Elizabeth	Fremont	Fremont	Sunrise to 10pm	One boat launch; boats may also be stored at Lake Elizabeth	$7 per day; $50 annual launch card; no motor boats may be started in the lake	CA State Fishing License; restricted in designated areas	No fee	No fee; dogs must be on leash	Yes
Cull Canyon Regional Recreation Area	Castro Valley	EBRPD	5am-10pm unless otherwise posted	No boat launch	N/A	CA State Fishing License & an EBRPD Daily Fishing Permit ($4 per day for persons age 16 and older)	No fee	No fee; no dogs allowed inside the fenced swim area	No
Del Valle Regional Park	~10 mi. south of Livermore	EBRPD	Varies by season	Visitors may launch any size boat at the public boat launch ramp; jet skis are not permitted	$4 per day trailered boat; $2 per day car-top or inflatable; $1 per day windsurf board	CA State Fishing License & an EBRPD Daily Fishing Permit ($4 per day for persons age 16 and older)	$6 per vehicle; $4 per trailered vehicle; $3 per vehicle at Arroyo staging; $25 per bus	$2 per dog	Yes
Don Castro Regional Recreation Area	Hayward	EBPRD	8am-10pm; 8am-8pm in winter months	None	N/A	CA State Fishing License & an EBRPD Daily Fishing Permit ($4 per day for persons age 16 and older)	$5 per vehicle weekends & holidays; $25 per bus	$2 per dog	No
Emeryville Marina	Emeryville	Privately owned (Marinas International)	The gates locked at 10 pm; reopened at 6am	One launching ramp	No charge	Fishing is allowed from the pier	No fee	No fee; dogs must be on leash	No
Estuary Park	Port of Oakland	Oakland	Open 24 hours a day, 7 days a week	One launching ramp	No charge	No fees or permits required	No fee	No dogs allowed on the pier	No
Garin/Dry Creek Pioneer Regional Parks	Hayward	EBRPD	5am-10pm unless otherwise posted	No boat launch	N/A	CA State Fishing License	$5 per vehicle (when kiosk is attended); $4 per trailered vehicle; $25 per bus	$2 per dog	No
Halcyon Park	San Leandro	San Leandro	Sunrise to Sunset	No boating facilities	N/A	No fishing facilities	No fee	No fee; dogs must be on leash	No
Hayward Regional Shoreline	Hayward	EBRPD	5am-10pm unless otherwise posted	No boat launch	N/A	CA State Fishing License. Fishing is allowed from the levees, except in the marsh areas	No fee	No fee	No
Lake Chabot	Castro Valley	EBRPD	5am-10pm	No boat launch facility	$2 car-top canoes, kayaks, & scull-craft only, 20 ft. or less	CA State Fishing License & an EBRPD Daily Fishing Permit ($4 per day for persons age 16 and older)	$5 per vehicle; $4 per trailered vehicle; $25 per bus	$2 per dog	Yes
Lakeside Park-Lake Merritt	Oakland	Oakland	6am-10pm	Multiple launching ramps	$2 per day to use your own boat or small vessel; no motor boats allowed	Fishing in Lake Merritt is very poor. No fish live in Lake Merritt year-round because of ever changing salinity conditions: freshwater in winter, brackish in spring, saltwater in summer and fall.	No fee & parking meter spaces	No fee; dogs must be on leash	Yes, at the Lake Merritt Boating Center
Marina Park	San Leandro	San Leandro	Sunrise to Sunset	No boat launch	N/A	CA State Fishing License – fishing available along the shoreline	No fee	No fee	No

TABLE 3.11-1
RECREATIONAL OPPORTUNITIES IN CONTRA COSTA AND ALAMEDA COUNTIES SIMILAR TO THOSE OFFERED AT THE LOS VAQUEROS WATERSHED

	Location (City)	Owned/Operated by	Hours	Boat Launch	Boat Launch Fee	Fishing Permit/ Fee	Parking Fee	Dog Fee	Boat Rental Available
Alameda County (cont.)									
Martin Luther King Jr. Regional Shoreline	Oakland	EBRPD	5am-10pm unless otherwise posted	A two-lane boat launch located on the west side of the park off Doolittle Drive; watercraft may launch, but are not allowed in the 50-acre Arrowhead Marsh; motorized vessels restricted during certain times of the year due to bird migration and nesting in the marshes	No fee	CA State Fishing License	No fee	No fee; leash required in marsh area	No
McCrea Memorial Park[a]	Oakland	Oakland	Sunrise-Sunset	No boat launch	N/A	Fishing allowed; Trout pond and casting pool facilities available to public; home to Oakland Casting Club; free fly-casting clinics (10 a.m. to 2 p.m. on 3rd Saturdays of the month, March through July)	–	–	No
Middle Harbor Shoreline Park	Port of Oakland	EBRPD	8am-10pm	No boat launch	N/A	CA State Fishing License is required to fish at the Park; no CA State Fishing license is required to fish from the pier at the end of Port View Park	No fee	No dogs allowed	No
Niles Community Park	Fremont	Fremont	Park is closed at night	No boat launch	N/A	CA State Fishing License	No fee	–	No
Oyster Bay Regional Shoreline	San Leandro	EBRPD	5am-10pm unless otherwise posted	No boat launch	N/A	CA State Fishing License	No fee	No fee	No
Pleasanton Ridge Regional Park	Pleasanton	EBRPD	5am-10pm unless otherwise posted	No boat launch	N/A	Not allowed	No fee	No fee	No
Port View Park	Port of Oakland	Oakland	8am-10pm	No boat launch	N/A	A CA State Fishing License is required to fish at the shoreline; no California State fishing license required to fish from the pier at the end of Port View Park	No fee	No dogs allowed	No
Quarry Lakes Regional Recreation Area - Horseshoe Lake	Fremont	EBRPD	Sept: 6am-8pm Oct: 6am-7pm Nov-Jan: 7am-6pm Apr: 6am-8pm May-Labor Day: 6am-9pm	Visitors may launch boats of up to 17 ft. Electric motors only; no gasoline-powered engines or personal watercraft are permitted	$4 per day trailered boat; $2 per day car-top or inflatable	CA State Fishing License & an EBRPD Daily Fishing Permit ($4 per day for persons age 16 and older)	$5 per vehicle; $4 per trailered vehicle; $25 per bus	$2 per dog	No
Robert W. Crown Memorial State Beach	Alameda	EBRPD	5am-10pm unless otherwise posted	No boat launch facility; only sailboards, kayaks & car-top inflatables are permitted at Crown Beach	$2 per day for car-top or inflatable; $1 per day windsurf board or sailing craft. No charge if carried into the park.	CA State Fishing License; fishing is allowed from the shore	$5 per vehicle (when kiosk is attended); $4 per trailered vehicle; $25 per bus	No fee; no dogs allowed on beach	Yes; kayaks and sailboards are available for rental
Shadow Cliffs Regional Recreation Area	Pleasanton	EBRPD	Jan: 7am-6pm Feb/Mar: 6am-7pm Apr: 6am-8pm May-Labor Day: 6am-9pm Post Labor Day-Sept: 6am-8pm Oct: 6am-7pm Nov: 7am-6pm Dec: 7am-6pm	Visitors may launch boats of up to 17 ft. Electric motors only; no gasoline-powered engines or personal watercraft permitted	$4 per day trailered boat; $2 per day car-top or inflatable; $1 per day windsurf board	CA State Fishing License & an EBRPD Daily Fishing Permit ($4 per day for persons age 16 and older)	$6 per vehicle; $4 per trailered vehicle; $25 per bus	$2 per dog	Yes

TABLE 3.11-1
RECREATIONAL OPPORTUNITIES IN CONTRA COSTA AND ALAMEDA COUNTIES SIMILAR TO THOSE OFFERED AT THE LOS VAQUEROS WATERSHED

	Location (City)	Owned/Operated by	Hours	Boat Launch	Boat Launch Fee	Fishing Permit/ Fee	Parking Fee	Dog Fee	Boat Rental Available
Alameda County (cont.)									
Temescal Regional Recreation Area	Oakland	EBRPD	5am-10pm unless otherwise posted	No boat launch	N/A	CA State Fishing License	April through October $5 per vehicle (when kiosk is attended); $4 per trailered vehicle; $25 per bus	$2 per dog	No
Tilden Regional Park (Lake Anza)	Berkeley	EBRPD	5am-10pm unless otherwise posted	No boat launch	N/A	CA State Fishing License	No fee	No fee	No
Trails									
Bay Trail (~300 mi)	~300 mi. shoreline trail along San Francisco Bay	San Francisco Bay Trail Project	N/A	The Bay Trail provides access to several public boat launch facilities	N/A	The Bay Trail provides access to several fishing piers as well as areas to fish along the shoreline. CA State Fishing License required along the shore; no permit required on fishing piers	No fee	No fee; no dogs allowed in designated areas	No

[a] There was limited information available for McCrea Memorial Park located in the City of Oakland. McCrea Memorial Park, managed by the City of Oakland Parks and Recreation District, is a neighborhood park open to the public with fly fishing and trout pond facilities (Oakland Casting Club, 2009). After several attempts of contacting the City of Oakland, it is unknown if there are any fishing permit requirements, fishing or parking fees, or dogs allowed at the park.

N/A = Not applicable

SOURCES: California State Parks, 2009(a-b); Camron-Stanford House, 2009; City of Antioch, 2009; City of Berkeley, 2009; City of Fremont, 2008; City of Fremont, 2009(a-b); City of San Leandro, 2009; CCWD, 2009; EBMUD, 2009(a-c); EBRPD, 2009; EBRPD, 2009(a-p); Hueseff, 2009; Loberg, 2009; Lutton, 2009; Nogare, 2009; Port of Oakland, 2009(a-b); Oakland Casting Club, 2009; San Francisco Bay Trail, 2009; Villanueva, 2009.

complex to include an additional interpretive center and more berths for rental boats. Proposed recreation enhancements for Alternative 4 include additional trails, picnic areas and potentially an additional fishing pier. These facilities will be replaced as described in the project description, and completed as part of the project construction within the planned construction timeframe. None of the alternatives will result in a net loss of recreational facilities. However, Mitigation Measure 4.15-1 in the Draft EIS/EIR (Vol. 2, Section 4.15, pp. 4.15-14 through 4.15-15) has been expanded to include Measure 4.15-1c to ensure timely replacement of recreational facilities.

The Draft EIS/EIR text (Vol. 2, Section 4.15, pg. 4.15-15) is revised as shown below. These text changes and all other document revisions are included in Final EIS/EIR, Chapter 5, Section 5.1, Revisions to the Draft EIS/EIR.

> **Measure 4.15.1c:** Recreational facilities displaced by reservoir expansion would be replaced within one year of completion of construction activities associated with all major facility components.

Recreational Impacts and Growth

Project implementation would not directly result in growth inducement. However, the project alternatives could remove water supply reliability as an obstacle to growth by providing adequate water supply to meet the needs of existing customers and growth that has been planned in each service area by the respective city and county land use agencies; therefore, the project could have indirect growth-inducement potential within these service areas (Draft EIS/EIR, Section 4.20, pg. 4.20-2).

Comment L_CCCDCD-02 states that because of the potential growth-inducing effects of the project, recreation facilities inundated by the expanded reservoir should be replaced at a ratio greater than 1:1. However, mitigation is not required for indirect growth inducement under any of the alternatives because it is not known whether or to what extent the city and county land use agencies in each service area would in fact use the improved water supply reliability afforded by the project to support future growth, or if that growth would require new recreation facilities. If new recreation facilities are required as a result of growth, the facilities would typically be provided along with the growth through conditions of approval, permit terms or other tools within the authority of the governing land use agency.

Although not required as mitigation, the Los Vaqueros Reservoir Expansion Project includes, consistent with CCWD Board Principles (see Draft EIS/EIR pg.2-12), more miles of trails than are impacted, as well as additional recreation facilities to improve opportunities for public use of the watershed over those currently in place.

Responses to other comments related to growth are found in **Section 3.13, Master Response 13, Growth-Inducing Effects**.

Feasibility of Trail Relocation and Construction

Commenter L_EBRPD2 requests that the EIS/EIR provide additional information as to whether it is feasible to replace hiking trails lost due to inundation, construct a new Eastside Trail, and also

replace the habitat mitigation lands that will be lost due to inundation. The commenter points out that there may be conflicts between these project elements. As explained in more detail in Chapter 2 of this volume, the majority of the Eastside Trail has been eliminated from all of the alternatives. Only a short segment of new trail is proposed. There is adequate land available within the watershed to construct the reduced Eastside Trail and the other recreational facilities, including the Westside Trail realignment, proposed by the alternatives (see Figures 2-2 and 2-3 in Chapter 2 of this document).

3.11.5 Construction of New Recreational Trails in the Los Vaqueros Watershed

Comment Summary

This section of this master response responds to all or part of the following comments, which focus on requests for additional multi-use trails. Replacement of existing facilities is addressed above in, 3.11.3, Effects on other Recreational Facilities/Areas.

L_EBRPD2-16	L_RCRA-01	O_DPBC1-01	O_DPBC2-01
O_DPBC2-02	O_DPBC3-01	O_DPBC3-02	O_DPBC3-03
O_DPBC4-01	O_DPBC4-02	O_DPBC4-03	O_DBPC5-01
O_DPBC6-01	O_DPBC7-01	O_DPBC7-02	O_EBATC1-01
O_EBATC2-01	O_EBATC2-02	O_EBATC2-03	O_EBBC-01
O_EBBC-02	O_EBBC-03	I_Birnbaum-01	I_Desmond-01
I_Gunn-01	I_Harris-01	I_Horejsi_01	I_Quigley1-01
I_Sagehorn-01	I_Vandeman-01	I_Vandeman-02	

Summary of Issues Raised by Commenters

- Provide a new path for cyclists to enter the watershed from either entrance and ride completely through from entrance to entrance. Establishment of a trail between the two entrances would enhance safety of bicyclists and would discourage use of illegal trails or cross country riding.
- Provide access to multi-use trails, including the Eastside Trail, for mountain bikes.
- Establish a multi-use trail link between Brushy Peak and Los Vaqueros Reservoir.
- Request for mitigation for reservoir expansion through increasing multi-use trail connections for equestrians and mountain bikes.
- Widen shoulder/bike lane along Walnut Blvd., leading to Marsh Creek Road and then Camino Diablo.
- Provide bicycle trail connections to neighboring parks.
- Develop bike and trail access; develop a paved multi-use path; consider placing lights and benches in visitor areas; develop bike connections to neighborhood parks.
- Against expanded use by mechanized mountain bikes; reconsider existing use by mountain bikes due to destruction of vegetation, water pollution, wildlife displacement, etc. Restrict bicycles and other vehicles to paved roads.

- CCWD committed to provide more multi-use trails (i.e. – including bicycles) as part of the original reservoir project. Planned trails are not multi-use and therefore inconsistent with CCWD Resource Management Plan (RMP) (Brady/LSA, 1999) for the Los Vaqueros Watershed.
- The Los Vaqueros RMP promised "public access at reasonable costs that are distributed equally among all users".
- Include an outdoor education site for schools, hiking, camping, and trails for cycling, shooting range and limited access to CCWD lands for hunting.

Response

Impact Summary

Access to Recreational Facilities

Under all alternatives, after project construction is completed, there would continue to be access to recreational facilities on the northern and southern end of the reservoir. Existing recreational facilities include a number of picnic areas with benches for the public. Under Alternatives 1, 2, and 3, the Marina Complex would be constructed at the northern end of the reservoir. Under Alternative 4, while the Marina Complex would remain at the southern end, a new fishing pier could potentially be constructed in the northern portion of the reservoir. Under all alternatives, the existing points of vehicle access to the watershed, from Walnut Avenue in the north and off Vasco Road in the south, would be unchanged. Access to the watershed is limited by season, but generally allowed from dawn to dusk, therefore lighting is not required. As discussed above in Section 3.11.4, proposed recreational facilities are included in each of the project alternatives (Draft EIS/EIR, Vol. 1, Chapter 3, Section 3.5.5, pp. 3-81 through 3-86). Proposed recreational enhancements for Alternatives 1, 2, and 3 include additional fishing access areas, trails, and an expanded Marina complex to include an additional interpretive center and more berths for rental boats. Proposed recreation enhancements for Alternative 4 include additional trails, picnic areas and potentially an additional fishing pier. None of the alternatives will result in a net loss of recreational facilities, and no additional mitigation is required.

Multi-Use Trails

CCWD acknowledges the public's desire for more multi-use trails within the Los Vaqueros Watershed. Currently, there are 15.8 miles of trails within the watershed designated as multi-use. As proposed, none of the project alternatives would impede or reduce the extent of existing multi-use trails. If the project were revised to include additional multi-use trails, use of such trails could result in a range of environmental effects that are beyond the scope of the effects analyzed in the Draft EIS/EIR prepared for the proposed project, including but not limited to destruction of vegetation on unpaved trails, soil erosion, loss of top soil, water quality effects, effects on biological and cultural resources, and others.

The multi-use trails in the watershed were developed consistent with Recreation and Public Access objectives adopted by CCWD as part of the Los Vaqueros Resource Management Plan (Brady/LSA, 1999). The objectives that have a bearing on multi-use trails include the following:

- Objective D2: Provide recreational activities, including water-based recreation, within the Watershed at a level consistent with maintaining the District's primary water quality and reliability goals.

- Objective D6: Provide recreational facilities and programs that are consistent with protection of the Watershed's natural and cultural resources.

- Objective D8: Provide recreational facilities and programs that are compatible with continued operation of wind farms and agricultural uses.

- Objective D9: Provide a trail network within the Watershed that has connections to regional trails.

- Objective D10: Establish and manage trails for pedestrians, bicyclists and equestrians in a manner that minimizes conflicts among trail users and impacts on natural and cultural resources.

The existing multi-use trails established in the watershed provide regional trail connections including links to multi-use trails in Morgan Territory and Round Valley Regional Preserves. About 12.5 miles of multi-use trails were opened originally as part of a pilot program to allow CCWD to evaluate management and operational issues associated with the trails including prevention of adverse water quality impacts associated with trail use, maintaining the Watershed's beauty and remote qualities, protection of special-status species and cultural resource sites, unauthorized use of areas not included in the pilot program, public safety and emergency response in remote areas, conflicts among users and administrative costs related to trail patrol and maintenance. Additional multi-use trails, consistent with these objectives and the findings of the pilot program, have been added since the pilot program, bringing the total to 15.8 miles.

The existing multi-use trails are located in areas of the Los Vaqueros property that do not drain into the reservoir in order to prevent water quality impacts. Grazing is allowed in parts of the property that do drain to the reservoir, but the grazing operations are strictly managed to ensure there are no water quality issues and grazing is kept outside of a buffer established around the reservoir to further help protect water quality. Expansion of multi-use trails would increase the risk of conflicts among users—bicyclists go too fast and scare the horses and have the potential to run into hikers; hikers do not like what the horses leave behind; bicyclists do not like the way the trails are chewed up by the horses and therefore seek new off trail paths resulting in potential harm to natural and cultural resources. Many of the hiking only trails in the watershed are too steep for bicycles, again providing incentive to seek off trail passage. Because of the greater risk of off trail activities, additional patrols would be needed increasing operating costs. For these reasons, CCWD generally considers expansion of multi-use trails in the watershed to be contrary to the objectives set forth above.

Several commenters (O_EBATC2, I_Quigley1 and I_Quigley2) raise the specific prospect of a multi-use trail connection from Brushy Peak through the Los Vaqueros Watershed, and on to Morgan Territory and/or Round Valley. The Los Vaqueros Watershed and Brushy Peak are separated by a small piece of land owned by a third party. CCWD has a gate, and a hiking-only

trail, the Black Hills Trail, in this vicinity. Hiking-only access to the Black Hills Trail from Brushy Peak would be available through this gate once a connection through the intervening lands is established. As stated above, multi-use trails in the watershed are limited to the existing 15.8 miles that have been developed consistent with CCWD objectives of protecting water quality, minimizing impacts on natural and cultural resources and minimizing conflicts among trail users.

Two comments (L_EBRPD2-16 and O_EBATC2-01) raise concerns that the proposed trails are inconsistent with CCWD's 1997 RMP based on an incorrect interpretation of one of the plan's stated goals. The commenters believe that the intent of Goal D is to provide recreational facilities, programs and public access that are distributed equally among users. However, this goal specifically states "Provide recreation facilities and programs and public access *at reasonable costs* that are distributed *equitably* among users" [emphasis added]. The plain meaning of the goal is clear; distribute the cost of providing recreational opportunities *equitably* (i.e., just and fair) among the users, not to provide *equal* amounts of different types of recreational opportunities. The development of the existing multi-use trail network was consistent with the RMP, and as discussed above, since there are no impacts to multi-use trails under any project alternatives, mitigation requiring new multi-use trails is not required. The watershed after implementation of the project would continue to offer recreational opportunities to the public at reasonable cost.

One commenter requested consideration of additional activities and facilities in the watershed, like hunting and a shooting range. Hunting and shooting activities are not part of the project description or any CCWD plans for the Los Vaqueros Reservoir Watershed. Implementation of such facilities and activities would be generally incompatible with the existing recreational activities within the watershed and could also result in increased liability related to public safety.

3.11.6 Applicability of Reclamation's Recreation Manual and EBRPD Master Plan

Comment Summary

This section of this master response responds to all or part of the following comments:

L_EBRPD2-05	L_EBRPD2-14	L_EBRPD2-17	L_EBRPD2-19
L_EBRPD2-20	O_EBBACT2-03	O_SMD-17	I_Quigley1-01
I_Quigley2-01			

Summary of Issues Raised by Commenters

- Reclamation's *Recreation Project Management Manual* may be applicable to the project and should be discussed.
- Draft EIS/EIR does not mention EBRPD Master Plan and recently updated 2007 Master Plan map, or analyze consistency with the master plan.

- Potential recreation-related impacts (access to the preserve, safety due to road closures/congestion) to the Byron Vernal Pools Regional Preserve during project construction should be addressed.
- Evaluate potential recreation-related impacts to planned Morgan Territory (Diablo Trail) to Brushy Peak Regional Trail which is a segment of the Juan Batista de Anza National Historic Trail.
- The project's impacts to the Byron Pools Regional Preserve would interfere with planned restoration of wetlands at that location.

Response

The Reclamation Recreation Project Management Manual Directives and Standards is an implementation program that supports the Reclamation Manual Policy (LND P04) for the Reclamation Recreation Program Management (Reclamation, 2008). This policy "defines the Bureau of Reclamation's overall roles and responsibilities in providing public outdoor recreation facilities and opportunities." Specifically, the policy states that it "applies to the recreation management of lands and waterbodies that *remain under the jurisdiction of Reclamation* [emphasis added], including those lands and waterbodies managed by a partner (i.e., non-Federal entity or another Federal agency)." The Los Vaqueros Watershed is solely owned and operated by, and under the jurisdiction of, CCWD; therefore, according to the Reclamation Policy, the Reclamation Manual Directives and Standards would not apply to the project. Reclamation has no role in the development, maintenance or management of CCWD's watershed facilities.

Regarding the East Bay Regional Parks Master Plan, EBRPD notes that Section 15125(d) of the CEQA Guidelines states that an EIR "shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans." The Draft EIS/EIR discusses applicable general plans and regional plans in accordance with the CEQA checklist which specifically states "would the project conflict with any applicable land use plan, policy, or regulation of *an agency with jurisdiction over the project* [emphasis added]…adopted for the purpose of avoiding or mitigating an environmental effect." Because EBRPD does not have jurisdiction over the proposed project or project area, analysis of project consistency with its master plan is not required. However, the Draft EIS/EIR did analyze EBRPD plans and project activities in the cumulative effects analysis.

The Draft EIS/EIR considered the potential for the project alternatives to affect future potential projects depicted in the 2007 Master Plan Map (see the Planned Recreational Facilities subsection on page 4.15-12 of the Draft EIS/EIR). In addition, the Draft EIS/EIR preparers contacted the EBRPD's Trails Development Program Manger, Jim Townsend, during fall 2008 to determine if implementation of the project could impact any project plans that the EBRPD had during the timeframe for implementation of the project. The proposed Morgan Territory to Brushy Creek Trail shown on the 2007 EBRPD Master Plan Map extends through the Los Vaqueros Watershed. As discussed in the Draft EIS/EIR, the expanded reservoir inundation area under any of the four project alternatives would not impact this potential future trail as it is shown on the Master Plan Map.

For any future potential projects including the multi-use Morgan Territory to Brushy Creek Trail that the EBRPD or Save Mount Diablo would want to see implemented within the Los Vaqueros Watershed, EBRPD would need to coordinate with CCWD and adhere to any requirements that encumber the land. For the proposed Morgan Territory to Brushy Creek Trail this would include compliance with the USFWS Biological Opinion for Alameda Whipsnake, which prohibits traffic or construction activities without prior approval by USFWS in the area where the trail is shown.

Byron Vernal Pools Regional Preserve

Several comments indicate that the future EBRPD Byron Vernal Pools Regional Preserve was not specifically identified or discussed in the Draft EIS/EIR. The only project component proposed to be located near the future Byron Vernal Pools Regional Preserve is the Transfer-Bethany pipeline (Alternatives 1 and 2). No component of Alternative 4 would be located in the vicinity of the future preserve. EBRPD's potential future preserve was not discussed in the Draft EIS/EIR because in EBRPD's 2007 Master Plan Map this "future preserve area" is shown to the west of Vasco Road on the other side of the road and approximately 1,000 feet away from the proposed Transfer-Bethany pipeline, which is a component of Alternatives 1 and 2. Inquiries to the EBRPD during the Draft EIS/EIR preparation did not uncover the fact that EBRPD was moving ahead with private property acquisition in this area or refinement/modification of its future preserve location until shortly before publication of the Draft EIS/EIR. However, although the Preserve is not mentioned by name, the land purchased by EBRPD for this preserve was evaluated during EIS/EIR preparation, the Transfer-Bethany pipeline alignment was moved from its initial location to avoid bisecting the future preserve property and relevant figures and tables are correctly shown in the Draft EIS/EIR.

Once CCWD became aware of plans for protecting and restoring the Byron Vernal Pools Regional Preserve, it continued its efforts to avoid impacts by further limiting the width of the proposed Transfer-Bethany pipeline construction zone in the Armstrong Road area of the proposed preserve while also protecting other vernal pools on the Byron Airport property to the east.

Construction activities within the vicinity of the future Byron Vernal Pools Regional Preserve would include installation of a portion of the Transfer-Bethany Pipeline. Approximately 3,000 feet of pipe would be installed in Armstrong Road in the area along the Byron Vernal Pools Regional Preserve property. A portion of the preserve in this area is planned for wetland restoration, which would occur prior to implementation of the Los Vaqueros Reservoir expansion. As discussed in the Draft EIS/EIR project description (Vol. 1, Chapter 3, pg. 3-68), construction of the pipeline would proceed at a pace of about 120 feet per day. Accordingly, construction is estimated to occur over approximately 25 working days or approximately one month, assuming a six-day work week. Since construction equipment and workers could be accessing the site from Armstrong Road, there is potential that, as discussed under Impact 4.15.1 (Vol. 2, Section 4.15, Recreation), Alternative 1 or 2 could result in a short-term reduction of recreational opportunities in the future preserve area due to construction activities. However, with implementation of **Measure 4.15.1b**, including the following text modifications, this impact would be a Less-than-Significant with Mitigation.

> **Measure 4.15.1b:** If EBRPD's proposed Delta Trail Extension or Byron Vernal Pools Regional Preserve is developed and open to the public before or during construction of the new Delta Intake and Pump Station and Transfer-Bethany Pipeline, respectively, CCWD shall provide EBRPD with an anticipated closure schedule; prepare and implement a public outreach program and promote the program via the web, billing inserts, and other methods to inform current and potential recreational trail users of the temporary closure of the Delta Trail Extension or Byron Vernal Pools Regional Preserve and inform customers of other recreational ~~trail~~ opportunities in the area; and place signage to the north and south of the new Delta Intake and Pump Station site or Byron Vernal Pools Regional Preserve along the trail or Armstrong Road to inform recreational users of the trail/preserve closure, alternative ~~trail~~ recreational options, and anticipated timing for the reopening.

In summary, to the extent possible, construction activities and pipeline placement will be limited to the Armstrong Road right of way to avoid, minimize and mitigate impacts to the Byron Vernal Pools Regional Preserve's biological, recreational and other resources. This topic is also discussed in Final EIS/EIR Section 4.8.3 (Vol. 4). The text modifications to Draft EIS/EIR Measure 4.15.1b are also found with other text changes in Final EIS/EIR Chapter 5 (Vol. 4).

3.12 Master Response 12: Cultural Resources

3.12.1 Introduction

Overview

Three comment letters express concern about potential impacts and mitigation related to cultural resources. The East Bay Regional Park District (EBRPD) and the Native Alliance of the Sierra Nevada Foothills (NASNF) ask about potential effects upon cultural resources at Vasco Caves Regional Preserve and other potential impact areas outside the Los Vaqueros Watershed, as well as the type and level of protection needed to mitigate effects upon archaeological resources. The California Department of Transportation (Caltrans) requests that Caltrans District 4 cultural resources staff be notified if undiscovered archaeological or burial resources are found on State right-of-way (ROW) during project construction.

This master response is organized by the following subtopics:

- 3.12.2 Vasco Caves Regional Preserve and Other Cultural Resources
- 3.12.3 Caltrans Construction-Related Mitigation Measures

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- California Department of Transportation – S_Caltrans

Local and Regional Agencies

- East Bay Regional Park District – L_EBRPD

Organizations

- Native Alliance of the Sierra Nevada Foothills – O_NASNF

Individuals

- None

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic in the following locations: Vol. 1, Executive Summary, pp. ES-86 through ES-90; Vol. 2, Section 4.16, Cultural and Paleontological Resources, pp. 4.16-1 through 4.16-56; Vol. 3, Appendix G – Cultural Resources Technical Report.

3.12.2 Vasco Caves Regional Preserve and Other Cultural Resources

Comment Summary

This section of this master response responds to all or part of the following comments:

L_EBRPD2-06 L_EBRPD2-07 O_NASNF-02 O_NASNF-03

Summary of Issues Raised by Commenters

- The area of potential effect should include the Vasco Caves Regional Preserve.
- Evaluate potential for indirect impacts to the Vasco Caves related to theft and vandalism that could result from increased accessibility during construction periods and from project-related recreational facilities.
- To mitigate impacts to the Vasco Caves, particularly during construction, CCWD should consult with EBRPD to develop a management plan that includes 24/7 security and closure of some roads during project construction to prevent unnecessary access to sensitive areas.
- Past and present vandalism in and near the Vasco Caves Regional Preserve should be repaired and further damage stemming from these past acts should be prevented.
- A native person, or a non-native person with established connections to Central California indigenous nations, should be hired to represent Native American religious interests in protecting the Vasco Caves and their resources.
- Reservoir enlargement (all alternatives) will result in inundation of two documented rock art sites.
- Increasing recreational access to the east side of the reservoir conflicts with CCWD's goals of protecting caves in the Kellogg Creek and Brushy Creek watersheds.

Response

Background

The Vasco Caves Regional Preserve (Preserve) is one of EBRPD's 55 parks situated throughout Alameda and Contra Costa Counties. It is located, generally, about two miles east of Los Vaqueros Reservoir and a substantially lesser distance from Vasco Road. All access is by guided tour only. The Preserve is not open to general public access in order to protect the Preserve's unique resources.[5]

The Vasco Caves cultural site is jointly owned by CCWD and EBRPD and is located within the larger Vasco Caves Regional Preserve which includes lands owned exclusively by EBRPD (EBRPD, 2000). The Vasco Caves cultural site is managed by EBRPD under the Vasco Caves Regional Preserve Long-term Operating Agreement (EBRPD, 2000). The most recent Agreement (dated June 6, 2000) indicates that the Preserve is currently operated under a Management Plan that

[5] Specific information about the caves is contained in the Draft EIS/EIR Appendix G – Cultural Resources Technical Report, a document that is available for review only by qualified cultural resource professionals.

was circulated for public review prior to its adoption. The Agreement states that EBRPD is responsible for all site security, "which may include the provision of an onsite caretaker." Information from an October 22, 2007 meeting of the EBRPD Advisory Committee indicates that there is an on-site caretaker residing on Preserve land, providing patrol services at the Preserve, and that helicopter patrols oversee activity on the site (EBRPD, 2007). The Vasco Caves Regional Preserve is located outside and adjacent to the Los Vaqueros Watershed. The Vasco Caves cultural site is located within the Preserve more than one-half mile from the watershed boundary.

Relevant Project Components

As originally proposed, the project included the option for the addition of six miles of hiking-only trails connecting 8.5 miles of existing access roads (currently used to access existing wind power facilities) on the east side of the reservoir. The resulting 14.5-mile trail was described as an optional Eastside Trail (Draft EIS/EIR Vol. 1, Section 3, pp. 3-86 through 3-87; Figures 3-28 and 3-29, and Table 3-6, pg. 3-87.) However, in response to concerns raised by the public and the resource agencies regarding impacts on biological resources and cultural resources, CCWD has eliminated the majority of the Eastside Trail as a proposed component of any of the project alternatives (see also Master Response 8, Biological Resources, Section 3.8.3). The retained portion of the trail extends about 5.1 miles from the gate on Los Vaqueros Road near Vasco Road to the reservoir then around the south/southeast side of the reservoir (See Figure 2-2 in Vol. 4, Chapter 2, Project Description Update). The shorter Eastside Trail would, at its closest point, be located nearly 2 miles (about 9,875 feet) away from the boundary of the Vasco Caves Regional Preserve, with multiple substantial elevation changes in the intervening area.[6] The Preserve's cave entrances are located approximately 4,000 feet from the eastern boundary with Los Vaqueros Watershed and are therefore closer to access roads outside the watershed than they are to any Los Vaqueros Watershed facilities or infrastructure. (See Vol. 4, Chapter 2, Project Description Update, for information about and evaluation of reductions in the length of the Eastside Trail.)

Analysis of Impacts

Given the distances and hilly terrain involved, it would be unlikely that casual hikers or project construction workers in the Los Vaqueros Watershed would discover and/or vandalize the caves. The geography, as well as the elimination of most of the proposed Eastside Trail (as originally proposed), minimize the risk that providing recreational facilities on the east side of the reservoir would conflict with CCWD's goal of protecting the Preserve.

Concern was raised by EBRPD that construction workers might access the Vasco Caves Regional Preserve from area roads, including Howden Road. There is no road officially named "Howden Road" in the project area; however, there is a private dirt road off Vasco Road and outside of the Los Vaqueros Watershed that accesses wind generators built and operated by Howden Wind Park, Inc. This and other private, gated roads provide restricted access to service wind generators

6 Even in its original conception, at its closest point to the Vasco Caves Regional Preserve, the Eastside Trail would have been more than one-half mile (about 2,725 feet) from the Watershed/Preserve property line. Access to the caves would have required walking an additional distance from the Preserve's property line to the cave entrance. As mentioned in the main text, there is substantial topographic rise and fall between the potential trail and the preserve, making increased access to the Vasco Caves cultural site improbable even under the original Eastside Trail option.

operated in the project vicinity. Locks and keys for the numerous gates within the watershed were recently changed by CCWD in order to further limit access (Mueller, 2009).

With reduction of the Eastside Trail (as described in Final EIS/EIR, Chapter 2, Section 2.3.1), which applies to Alternatives 1 through 4), there is no project construction planned for areas near the Preserve or in the vicinity of the wind generators; therefore, these gated watershed roads would not be available for travel to and from worksites by project contractors and other workers[7]. Workers would be limited to project construction areas near Walnut Boulevard or, as needed for marina area construction, from Los Vaqueros Road (Mueller, 2009).

In summary, access to the Preserve is closed to private vehicles and is only available to the public by naturalist-led tours. While the Preserve does sit close to some watershed roadways, locked gates, steep terrain and/or visual obstruction greatly inhibit access to the caves. Even where roads do pass near the caves, as is the case with Vasco Road, there is no basis to conclude that construction workers traveling to and from work sites would result in a greater risk of vandalism and theft than currently exists. Therefore, any impact to the Preserve in terms of increased accessibility from the Los Vaqueros watershed or area roads would be Less-than-Significant.

Mitigation Measures

A comment states that past and present vandalism in and near the Preserve should be repaired. CEQA, however, requires mitigation only for the impacts of a proposed project, not for remediation of existing conditions.

Preserve Management

A commenter expresses concern that decision-making relating to the care, management, and protection of the Preserve be more inclusive (i.e., be expanded beyond the participation of senior and middle management), and that a native person or someone with established connections with Central California indigenous nations be hired to represent Native American religious interests in protecting the Vasco Caves. The request that CCWD and EBRPD develop a more inclusive process is not relevant to the Los Vaqueros Reservoir Expansion Project or its EIS/EIR process; as previously explained, the NEPA/CEQA process only would generate programs or policies with regard to management of the Preserve to the extent the project would have impacts on its resources. Rather, the desire to broaden the number of voices in management of the Preserve is relevant to the adopted, long-term Vasco Caves Regional Preserve Management Plan and that document's public review process.

Inundation of Rock Art

A comment states that inundation of the expanded reservoir would damage two documented rock art sites; however, the cultural studies prepared for the project do not indicate that any known rock art sites would be subject to inundation under any of the project alternatives. However, the

[7] Removal of two existing wind generators in the southern part of the watershed (associated with a 275 TAF reservoir inundation area) would be completed by wind generation facility operators who already have site access, if an applicable alternative is constructed (Mueller, 2009).

commenter may be referring to two known petroglyph boulders, one located outside the inundation area, and one located in the inundation area of the 275 TAF reservoir. The Draft EIS/EIR includes study of 44 documented cultural resources, including rock art sites (Vol. 2, Section 4.16, pg. 4.16-11), and one sensitive location partially within the Area of Potential Effect, as depicted in Figure 4.16-1 (Vol. 2, Section 4.16, pg. 4.16-11). This area includes the entirety of the inundation area under the 275 TAF alternatives, which would generate the greatest area of flooding.

Rock art sites include the painting, pecking, or engraving on rock faces, which can occur in isolation or in association with bedrock milling stations, midden, rockshelters, and/or subsurface deposits. The rock faces may be found on isolated or grouped boulders or rock shelter interiors (Draft EIS/EIR, Vol. 2, Section 4.16, pg. 4.16-18). Two petroglyph boulders are the sole examples of a rock art site within the study area (Draft EIS/EIR, Appendix G, pg. 46). This site is in the area of the proposed Transfer-Bethany Pipeline (Vol. 2, Section 4.16, pg. 4.16-29), which is a component of Alternatives 1 and 2, and this area would not be subject to inundation. Within the potential reservoir inundation area there is another reported petroglyph boulder (CA-CCO-0, noted as a milling station) that contains linear grooves on the face of the stone. Impact assessment and mitigation for this site and other cultural resources that may potentially be affected by the project is included in the Draft EIS/EIR (Vol. 2, Section 4.16.2, pp. 4.16-34 through 4.16-49). It should be noted that Mitigation Measures 4.16.1a through 4.16.1h address both identified and previously undiscovered cultural resources. No additional mitigation is needed.

Lastly, there was a comment indicating that by increasing recreational access to the east side of the reservoir, the project would conflict with CCWD's goals of protecting caves in the Kellogg Creek and Brushy Creek watersheds. As discussed above, the project description has been modified to exclude most of the optional Eastside Trail and given the distances and terrain in the vicinity, the risk that providing recreational facilities on the east side of the reservoir would conflict with CCWD's goal of protecting caves and other natural resources in the Los Vaqueros watershed is minimal.

3.12.3 Caltrans Construction-Related Mitigation Measures

Comment Summary

This section of this master response responds to all or part of the following comments:

S_Caltrans-02

Summary of Issues Raised by Commenters

Caltrans is in agreement with the findings and mitigation measures of the Cultural Resource section of the Draft EIS/EIR. In the event ground-disturbing activities take place within the state right-of-way (ROW) and there is an inadvertent archaeological or burial discovery, Caltrans has requested that its Office of Cultural Resources Studies be contacted in order to have a Caltrans staff archaeologist evaluate the resources and approve a data recovery plan, as needed (S_Caltrans-02).

Response

The Draft EIS/EIR assesses the potential for excavation and other construction activities to occur along existing roadways, as shown on Table 4.9-1, Roadways Used and/or Affected During Project Construction (Draft EIS/EIR, Vol. 2, Section 4.9, pg. 4.9-2). The Draft EIS/EIR does not identify a need for improvements to state highways or improvements that would encroach into a Caltrans ROW as a result of project construction or operations, and no such improvements are anticipated. It is noted that the proposed Delta-Transfer Pipeline (Alternatives 1, 2 and 3) is proposed to occur adjacent to (but not within) portions of State Route 4 (SR 4) between Old River and west to Bixler Road. There is also possible new powerline construction proposed along SR 4 from just east of Bixler Road to Bixler Road under Power Supply Option 1 – Western Only (Alternatives 1, 2 and 3) (Vol. 2, Section 4.9, pg. 4.9-18). The Delta-Transfer Pipeline, if constructed, would parallel the existing Old River Pipeline. Because this ROW area was disturbed during construction of the existing pipeline, there is a low potential for undiscovered buried cultural resources along this pipeline alignment (Draft EIS/EIR, Vol. 2, Section 4.16, pg. 4.16-40).

Although there is a low potential for archaeological or burial discovery within the ROW for SR 4, Mitigation Measures 4.13-1e and 4.13-1f (Draft EIS/EIR, Vol. 2, Section 4.16, pg. 4.16-48) plus Mitigation Measure 4.16-3 (Draft EIS/EIR, Vol. 2, Section 4.16, pg. 4.16-54) provide detailed procedures that CCWD would use to address any inadvertent archaeological or burial discovery during project construction. Such measures provide that a qualified archeologist assess any findings of previously undiscovered cultural resources or burial sites, and in certain circumstances develop appropriate treatment measures in consultation with CCWD. In addition, Mitigation Measure 4.16-1 in the Draft EIS/EIR (Vol. 2, Section 4.16, pp. 4.16-47 through 4.16-49) has been expanded to include Measure 4.16-1i to ensure that a staff archeologist with the Caltrans Office of Cultural Resources Studies also is contacted and coordinated with in the event that there is an inadvertent archaeological or burial discovery within state ROW.

The Draft EIS/EIR text (Vol. 2, Section 4.16, pp. 4.16-47 through 4.16-49) is revised as follows:

> **Measure 4.16.1i:** Los Vaqueros Reservoir Expansion; Dam Modification; and Other Sites Where Cultural Resources Cannot Be Avoided. In the event there is an inadvertent archaeological or burial discovery within State ROW, the Caltrans Office of Cultural Resources Studies, District 4, Oakland, shall be immediately contacted at (510)286-5618. A staff archaeologist will evaluate the finds within one business day of being contacted by CCWD representatives. A data recovery plan and all subsequent reports for investigations within State ROW will need to be approved by the Office of Cultural Resources Studies, District 4.

These text changes and all other document revisions are included in Final EIS/EIR, Chapter 5, Revisions to the Draft EIS/EIR.

Note the Delta-Transfer pipeline and the Power Supply Option 1 - Western Only are not components of Alternative 4.

3.13 Master Response 13: Growth-Inducing Effects

3.13.1 Introduction

Overview

This master response addresses the issues raised by commenters about the growth-inducement analysis in the Draft EIS/EIR. Specifically, two commenters assert that the proposed project would result in growth-inducing effects that are not acknowledged or mitigated in the Draft EIS/EIR.

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- None

Organizations

- East Bay California Native Plant Society – O_EBCNPS
- Save Mount Diablo – O_SMD

Individuals

- None

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Executive Summary, Section ES 4.5, pg. ES-30 and Table ES-7, pg. ES-92; Vol. 1, Chapter 3.0; Vol. 1, Section 4.2; and Vol. 2, Section 4.20.

3.13.2 Growth-Inducing Effects

Comment Summary

This section of this master response responds to all or part of the following comments:

O_EBCNPS-06 O_EBCNPS-07 O_SMD-15 O_SMD-16

Summary of Issues Raised by Commenters

- In assessing whether the project's benefit of increased water supply reliability would induce growth, the EIS/EIR must compare the project's effects to water supply levels that water agencies would be likely to actually receive rather than comparing to water supply levels that the agencies previously had planned to receive.
- The EIS/EIR should include an official document describing the policies and standards for uses of water in the reservoir, to include requirements restricting the use of some of the water supply for emergency storage.
- The Draft EIS/EIR does not acknowledge or mitigate direct project-related growth-inducing effects even though other jurisdictions are relying on increased water supply from the project to support growth.

Response

The Draft EIS/EIR considers the potential for each of the alternatives to induce growth in Section 4.20, Growth-Inducing Effects (Vol. 2). As discussed in Section 4.20, none of the project alternatives involve the construction of new housing; therefore, none of the alternatives would result in direct growth inducement. Further, none of the alternatives would result in a substantial number of new permanent employment opportunities (less than 10). Therefore, none of the alternatives would result in indirect effects on population growth related to the establishment of new permanent jobs (Draft EIS/EIR, Vol. 2, Section 4.20, pg. 4.20-2).

The Draft EIS/EIR acknowledges that the project could have the potential to result in indirect growth-inducing effects related to removing an obstacle to population growth (Draft EIS/EIR, Vol. 2, Section 4.20, pg. 4.20-2). One of the project's Primary Objectives is to:

> Increase water supply reliability for water providers within the San Francisco Bay Area, to help meet municipal and industrial water demands during drought periods and emergencies or to address shortages due to regulatory and environmental restrictions.

Although only Alternative 1 is designed to include Delta Supply Restoration, each alternative includes project operations that are designed, through Dry-Year Storage and Emergency Storage, to provide some level of improvement in water supply reliability to the three South Bay water agencies: Alameda County Water District (ACWD), Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7), and Santa Clara Valley Water District (SCVWD); as well as to the CCWD (Draft EIS/EIR, Vol. 2, Section 4.20, pp. 4.20-4 through 4.20-11.) As stated in the Draft EIS/EIR, increasing water supply reliability for Bay Area water providers does have the potential to remove an obstacle to growth (Draft EIS/EIR, Vol. 2, Section 4.20, pg. 4.20-2).

Each of these agencies (ACWD, Zone 7, SCVWD, and CCWD) has prepared a long-term future water supply plan. These long-term water supply plans have been designed to provide adequate water supply to meet the needs of both existing customers and the growth that has been planned in each service area by the respective city and county land use agencies (Draft EIS/EIR, Vol. 2, Section 4.20, pg. 4.20-12).

Comment O_SMD-15 notes that the Draft EIS/EIR "asserts that the project would not have any growth-inducing impacts" and that the Draft EIS/EIR draws this conclusion because the project would "provide the agencies with the amount of water for which they had already planned." These statements misunderstand the Draft EIS/EIR. First, as noted above, the Draft EIS/EIR acknowledges that the project alternatives have the potential to remove an obstacle to growth by increasing water supply reliability. The Draft EIS/EIR discusses this potential effect for each of the four project alternatives. Second, the comparison of Alternative 1 (which would have the greatest water supply reliability effect of the four alternatives) with the approved plans of the South Bay Agencies, CCWD and their customers is only one of the comparisons included in the Draft EIS/EIR. Evaluating whether the growth that could occur with the project is consistent with planned growth is not a way to deny that growth could take place, but rather to acknowledge that the impacts of growth have already been identified and mitigated, to the extent feasible, through general plan or other land use planning processes. The comment does not acknowledge that the Draft EIS/EIR includes two additional comparisons to the water supply reliability made available by Alternative 1: future water supply levels without the project and historic, actual water supplies made available to the various water agencies (Draft EIS/EIR, Vol. 2, Section 4.20, pp. 4.20-4 through 4.20-9). The latter is the comparison the commenter seeks; it is provided in the Draft EIS/EIR.

The modeling analysis prepared for the Draft EIS/EIR indicated that Alternative 1, which would provide for the greatest improvement of water supply reliability, could restore, on average, about 30 TAF of Delta supply to the three South Bay water agencies. This represents about 10 percent of the total Delta supply these agencies had been expecting from Delta supply sources (294.3 TAF), as reflected in their current Urban Water Management Plans, and about 5 percent of their total water demands (about 596.7 TAF) (Draft EIS/EIR, Vol. 2, Section 4.20, pg. 4.20-9). Subsequently, the updated modeling performed for the Final EIS/EIR indicates that Alternative 1 could restore, on average, about 6 TAF of Delta supply to these agencies (see updated Section 4.2 in Vol. 4, Chapter 5, Section 5.3 of this document). This represents 2 percent of the total 294.3 TAF of Delta supply these agencies had been expecting and about 1 percent of their total water demands (about 596.7 TAF). Based on the updated modeling analysis, Alternative 1 would not provide more water than the average annual amount that these agencies historically received.

As the Draft EIS/EIR explains, Alternatives 2, 3 and 4 include no Delta Supply Restoration component, so the likelihood that any of these alternatives would induce significant growth is lower than that identified for Alternative 1 (Vol. 2, Section 4.20, pp. 4.20-10 through 4.20-11.)

Comment O_SMD-16 also requests that "an official document describing the policy and standards of the uses of the water in the reservoir" should be developed, presumably to ensure that the water for emergency purposes is not used for growth. If one of the project alternatives is approved, operations of the expanded reservoir will be documented in biological opinions and other permits as well as in partnership agreements with any agencies that decide to participate in the project, and will be consistent with CCWD Board principles and the mitigation commitments in the EIS/EIR.

Comment O_ECNPS-06 states that the expansion project will have a direct impact on growth because the increased capacity has been mentioned at City Council meetings and in EIR documents associated with local development projects in CCWD's service area. The commenter does not provide specific evidence to support this statement. CCWD is not aware of any development project that has stated it is relying on an expanded Los Vaqueros Reservoir for its water supply. CCWD cooperates with the cities within its service area to comply with Senate Bill (SB) 221 and SB610 for new development, and participates in the CEQA review of significant projects. Through these processes, CCWD consistently relies upon its Future Water Supply Study and Urban Water Management Plan, not upon any expansion of Los Vaqueros Reservoir. CCWD has not indicated that expansion of the Los Vaqueros Reservoir is required in order to provide supply for any new developments within its service area nor has it become aware of any misunderstandings or misstatements regarding the purpose of the Los Vaqueros Reservoir Expansion Project. Any statement that a specific development project is relying on expansion of Los Vaqueros Reservoir for its supply would be inaccurate and the CCWD would seek to correct it immediately. CCWD has conducted an extensive outreach program on the expansion project within its service area since 2001 and all presentations and written material have been clear that the purpose of the expansion project is to provide environmental water management benefits and improve water supply reliability including dry year and emergency storage; the purpose is not to provide yield for growth (Vol. 1, Chapter 2, pp. 2-11 through 2-14.)

As described in Vol. 1, Chapter 2, Project Background, CCWD has an adopted long-term plan to provide water supply within its service area. CCWD's Future Water Supply Study (FWSS), adopted in 1996, projected future demand within CCWD through 2040 and identified a preferred program to reliably meet those demands with high quality water at the lowest cost possible, in an environmentally responsible way (CCWD, 1996). A key element of the FWSS was that implementation would be accomplished incrementally so that growth was not encouraged beyond that which was already planned and permitted by local land use agencies. CCWD updates the FWSS regularly to address changing conditions. The last update was in 2002 (CCWD, 2002). The FWSS also forms the basis for CCWD's latest Urban Water Management Plan (UWMP) (CCWD, 2005). None of these documents, the FWSS, the 2002 update to the FWSS (CCWD, 2002), or the UWMP, relies in any way on the expansion of Los Vaqueros Reservoir to meet future demands within the service area. CCWD supplies for growth remain its existing water right supplies at Mallard Slough, Central Valley Project supply and East Contra Costa Irrigation District supply, with any additional supplies to be obtained from permanent water transfers when and if needed, with or without an expansion of Los Vaqueros Reservoir.

Additional information on the FWSS, the accompanying programmatic EIR (certified by the CCWD Board in 1999) (CCWD, 1999) and the related Biological Opinion (USFWS, 2000) can be found in the Draft EIS/EIR (Vol. 1, Chapter 2, Project Background, pp. 2-10 through 2-11 and Vol. 2, Section 4.20, Growth Inducing Effects, pp. 4.20-9 through 4.20-12).

3.14 Master Response 14: Climate Change

3.14.1 Introduction

Overview

This master response addresses the single comment received regarding the proposed project's greenhouse gas emissions and potential effects on climate change. The East Bay California Native Plant Society (EBCNPS) expressed the opinion that the Draft EIS/EIR did not describe the release of carbon from disturbed soils associated with building the reservoir and the reservoir's contribution to climate change. EBCNPS also expressed the opinion that the Draft EIS/EIR did not consider the proposed project's direct impact on current day carbon emissions and climate change.

This master response includes the following subtopic:

- 3.14.2 Air Quality and Greenhouse Gas Emissions

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- None

Organizations

- East Bay California Native Plant Society – O_EBCNPS

Individuals

- None

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic area in the following locations: Vol. 1, Executive Summary, Table ES-7, pg. ES-78; and Vol. 2, Section 4.10, pp. 4.10-33 through 4.10-37.

3.14.2 Air Quality and Greenhouse Gas Emissions

Comment Summary

This section of this master response responds to all or part of the following comments:

O_EBCNPS-05

Summary of Issues Raised by Commenters

- The effect of building the reservoir (disturbed soils release carbon and greatly impact carbon balances) and the actual reservoir's contribution to climate change were not described in the Draft EIS/EIR.
- The Draft EIS/EIR did not examine the direct impact of the project on current day emissions and climate change.

Response

Impacts to climate change associated with construction and operational emissions of greenhouse gases (GHGs) are discussed in the Draft EIS/EIR (Vol. 2, Section 4.10, pp. 4.10-32 through 4.10-37). The Draft EIS/EIR addresses direct and indirect sources of GHGs associated with construction and operation of Los Vaqueros Reservoir.

Construction emissions

The Draft EIS/EIR quantifies emissions from construction equipment and trucks hauling materials to and from the construction sites. The Draft EIS/EIR calculates that, for the duration of construction, Alternatives 1 and 2 are expected to produce 22,550 metric tons of carbon dioxide equivalents (CO_2E) from hauling activities and construction equipment operation; Alternative 3 is expected to produce 22,285 metric tons CO_2E; and Alternative 4 is expected to produce 19,600 CO_2E (Draft EIS/EIR, Vol. 2, Section 4.10, pg. 4.10-33).

Operational emissions

The Draft EIS/EIR quantifies the operational (direct and indirect) emissions of GHGs for the four action alternatives (Vol. 2, Section 4.10, pp. 4.10-33 through 4.10-35). More specifically, the analysis addresses indirect emissions due to the increased energy use (associated with increased water diversion and pumping), expected increases in the rate of decomposition of organic matter due to increased reservoir volume, and carbon releases associated with the introduction of more water into the reservoir (Vol. 2, Section 4.10, pp. 4.10-34 through 4.10-35). Operational emissions associated with electricity use have been revised with an additional comparison to existing conditions and are described below.

Based on the analysis of project-related GHG emissions, projections of Bay Area and statewide GHGs, and consideration of energy-reducing project features, the Draft EIS/EIR concludes emissions of GHGs would not be cumulatively considerable. The comparison to current day emissions, presented below, does not change this determination.

Scope of Analysis

The comment (O_EBCNPS-05) states that the Draft EIS/EIR does not describe the climate change effect of building the reservoir, parenthetically noting that "disturbed soils release carbon and greatly impact carbon balances." While there is influx and efflux of gases between soil and the atmosphere, the primary and quantifiable source of anthropogenic GHGs during construction activities would be generated from the combustion of fossil fuels associated with off-road equipment and on-road vehicle operations. In addition, there are no available emission factors, requirements, established protocols, or emission models to quantify carbon release from disturbed soil during construction. While soil disturbance does result in release of carbon, such emissions during construction would be a one-time event to the affected soil (unlike the combustion of fossil fuels in vehicles that can be refueled to continuously release GHGs). A search of references related to soil disturbance and GHG emissions finds that these references primarily discuss farming activity, especially plowing, that recur on an annual basis. An obvious difficulty in establishing protocols for general construction emission calculations is that the soil organic matter (SOM) is highly variable between different soil types, including spatial and temporal variability. Without established protocols and detailed knowledge of the SOM content throughout the portion(s) of the construction area that would be disturbed, which would not be practical and would likely result in more GHG emissions from disturbed soils than the releases during construction, estimates would be speculative. For these reasons, the Draft EIS/EIR appropriately focused its analysis on quantification of GHGs associated with construction equipment and trucks hauling construction materials to and from the project sites.

The commenter also states that the Draft EIS/EIR does not describe the actual reservoir's contribution to climate change. However, emissions associated with decay of organic material due to inundation of plant material and emissions from release of carbon by the water in the expanded reservoir are quantified in the Draft EIS/EIR (Vol. 2, Section 4.10, pp. 4.10-34 through 4.10-35).

Comparison to Current Day Emissions

The commenter states that the Draft EIS/EIR did not examine the direct impact of the project on current day emissions. Table 4.10-10 in the Draft EIS/EIR identifies the net increase in emissions from reservoir operation in comparison to future emissions without the project (Vol. 2, Section 4.10, pp. 4.10-34 through 4.10-35). Since the preparation of the Draft EIS/EIR, the California Natural Resources Agency (Resources Agency) has adopted and approved amendments to the CEQA Guidelines to address the analysis and mitigation of the effects of GHG emissions. These amendments are anticipated to become effective on March 18, 2010 (Resources Agency, 2010). The amendments to the CEQA Guidelines indicate that a comparison of future GHG emissions to existing emissions levels would be appropriate. The comparison of the "future without" and "future with" the project is required for NEPA analysis and thus remains an important part of the assessment.

The Resources Agency's CEQA Guidelines on climate change do not dictate a specific metric threshold in order to determine whether project-related GHGs are cumulatively considerable. Instead, the CEQA Guidelines do the following (Resources Agency, 2009a):

- Provide that, in defining the scope of other projects necessary to carry out a cumulative impact analysis, an agency may use a summary of projects adopted in a local, regional, or statewide plan, or some related planning document, such as a general plan, regional transportation plan, or a greenhouse gas reduction plan. CEQA Guidelines § 15130(b)(1)(B).

- Provide that an analysis of GHG emissions may rely on qualitative or quantitative analysis. Proposed Guidelines § 15064.4(a)(1)&(2). The California Resources Agency has explained that emissions should be quantified where possible. See *Initial Statement of Reasons for Regulatory Action* (Resources Agency, 2009b).

- Suggest methods for assessing the significance of an impact, such as reviewing:

    - The extent to which a project increases or decreases GHG emissions as compared to the existing environmental setting. Guidelines § 15064.4(b). "All project components, including construction and operation, equipment and energy use, and development phases must be considered." *Initial Statement.*
    - Whether a project exceeds a threshold of significance (with the lead agency retaining the discretion to choose a threshold). Guidelines § 15064.4(b).
    - The extent to which a project complies with regulations adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Note that such plans must previously have undergone a public review process, such as CEQA, and must include specific requirements that reduce or mitigate the project's incremental contribution. Guidelines § 15064.4(b); *see also* Guidelines § 15183.5 (authorizing agencies to use previous plan for tiering or streamlining purposes, and setting out requirements for a greenhouse gas reduction plan). Also, an agency must discuss the extent to which a project is inconsistent with such plans. Proposed Guidelines § 15125(d). Compliance with a plan creates a rebuttable presumption that a project's incremental contribution is not cumulatively considerable. CRA, *Initial Statement.*

- Allow agencies to, when adopting thresholds of significance, consider those previously adopted or recommended by other public agencies, or recommended by experts, provided that substantial evidence informs such thresholds. Guidelines § 15064.7(c).

- Provide options for mitigation measures, including (1) those incorporated into an existing plan or program, ordinance, or regulation; (2) modification of project features, design, or other measures to reduce GHG emissions; (3) off-site measures, including offsets; and (4) measures that sequester GHGs. Guidelines § 15126.4(c).

The approach used to analyze GHG emissions in the Draft EIS/EIR generally conforms with the amendments to the CEQA Guidelines. Notably, the project would not result in a direct impact on current day emissions, but rather a cumulative contribution to a global impact. The Draft EIS/EIR quantifies GHG emissions associated with project construction and operation, identifies applicable summaries of projections, and uses both quantitative data and a qualitative analysis to determine significance.

A comparison of project-related emissions to existing GHG emissions associated with operation of Los Vaqueros Reservoir has been prepared and the text of the Draft EIS/EIR is revised to incorporate this additional information, including **revised Table 4.10-10**, below.

Table 4.10-10 (Draft EIS/EIR, Vol. 2, Section 4.10, pg. 4.10-34) is revised as shown below. This revised table is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

TABLE 4.10-10 (REVISED)
INDIRECT GHG EMISSIONS FROM PROJECT ELECTRICITY USE
(METRIC TONS/YEAR)[1]

Operational Emissions	Total Metric Tons/Year CO_2E	Incremental Increase (vs Existing)[3]	Incremental Increase (vs Future Without Project)[4] ~~Increase in Metric Tons/Year CO_2E~~[3]
Existing	23,300	n/a	n/a
Future Without Project[2]	26,000	2,700	n/a
Alternative 1	33,800	10,500	7,900
Alternative 2	34,900	11,600	9,000
Alternative 3	30,400	7,100	4,400
Alternative 4	26,400	3,100	500

1 Metric tons/year of CO_2E were calculated using the *California Climate Action Registry General Reporting Protocol* emission factors and methodology. See Appendix H for more details.

2 "Future Without Project" includes power required for pumping at Banks and Jones Pumping Plants needed to deliver water to the SBA, SCVWD via San Luis Reservoir, and power required at CCWD's pumping facilities.

3 "Incremental Increase (vs Existing)" shows the increase in the total emissions for each alternative compared existing conditions.

~~4~~3 "Incremental Increase (vs Future Without Project)" ~~"Increase in Metric Tons/Year"~~ shows the increase in the total emissions for each alternative compared to the emissions for "Future Without Project" conditions

SOURCE: ESA, 2008; California Climate Action Registry, 2008; CCWD, 2008

In addition, relevant text in the Draft EIS/EIR (Vol. 2, Section 4.10, pg.4.10-36) has been revised as shown below. This text change is included in Chapter 5, Revisions to the Draft EIS/EIR, in this document (Vol. 4).

> With implementation of the project alternatives GHG emissions during construction for a worse-case year would range from approximately 19,600 metric tons CO_2E (Alternative 4) to 22,550 metric tons CO_2E (Alternatives 1 and 2). These construction emissions represent approximately 0.02 to 0.03 percent, of Bay Area GHGs emitted in 2002, respectively.[8] As shown in Table 4.10-10, the increase in indirect GHG emissions from project electricity use for each alternative versus the "Existing" scenario would be no more than 11,600 metric tons/year CO_2E. Also~~As~~ shown in Table 4.10-10~~8~~, the increase in indirect GHG emissions from project electricity use for each alternative versus the "Future Without Project" scenario would be no more than 9,000 metric tons/year CO_2E. In comparison to Bay Area GHG emissions, the project alternatives' ~~future~~ increases in annual operational emissions versus "Existing" and versus "Future Without Project", respectively, represent approximately 0.01 and 0.009 percent (Alternative 1), 0.01 and 0.01 percent (Alternative 2), 0.008 and 0.005 percent (Alternative 3), and 0.004 and 0.0006 percent (Alternative 4) of total Bay Area GHGs emitted in 2002. The 2020 GHG emissions limit for California, as adopted by CARB in December of 2007 is approximately 427 million metric tons of CO_2E. In comparison to this emissions limit, ~~T~~the proposed project's annual ~~contribution~~ operational

8 The Bay Area Air Quality Management District reported regional Bay Area GHGs emissions in 2002 at approximately 85 million CO_2E tons. Bay Area 2002 GHG emissions are used as the baseline for determining whether a project's contributions are significant as these are the most recent emissions inventory for the Bay Area.

emissions versus "Existing" and versus "Future without Project", respectively, represent ~~would be~~ approximately 0.002 and 0.002 percent (Alternative 1), 0.003 and 0.002 percent (Alternative 2), 0.002 and 0.001 percent (Alternative 3), and 0.0007 and 0.0001 percent (Alternative 4) of this total 2020 emissions limit.

3.15 Master Response 15: Procedural Issues

3.15.1 Introduction

Overview

This master response addresses comments regarding procedural requirements of CEQA. Relevant comments addressed the following issues: extension of the CEQA comment period, requirements for a Notice of Preparation, and conditions triggering recirculation of the Draft EIS/EIR.

This master response is organized by the following subtopics:

- 3.15.2 Recirculation
- 3.15.3 Review Period
- 3.15.4 Notice of Preparation

Commenters

Commenters that addressed this topic include:

Federal Agencies

- None

State Agencies

- None

Local and Regional Agencies

- East Bay Regional Park District – L_EBRPD

Organizations

- East Bay California Native Plant Society – O_EBCNPS

Individuals

- None

Draft EIS/EIR Section Reference

The Draft EIS/EIR addresses this topic in the following locations: Vol. 1, Executive Summary, ES-33; Vol. 1, Chapter 3, Project Description, pp. 3-37 through 3-41.

3.15.2 Recirculation

Comment Summary

This section of this master response responds to all or part of the following comments:

L_EBRPD2-03 L_EBRPD2-44

Summary of Issue Raised by Commenter

- The Draft EIS/EIR must be recirculated, as significant new information and clarifications are necessary in order to give the public a meaningful opportunity to review and comment on the Project.

Response

Comments L_EBRPD2-03 and L_EBRPD2-44 assert that the Draft EIS/EIR should be recirculated for another round of public review and comment. However, the commenter does not identify the new significant information triggering the need to recirculate the Draft EIS/EIR.

Given the EIR process contemplates the development of responses to comments received on a draft EIR, the fact that comments are received and responded to in order to clarify, amplify, or correct statements in a draft EIR does not trigger the requirement to recirculate the document. Rather, recirculation is mandated only in certain prescribed circumstances. As provided in the CEQA Guidelines section 15088.5:

> A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:
>
> 1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
> 2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
> 3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
> 4. The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

In completing the Final EIS/EIR, the lead agencies have not identified "significant new information", as defined in the CEQA Guidelines. Consequently, there is no need or obligation to recirculate the Draft EIS/EIR.

3.15.3 Request for Extended Review Period

Comment Summary

This section of this master response responds to the following comment:

O_EBCNPS-01

Summary of Issues Raised by Commenter

- The comment period should have been extended.
- CCWD was not responsive to requests for documents.

Response

Comment O_EBCNPS-01 states the time period for public review of the Draft EIS/EIR should have been extended, and that CCWD misled the public as to the amount of time that would be allowed to comment on the project. The comment also states that CCWD was not responsive in requests for documents during this period.

The Draft EIS/EIR was released on February 20, 2009. A 60-day comment period ending April 21, 2009 followed, in which members of the public reviewed the Draft EIS/EIR and submitted comments. Pursuant to CEQA Guidelines Section 15203(a), CCWD notified the public and reviewing agencies of this 60-day time period in the Draft EIS/EIR itself (Vol. 1, Executive Summary, pg. ES-33) and a Notice of Availability (Draft EIS/EIR, Vol. 3, Appendix A-3).

Where a draft EIR is submitted to the State Clearinghouse, CEQA requires a minimum review period of 45 days. Moreover, the CEQA Guidelines recommend the review period not exceed 60 days [CEQA Guidelines § 15105(a)]. The 60-day review period thus was compliant with CEQA.

The statement that CCWD misled the public as to the duration of the review period appears to be based on a personal, oral communication from a CCWD staff member to the East Bay California Native Plant Society representative that there was a possibility that the comment period would be extended. However, neither CCWD nor any of its staff promised the review period would be extended, nor took any official action to extend the period.

Finally, CEQA requires that the public be provided notice of where the Draft EIR and all documents it references will be available for public review. These locations must be readily accessible to the public during the lead agency's normal working hours. Here, the Draft EIS/EIR was available in numerous locations throughout CCWD's service area and in Sacramento, and the documents referenced in the Draft EIS/EIR were available for public review at CCWD's offices in Concord, as well as various locations in Sacramento, during working hours, and throughout the review period.

3.15.4 Adequacy of Notice of Preparation

Comment Summary

This section of this master response responds to all or part of the following comments:

L_EBRPD2-42

Summary of Issues Raised by Commenter

- The Notice of Preparation was inadequate because the Draft EIS/EIR studied a different pipeline alignment than that identified in the Notice of Preparation.

Response

Comment L_EBRPD2-42 asserts the Notice of Preparation was inadequate because the Draft EIS/EIR studied a different alignment for the Transfer-Bethany pipeline than that identified in the Notice of Preparation. Specifically, the comment states the alignment evaluated in the Draft EIS/EIR, which involves an intermediary transfer facility and follows a trajectory that could affect the Byron Vernal Pools Regional Preserve, is different than the alignment identified in the Notice of Preparation, which involved more direct trajectories between the dam and the South Bay water agency facilities, with no transfer station.

Published January 2006, the Notice of Preparation stated that the lead agencies contemplated a range of siting options for each facility, but that "the most appropriate size and location of each facility under each alternative [was] still being refined," and that the more refined alignments would be presented in the EIS/EIR (Draft EIS/EIR, Vol. 3, Appendix A1, Notice of Preparation [Appendix B-1], pg. 8). With regard to the pipeline alignment in question, the Notice of Preparation contained: (1) a graphic with two arrows that showed potential, conceptual alignments of the pipeline, with the arrows being markedly distinct from graphics used to indicate the comparatively more precise alignments of other facilities (Notice of Preparation, Figure 2, pg. 9); and (2) a short description identifying a number of general options for the pipeline alignment that included the possibilities of pump stations and tunnels (Notice of Preparation, pg. 10). The description of the Transfer-Bethany pipeline in the Notice of Preparation is not inconsistent with the refined alignment in the Draft EIS/EIR.

It also bears noting that the alignment for the Transfer-Bethany pipeline was designed specifically to avoid crossing the future planned Byron Vernal Pools Regional Preserve. In the vicinity of the future preserve, the alignment would be within the Armstrong Road right-of-way, to the extent possible.