

Chapter 4

Revisions to the Draft Supplemental EIS/EIR

This chapter contains all changes to text to the Draft Supplemental EIS/EIR. The chapter is organized by reference to page numbers from the Draft.

4.1 Revisions from Public Comments

Revisions have been made to the Supplemental EIS/EIR text as a result of comments received on the Draft Supplemental EIS/EIR. A compilation of the revisions is provided below. Changes in text are signified by strikeouts where text is removed and by italics where text is added. Corrections to the text that do not reference a comment number are EWA agency-initiated changes.

Executive Summary

Page ES-2

The top paragraph, last sentence has been edited as follows:

This Supplement, along with the 2004 EIS/EIR, provides the public, reviewing agencies, and decision-makers with ~~an complete up-to-date~~ analysis of the EWA ~~program alternatives~~ as ~~currently under consideration~~ *defined in this document*.

Page ES-4

The description of fish actions under the No Action Alternative on the bottom of Page ES-4 has been edited for clarification (Comment 6-8):

“Reclamation, with DWR as an applicant, has reinitiated consultation on the current biological opinions; these revised opinions would establish the fish actions in the No Action Alternative. ~~While the fish actions in these biological opinions are unknown, they would likely to be less than with the EWA program.~~ The No Action Alternative in this Supplement is structured such that it has fewer fish actions than the action alternatives. However, it is unknown what level of fish actions will be contained in the revised biological opinions.

Page ES-8

The following edit has been made to Footnote 2:

Since publication of the 2004 EIS/EIR, the EWA agencies have decided that they would not purchase water through crop idling from the Friant Division. Tulare County contains primarily Friant Division contractors; therefore, Tulare County was removed from the Export Service Area. Placer County Water Agency has indicated that they would not sell water through crop idling *or stored reservoir water* to the EWA agencies; therefore, Placer County was removed from the Upstream from the Delta region.

Page ES-8

An “X” has been added under Environmental Setting Change for groundwater (Comment 2-1):

Table ES-2. Changes to the Resource Area Regulatory and Environmental Settings

| Resource Area | Regulatory Setting Change ¹ | Environmental Setting Change ¹ | No Substantive Change |
|-------------------------------------|--|---|-----------------------|
| Water supply | | | X |
| Water quality | | X | |
| Groundwater | | X | X |
| Geology and soils | | | X |
| Air quality | X | X | |
| Fisheries and aquatic ecosystems | X | X | |
| Vegetation and wildlife | X | | |
| Regional and agricultural economics | | X | |
| Agricultural social issues | | X | |
| Agricultural land use | | X | |
| Recreation | | X | |
| Flood control | | | X |
| Power | X | | |
| Cultural | | | X |
| Visual | | | X |
| Environmental justice | | X | |
| Indian Trust Assets | | | X |

Notes:

¹ Indicates regulatory and environmental setting changes from the 2004 EIS/EIR. See resource area sections in Chapter 3 for need for new analysis and significance determinations.

Page ES-9 and ES-10

The words, “and in the Delta” have been added to the following conservation measure to reduce confusion (Comment 3-12):

These conservation measures have not changed from the 2004 EIS/EIR and ASIP. However, the updated impacts analysis incorporates one conservation measure at a new time of year:

- The EWA agencies will avoid acquisition and transfer of water that would reduce flows essential to maintaining populations of native aquatic species in the source river *and in the Delta*.

Chapter 1, Introduction

Page 1-4

The following text has been added to the first paragraph on page 1-4 (Comment 11-2):

The U.S. District Court for the Eastern District of California has found the biological opinion issued by USFWS to be arbitrary and capricious in certain respects. The Court has selected remedies for this violation of the Administrative Procedures Act. *On December 14, 2007, the United States District Court Eastern District of California filed an Interim Remedial Order following Summary Judgment and Evidentiary Hearing to remain in place no longer than September 15, 2008, at which point USFWS will issue a new biological opinion.* The existing BO includes the EWA program; however, the contents of future BOs are uncertain.

Chapter 2, Alternatives, Including the Proposed Action/Proposed Project

Page 2-4

The following text has been added to the last paragraph on page 2-4 (Comment 6-4):

Based on current circumstances, ~~these three tiers~~ *Tiers 1 and 2* are no longer an accurate way to describe EWA assets. Tier 1 included baseline water, which included the biological opinions on winter-run salmon and delta smelt. Tier 2 included the EWA and a fully funded Ecosystem Restoration Program (ERP). Tier 3 consisted of assets beyond Tiers 1 and 2 ~~that would be based upon the commitment and ability of the CALFED agencies to make additional water available should it become needed.~~ At the time that these tiers were envisioned, the biological opinions governing operations (1993 NMFS BO for winter-run Chinook salmon and the 1995 USFWS BO for delta smelt) did not include an EWA. The biological opinions on the long-term operations of the Projects (NMFS 2004, USFWS 2005) did include an EWA, which made it difficult to differentiate between baseline water and the EWA. DWR and Reclamation have reinitiated consultation under the Federal Endangered Species Act for the BOs on the long-term operations of the Projects, and it is unclear whether the EWA will be included in the revised opinions. The discussion of ~~tiers~~ *Tiers 1 and 2* has been deleted to reduce confusion. *However, Tier 3 (funding available to the EWA agencies to take fish actions for a species that is in jeopardy without available assets) is still in place.*

Chapter 3, Resource Areas

Page 3-1

The paragraph in Section 3.1 has been changed as follows (Comment 2-1):

The following resources have either: 1.) no changes; or 2.) changes to the environmental or regulatory setting that are not specific enough to distinguish them from the description in the 2004 EIS/EIR: water supply, ~~groundwater~~, geology and soils, visual, cultural, flood control, and Indian Trust Assets. Because the project description for the EWA is still essentially the same as originally proposed, the baseline condition for these resources have not substantially changed, and there is no new important information regarding these resources, no additional analysis beyond that already provided in the 2004 EIS/EIR is necessary for this Supplement.

Page 3-1

The last paragraph on page 3-1 has been edited as follows (Comment 2-1):

This section describes resource areas that have substantive changes to the environmental and/or regulatory setting since the 2004 EIS/EIR: water quality, air quality, fisheries and aquatic ecosystems, vegetation and wildlife, agricultural economics, agricultural social issues, agricultural land use, environmental justice, recreation, ~~and~~ power, *and groundwater*.

Page 3-3

Following Table 3-1, the following text regarding the environmental setting for water quality has been added (Comment 11-3):

Since the 2004 EIS/EIR, there have been efforts to help better the characterization and management of water quality within the Delta. Such efforts include State Water Resources Control Board (SWRCB) Resolution “Water Boards’ Actions to Protect Beneficial Uses of the San-Francisco Bay/Sacramento-San Joaquin Delta Estuary”; Delta Regional Ecosystem Restoration Implementation Program; and strategies that are part of the Delta Vision.

SWRCB Resolution

The SWRCB resolution contains 20 steps that the water boards will take to address the pelagic organism declines and other important Delta issues, including: protect beneficial uses, prepare a strategy and workplan for implementation of coordinated activities in the Delta; address salinity issues; assess the POD synthesis report and other information regarding POD; assess CDFG’s San Joaquin River salmon escapement model and other information regarding San Joaquin River flows; initiate a public trust proceeding; require a comprehensive long-term Delta-wide monitoring program; require characterization of discharges to and from Delta islands;

execute a contract to conduct screening studies of potential inhibition of primary productivity and toxicity to fish; implement a standardized monitoring program to better understand blue-green algae blooms; take actions to develop or implement TMDLs; compile and assess available data on contaminants and toxicity; track progress in maintaining a delta smelt refuge population; encourage the Department of Pesticide Regulation to expedite their pyrethroid pesticide re-registration process; develop and consider adopting a Basin Plan amendment regarding municipal and domestic supply beneficial uses; develop and adopt sediment quality objectives; develop and consider adopting a statewide policy to implement Clean Water Act section 316(b); develop and implement regulatory controls to address the introduction of invasive species; participate in the development of the Suisun Marsh Habitat Management, Preservation, and Restoration Plan; and use existing interagency agreement to assure their activities are based upon sound science (SWRCB 2007).

Delta Regional Ecosystem Restoration Implementation Program

The Delta Regional Ecosystem Restoration Implementation Program (DRERIP) is a collaborative effort involving the ERP implementing agencies: CDFG, NMFS, and the USFWS, as well as the California Bay-Delta Authority Science Program staff and the ERP Science Board. “The DRERIP is one of four regional plans intended to guide the implementation of the CALFED Ecosystem Restoration Program element. The DRERIP will refine the planning foundation specific to the Delta, refine existing and develop new Delta specific restoration actions and provide Delta specific implementation guidance, program tracking, performance evaluation and adaptive management feedback.” (CALFED 2007). A draft table of contents has been established for the DRERIP, but at the time of this document, no additional information regarding this program is available.

Delta Vision

“Delta Vision is intended to identify a strategy for managing the Sacramento-San Joaquin Delta as a sustainable ecosystem that would continue to support environmental and economic functions that are critical to the people of California (Delta Vision 2007).” The Delta Vision Blue Ribbon Task Force submitted to Governor Schwarzenegger 12 linked recommendations and several proposed near-term actions to protect the Delta ecosystem and the state’s water supply, including: 1. Delta ecosystem and a reliable water supply for California are the primary, co-equal goals for sustainable management of the Delta. 2. The California Delta is a unique and valued area, warranting recognition and special legal status from the State of California. 3. The Delta ecosystem must function as an integral part of a healthy estuary. 4. California’s water supply is limited and must be managed with significantly more efficiency to be adequate for its future population, growing economy and vital environment. 5. The foundation for policy making about California water

resources must be the longstanding constitutional principles of “reasonable use” and “public trust;” these principles are particularly important and applicable to the Delta. 6. The goals of conservation, efficiency and sustainable use must drive California water policies. 7. A revitalized Delta ecosystem will require reduced diversions, or changes in patterns and timing of those diversions, upstream, within the Delta and exported from the Delta at critical times. 8. New facilities for conveyance and storage, and better linkage between the two, are needed to better manage California’s water resources the estuary and exports. 9. Major investments in the California Delta and the statewide water management system must be consistent with, and integrate specific policies in this vision. In particular, these strategic investments must strengthen selected levees, improve floodplain management and improve water circulation and quality. 10. The current boundaries and governance system of the Delta must be changed. It is essential to have an independent body with authority to achieve the co-equal goals of ecosystem revitalization and adequate water supply for California while also recognizing the importance of the Delta as a unique and valued area. This body must have secure funding and the ability to approve spending, planning and water export levels. 11. Discouraging inappropriate urbanization of the Delta is critical both to preserve the Delta’s unique character and to ensure adequate public safety. 12. Institutions and policies for the Delta should be designed for resiliency and adaptation. (Delta Vision 2007).

Page 3-4

Following the last paragraph in Section 3.2.1, the following paragraph should be added (Comment 11-3):

Several efforts are ongoing to help improve the management of the Delta, with a strong focus on water quality. Although the framework for these actions is in place (see descriptions above of the SWRCB resolution, the DRERIP, and the Delta Vision), the specifics have yet to be implemented. It is unclear how these actions would, if at all, affect EWA operations. Therefore, no new water quality analysis based on the updated environmental setting information can be conducted.

Page 3-6

The following sub-headers were added for clarification:

3.2.4 Vegetation and Wildlife

Regulatory Setting

Wetland Communities

Environmental Setting

Wetland Communities

Conclusion
Wetland Communities

Page 3-7

The following text has been added following the last paragraph in Section 3.2.4 (Comment 1-5):

***Valley/Foothill Woodland and Forest.** The 2004 EIS/EIR did not analyze effects on the Valley/Foothill Woodland and Forest Community. It has since been determined that the environmental consequences of EWA actions should be described in further detail to clarify how impacts to this plant community would be lessened or avoided.*

Impact Analysis

Impact Statement: EWA acquisition of water via groundwater substitution transfers in the Upstream from the Delta Region could lower groundwater levels.

As a part of groundwater substitution transfers, the willing sellers would use groundwater to irrigate crops and decrease use of surface water. Pumping additional groundwater would decrease groundwater levels in the vicinity of the sellers' pumps. Valley/Foothill Woodland and Forest habitat includes trees that access groundwater as a source of water through taproots in addition to extensive horizontal roots that use soil moisture as a water source. Decreasing groundwater levels could reduce part of the water base for species within these habitats.

The 2004 EIS/EIR Chapter 6, Groundwater Resources, analyzes in detail how groundwater substitution transfers could affect groundwater levels and surrounding beneficial users, including the environment. The section concludes that these effects could be potentially significant, and requires several mitigation measures. These measures would require monitoring to identify if any effects are occurring, and implementation of additional measures by the seller if any effects should occur. The additional mitigation steps could be cessation of pumping or use of a replacement water source for the affected area. Because the mitigation involves monitoring and the effect may only be determined after the drying of a habitat is observed, groundwater substitution has the potential for a significant effect on Valley/Foothill Woodland and Forest. The degree of that effect will be dependent on how soon the effect is noted, the response by the willing seller to mitigate that effect, and the amount of groundwater versus soil moisture used by individual trees for their survival. Implementation of Environmental Measures in 2004 EIS/EIR Section 10.2.4 would reduce this effect to a less-than-significant level.

Page 3-33

Prior to the references section, the following section on groundwater resources has been added (Comment 2-1):

3.2.12 Groundwater

Regulatory Setting

No regulatory changes have occurred since the completion of the 2004 EIS/EIR.

Environmental Setting

Two sources of information regarding the groundwater environmental setting have been published since the completion of the 2004 EIS/EIR. These documents are summarized in this section.

Groundwater Ambient Monitoring and Assessment

The goal of the Groundwater Ambient Monitoring and Assessment (GAMA) program is to understand the groundwater quality and potential susceptibility to contamination. The GAMA report (Lawrence Livermore National Laboratory 2005) describes a number of laboratory assessment techniques used, including age-dating, and noble gas, volatile organic carbon (VOC), and stable isotope content. These various laboratory tests were performed on groundwater samples from across the Butte aquifer region to assess the general age and source of groundwater.

The GAMA report goes through a very technical discussion of the results of the study on an area by area basis. The relative age of groundwater in various areas of the basin is discussed and is reported to be very old in some areas. It should be noted that the age of groundwater in a certain zone should not be confused with the travel time for groundwater to reach that zone. Groundwater flow is induced by a difference in groundwater heads. A higher gradient results in quicker groundwater flow. A relatively low gradient can result in very little groundwater flow.

Therefore, groundwater may simply not be flowing through an area very quickly because the groundwater head gradient may be low. However, the head gradient can be increased by introducing a new stress to the system (e.g. groundwater pumping). An increase in the gradient will cause groundwater to flow toward the pumping more quickly. It may not take the same number of years for groundwater to reach this area (to “refill”) as the age of the groundwater that has been pumped out. Rather the rate of groundwater flow would be a function of the pumping rate, aquifer characteristics (e.g. hydraulic conductivity, porosity, etc.), and the groundwater conditions in the surrounding area. The GAMA report does not discuss this type of travel time analysis.

Groundwater Status Report

The Groundwater Status Report (BBWUA 2007) is an annual document

produced to summarize groundwater level and land subsidence information collected in Butte County. The data is collected by Butte County and DWR, depending on the location. The report states that 73 of the 75 monitoring wells which had both spring 2005 and spring 2006 data points indicated higher water levels in spring 2006. Much of this increase is attributed to the sixth highest annual precipitation total since 1960.

The report specifically notes a few locations and/or wells with notable trends. The report indicates a significant recovery in 2006 for a line of five wells which had previously shown decreasing trends. Five wells (near Chico, Durham and Nelson) indicate a declining water level trend from less than 5 feet to more than 20 feet. The report also documents six wells with no significant declining trend in the southwest valley portion of Butte County.

Conclusion

GAMA Report

It is believed that the information presented in the GAMA report does not substantially alter the description of the groundwater resources in the Butte 2004 EIS/EIR. The GAMA report does not fully describe the flow paths for groundwater in each of the zones analyzed. The discussion in the report indicating the potential connection between groundwater and surface water in certain areas is acknowledged. The potential for this connection is already described and discussed in the 2004 EIS/EIR. Therefore, additional groundwater impact analysis is not warranted.

Groundwater Status Report

While the groundwater level trends discussed in this report describe the groundwater levels in the Butte basin during a more recent time, the analysis used to assess impacts would not change. The assessment of regional groundwater level declines (Section 6.2.1.1 of the 2004 EIS/EIR) describes the potential groundwater decline due to an EWA transfer as a function of the volume of water transferred. This volume of water is converted to a change in water level as a function of the aquifer's specific yield and the area of pumping. The potential water level decline would then be superimposed on the water level conditions to assess the potential resulting water table elevation. Because this information would not change the information used in the analysis or the analysis itself, no additional groundwater impact analysis is warranted.

Chapter 4, Fisheries and Aquatic Ecosystems

Page 4-15

The first full paragraph on this page is modified as follows (Comment 6-7).

The majority of juvenile Chinook salmon (primarily fall-run Chinook salmon fry) are observed in salvage operations during the late winter and early spring (February through May). Yearling spring-run and fall-run salmon, late-fall-run salmon smolts, and pre-smolt winter-run juvenile salmon are also observed during the late fall and winter (November through January). Steelhead are primarily observed in salvage during the late winter early spring months (February through April) but juveniles and adults are observed from December through July. Striped bass are salvaged at all times, with the majority of juvenile striped bass occurring during the summer months (May through July). Delta smelt are observed in the salvage operations during the *late* fall, winter, and early spring. Longfin smelt are primarily salvaged during the spring (March through May) as juveniles. Sacramento splittail are salvaged throughout the year, although the majority of splittail (young-of-the-year) occur during the spring and early summer (March through July). Green sturgeon are found in low numbers in the salvage operations throughout the year with the highest density occurring in August. A variety of other resident and migratory fish species are also collected as part of both SWP and CVP salvage operations.

The timeframe of July through November was identified as a window when water could be moved through the Delta for export with less impact than would occur at other times of year. As described above, salvage information indicates that the species most sensitive to entrainment during the months of August through November are the introduced species, threadfin shad and American shad, and, to a lesser extent, striped bass. The native species are entrained at very low numbers during these months relative to other times of year. Exceptions are late fall run Chinook salmon, which are observed in salvage in low, but not insubstantial numbers in November and splittail, which are observed in low, but not insubstantial numbers at the State Water Project in October and November in drier years. None of the species named above are listed under either the state or federal ESAs. All EWA actions would be made considering near real-time monitoring information to avoid periods when sensitive species were present near the SWP/CVP pumps or in areas where the actions might expose them to more adverse conditions than they would experience in the absence of that action.

Page 4-31

The first paragraph of Section 4.2.3.1 has been modified as follows (Comment 7-3) to better reference the biological relevance of Delta Outflow.

Delta outflow is linked to ecosystem health and has historically been related to the abundance of several species. Generally speaking, increases in Delta outflow would be considered beneficial, while decreases would be considered adverse (*see Sections 4.2.2.1*).

Page 4-32

A sentence has been inserted at the beginning of the first paragraph of Section 4.2.3.2 (Comment 7-3) to better reference the biological relevance of X2 location.

As previously discussed, X2 is thought to be an important indicator of habitat conditions in the Delta (see Section 4.2.2.2). The estimates of X2 locations . . .

Page 4-32

The second sentence of the first paragraph of Section 4.2.3.3 has been modified as follows (Comment 7-3) to better reference the biological relevance of entrainment.

Increases in the entrainment index indicate an increase in the total number of that species potentially lost to entrainment or related causes and are considered adverse (see Section 4.2.2.3).

Page 4-33

The text of the ASIP conservation measure has been revised as indicated below (Comments 3-12 and 3-14, 3-15, 3-16, 6-11). This measure reflects a restriction that would be placed on EWA actions to avoid potential impacts to Delta fish during the late summer and fall when debt is generally made up by the CVP and SWP.

The EWA agencies will avoid acquisition and transfer of water that would reduce flows essential to maintaining populations of native aquatic species ~~in the source river~~ in the Delta or in the source river for these waters. EWA actions would not move X2 more than 0.5 km to the east from its location if EWA actions were not occurring, or reduce Delta outflow by more than 10%, unless the EWA agencies determined that such changes would not be detrimental to fish (e.g., when X2 were located in Benicia, where changes of this magnitude are unlikely to affect habitat). Nor would EWA actions be undertaken that might jeopardize fish protections in upstream rivers subsequent to those actions.

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Chapter 5

Mitigation Monitoring and Reporting Program

5.1 Introduction

CEQA (PRC § 21081.6) requires that a public agency adopt a mitigation monitoring and reporting program for any project approved based on an EIR or a mitigated negative declaration. This program must ensure compliance with mitigation measures during project implementation. Agencies must adopt a program if they adopt findings, including mitigation measures, as a part of the project approval. The approving agency then has the discretion to decide whether it implements a reporting program, monitoring program, or some combination of both. A reporting program consists of written compliance review and guarantees that the approving agency is informed of compliance. A monitoring program consists of a project oversight process and guarantees that compliance is checked regularly.

Although not expressly required by NEPA, the President's Council on Environmental Quality directs all Federal agencies to include in an EIS the appropriate means to mitigate any adverse environmental impacts (40 CFR 1502.14(f), 1502.16(h)). The final Record of Decision (ROD) must state whether all practicable means to avoid or minimize environmental harm were adopted and include a monitoring and enforcement plan for any proposed mitigation (40 CFR 1505.2(c)). An EWAT Monitoring Subteam will be responsible for implementation of the Monitoring Plan.

5.2 EWA Mitigation and Monitoring Overview

EWA agencies acquire and manage assets to maximize benefits to at-risk native fish species, but asset management can change river flows and Delta outflows and also change the amount of seasonal wetlands within agricultural areas. The manner in which EWA agencies apply, acquire, and manage assets will be monitored to ensure that EWA fish benefit objectives are being met while adverse effects to other species and their habitats because of EWA actions are being minimized or avoided. The monitoring program will include both compliance and effectiveness monitoring. Data collected and reviewed under EWA monitoring efforts will be used to support adaptive management decisions that could change how some assets are managed should the overall goals of the EWA program related to fish species, habitats, and terrestrial species not be

met. Prior to implementation of either action alternative, EWA agencies will document compliance with ESA, CESA, and NCCPA in the BO's and NCCP Approval.

The EWA agencies are responsible for the development and implementation of a combined monitoring and reporting program. The responsibilities of each agency may include data collection, analysis, interpretation, findings, and recommendations for changing EWA water asset acquisition and management strategies. Water agencies and/or willing sellers may participate in monitoring related to asset management actions involving their facilities or land within their districts. For more information on agency development of the Monitoring Plan, see Section 7.1.2 of the AASIP. The Monitoring Subteam will review and assess monitoring data as necessary, to evaluate EWA action effects and will submit the data to peer review through the CALFED Science Program.

Tables 5-1 and 5-2 provide some early guidance for developing the mitigation monitoring and reporting program. These environmental measures incorporated into the project and mitigation measures were included in the 2004 EIS/EIR and incorporated by reference in the Supplement. Table 5-1 includes environmental measures incorporated into the project description and conservation measures associated with the project. This table lists the EWA action, the measures incorporated into the project/conservation measures, objective of that measure, monitoring/reporting action, responsible party, and timing.

Table 5-2 includes mitigation measures to reduce impacts to less-than-significant levels and lists the action, potential effect, mitigation measure, monitoring/reporting action, responsible party, effectiveness criteria, and timing. Table ES-4 in Chapter 2 provides a summary of effects of the EWA that led to the development of the mitigation measures listed in Table 5-2. In both Tables 5-1 and 5-2, the willing seller is identified for some measures as the responsible agency. The EWA agencies will include provisions in the purchase contracts to require the willing seller to complete these measures.

In addition to the tables, the sections below discuss the general monitoring process for fisheries and vegetation/wildlife actions.

5.2.1 EWA Fish Monitoring Process

The EWA agencies initiate fish actions based on a range of data collected in the Delta and upstream rivers. The EWA agencies would use the same data to monitor the effectiveness of EWA actions and to implement conservation measures incorporated into the EWA project. Table 5-1 summarizes these conservation measures and EWA monitoring actions concerning fish species in the Delta and upstream rivers. This section further details the EWA agencies' process for monitoring and reporting fish abundance and distribution.

Delta Smelt

Delta smelt are vulnerable to entrainment at the CVP and SWP export facilities. The EWA agencies initiate pumping reductions based on an assessment of data from various fish surveying methods and other fish distribution indicators such as year-type hydrology, rate of export pumping, salvage estimates, location of X2, water quality, water flows and temperature. These multiple data sources are used to assess entrainment risk particularly once delta smelt spawning has begun because the fish facilities are not an effective sampling method for larval and early juvenile fish (personal communication, White 2008). The EWA agencies would also use these data to determine the effectiveness of EWA actions taken to protect delta smelt.

The Delta Smelt Working Group reviews and monitors survey data and provides recommendations for changes in Project operations that could affect the need for fish actions. The Delta Smelt Working Group is made up of experts in delta smelt biology from the following agencies: USFWS, Reclamation, U.S. EPA, DWR, and CDFG.

The EWA agencies have also incorporated measures into the EWA program intended to protect and facilitate the recovery of delta smelt. EWA agencies will avoid increased exports for EWA transfers when delta smelt are vulnerable, based on monitoring fish at the fish facilities and in proximity to the Delta pumps. Monitoring data from several surveying methods will be used to characterize the distribution and estimate relative abundance of various life-stages of delta smelt. For adult fish, these tools include the fall mid-water trawl, spring Kodiak trawl, beach seining, the Chipps Island trawl, and estimation of gonadal development. For larval delta smelt, these methods may include light trapping and 20-mm surveys. For juvenile fish, these methods will include the 20-mm and summer tow-net surveys (personal communication, White 2008). The EWA agencies will utilize data collected from these surveys to monitor delta smelt recovery after EWA measures have been implemented.

Salmonids

The EWA agencies use many data sources to decide when and how to take fish actions to protect salmon and steelhead in the Delta and upstream rivers. Salmon biologists collect data on fish passage through the Delta from the catch of juvenile salmon, and various monitoring stations measure environmental parameters, such as flow, water temperature, precipitation, and turbidity. The EWA agencies use this information to trigger closures of the Delta Cross Channel gates and alter export pumping patterns. This information will also be used to monitor the effectiveness of EWA actions.

The EWA agencies have incorporated measures into the EWA for protection of salmon and steelhead in the Delta and upstream rivers. Many programs monitor the presence of adult and juvenile salmonids in the Sacramento and San Joaquin River basins and the Delta (CALFED 2003a). The EWA agencies would utilize data collected from these surveys to monitor abundance, escapement, spawning

distributions, and juvenile stranding. The EWA agencies would use salvage estimates at the Delta export facilities to adhere to biological opinions and permits for Project operations.

The EWA agencies have also agreed to evaluate the Folsom Reservoir coldwater pool availability prior to releasing EWA assets. Before taking fish actions, the EWA agencies meet with the American River Operation Group (AROG) to discuss the management of reservoir releases at Folsom for temperature requirements on the American River. On the basis of water temperature and coldwater pool availability, the AROG make recommendations to the EWA agencies on when to take fish actions. The EWA agencies would use the data collected by the AROG to monitor the effectiveness of EWA actions to maintain spawning habitat for salmonids.

5.2.2 Vegetation and Wildlife Monitoring

The conservation measures identified to protect vegetation and wildlife resources are included in the 2004 EIS/EIR and incorporated by reference in the Draft Supplemental EIS/EIR, USFWS's biological opinion, and the NCCP approval. The willing seller is responsible for completing many of these conservation measures. The biological opinion will require the EWA agencies to comply with these conservation measures; the EWA agencies in turn will contractually require the willing sellers to perform these measures. EWA actions affecting vegetation and wildlife will be confined to river corridors, canals, and Delta waterways that convey water to idled lands and rice and cotton cropland offered for crop idling programs within the EWA action area. Monitoring will only be done during those times and in those places where EWA actions are taken.

Table 5-1. Environmental Measures Incorporated into the Project/Conservation Measures

| EWA Asset Acquisition/ Management Action | Environmental Measures Incorporated into the Project/ Conservation Measures | Objective | Monitoring/Reporting Action | Responsible Party | Timing |
|--|--|---|---|---|-----------------|
| Water Supply | | | | | |
| Stored reservoir water | Refill Criteria | Prevent EWA purchases from affecting downstream users. | Use of Impact Account (amount of water that would have flowed downstream in absence of the water transfer, but which did not because of reservoir refilling during periods when the Delta is in balanced conditions). The amount of Impact Account water will be computed daily during the refill period. On days of excess conditions, the daily impact equals zero. On days of balanced conditions, the daily impact equals the daily refill volume. The Impact Account balance is the sum of the daily impact amounts. | Willing seller is responsible for the action and to coordinate with Reclamation and DWR operations about when the Delta is in balanced or excess conditions | After transfer |
| Water Quality | | | | | |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Carriage Water | Maintain water quality within the Delta at without-EWA constituent levels. | Use of DSM2 to estimate the amount of carriage water needed to prevent an EWA-related increase in chloride concentration in the Delta | Reclamation/DWR | During transfer |
| Stored groundwater purchase | California Aqueduct Pump-in Quality | Maintains that groundwater quality falls within historical constituent levels measured at the O'Neill Forebay Outlet. | Analyze and monitor groundwater quality in compliance with DWR's interim policy on groundwater pump-in to the California Aqueduct. | Willing seller/DWR | During transfer |
| Fisheries and Aquatic Ecosystems | | | | | |
| <i>All species</i> | | | | | |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Coordinate EWA water acquisition and transfer actions that could affect management of evaluated species with Federal, State, and other CALFED agencies, and regional programs. | Avoid conflicts among management objectives. | Actions are incorporated in the following measures for fisheries and aquatic ecosystems. | EWA agencies | Ongoing |

Final Supplemental EIS/EIR to the
Environmental Water Account EIS/EIR

| EWA Asset Acquisition/ Management Action | Environmental Measures Incorporated into the Project/ Conservation Measures | Objective | Monitoring/Reporting Action | Responsible Party | Timing |
|---|---|--|---|--|--|
| <i>General Fish Species</i> | | | | | |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Avoid acquisition and transfer of water that would reduce flows essential to maintaining populations of native aquatic species in the source river and in the Delta. ¹ | Maintain the essential flows of fish habitat for spawning, rearing, and migration | Willing sellers to develop water transfer schedules that protect fish habitat in cooperation with EWA agencies. Management agencies are to check necessary flows for each river based on historical releases and flows harmful to fish. Project Agencies to report the status of transfers (predicted changes in flow) and Management Agencies to report needs of aquatic species. | EWA agencies/willing sellers | Prior to and during transfers. |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Acquisitions and transfers will not increase exports during times of the year when anadromous and estuarine fish are most vulnerable to damage or loss at project facilities or when their habitat may be adversely affected. | Protect at risk fish species in vicinity of Delta pumps (reduce take at pumps) | EWA agencies to monitor fish distribution in the Delta and salvage data at the CVP/SWP export facilities. The Data Assessment Team will assess vulnerability of fish to current and forecasted export pumping regimes, report their analysis to the Water Operations Management Team, and make recommendations for project operational changes to the Project Agencies. | EWA agencies | During export pumping of transferred water. |
| Stored reservoir water | Avoid acquisition and transfer of stored reservoir water quantities that would impair compliance with flow requirements and maintenance of suitable habitat conditions in the source river in subsequent years. | Comply with minimum flow requirements downstream in the post transfer period to provide for fish habitat related to spawning, rearing, and/or migration | EWA agencies will work with willing sellers to ensure that minimum flows are maintained during refill. Monitoring of reservoir releases related to stream gage data. | Willing sellers with oversight by EWA agencies | During refill (winter/spring) |
| <i>Delta Smelt</i> | | | | | |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Adhere to the terms and conditions in all applicable CESA and FESA biological opinions and permits for CVP and SWP operations. | Protect and facilitate recovery of Delta smelt | Management agencies to monitor salvage numbers at Delta pumps | EWA agencies | During transfer |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Avoid initiation of EWA water exports in July until delta smelt will not be harmed. | Protect and facilitate recovery of Delta smelt | EWA agencies to monitor salvage numbers at Delta pumps | EWA agencies | July |

Section 5
Mitigation Monitoring and Reporting Program

| EWA Asset Acquisition/ Management Action | Environmental Measures Incorporated into the Project/ Conservation Measures | Objective | Monitoring/Reporting Action | Responsible Party | Timing |
|--|---|---|--|--|----------------------------------|
| <i>Salmonids</i> | | | | | |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Adhere to the terms and conditions in all applicable CESA and FESA biological opinions and permits for CVP and SWP operations. | Protect and facilitate recovery of at risk salmonid species | EWA agencies to monitor salvage numbers at Delta pumps | EWA agencies | During transfer |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Minimize flow fluctuations resulting from the release of EWA assets from Project reservoirs to reduce or avoid stranding juveniles. | Maintain the essential flows of streams for adequate fish habitat to reduce or avoid the stranding of juveniles | EWA agencies will evaluate when juveniles are present in subject streams, monitor flow data, and compare flow data with known ranges to work with Project operators in planning how to ramp down/up reservoir releases | EWA agencies | Before and during water releases |
| <i>Central Valley Steelhead</i> | | | | | |
| Stored reservoir water | In May, evaluate Folsom Reservoir coldwater pool availability to benefit returning adult fall-run Chinook salmon prior to releasing EWA assets. | Optimally manage CVP facilities to maintain essential spawning habitat for salmonids | Reclamation to evaluate coldwater pool in relation to release schedules based on water demand, water quality, and fish needs. Fishery agencies to read temperatures at gages along the river; temperature profile in reservoir | Reclamation to manage water; fishery agencies to request water at times when it will benefit fish. | May to December |
| <i>Central Valley Fall/Late-Fall Run Chinook Salmon</i> | | | | | |
| Stored reservoir water | In May, evaluate Folsom Reservoir coldwater pool availability to benefit over-summering juvenile steelhead prior to releasing EWA assets. | Optimally manage CVP facilities to maintain essential spawning habitat for salmonids | Reclamation to evaluate coldwater pool in relation to release schedules based on water demand, water quality, and fish needs. Fishery agencies to read temperatures at gages along the river. | Reclamation to manage water; fishery agencies to request water at times when it will benefit fish | May to December |
| Stored reservoir water release | Consult with the Multi-agency Team regarding ramping considerations before and after EWA transfers to avoid non-volitional steelhead downstream movement. | Prevent or control non-volitional movement of juvenile fish | Stream flows and fish monitoring to be performed by Yuba County Water Agency. | EWA agencies/YCWA | Prior to and after transfer. |
| Vegetation and Wildlife | | | | | |
| <i>All species</i> | | | | | |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Coordinate EWA water acquisition and transfer actions that could affect management of evaluated species with Federal, State, and other CALFED agencies and regional programs. | Avoid conflicts among management objectives. | Actions are incorporated in the following measures for vegetation and wildlife. | Reclamation/DWR | Prior to transfer. |
| <i>Giant Garter Snake</i> | | | | | |
| Crop idling | Adhere to programmatic biological opinion for giant garter snake (GGS). | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Submit package including maps and description of where the crops will be idled and proposed minimization measures. | Willing seller prepares the package and the EWA agencies review it | Prior to transfer. |

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| EWA Asset Acquisition/ Management Action | Environmental Measures Incorporated into the Project/ Conservation Measures | Objective | Monitoring/Reporting Action | Responsible Party | Timing |
|---|--|--|---|--|------------------------------|
| Crop idling | Ensure parcels from which water is to be acquired are outside of mapped proscribed areas. | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Compare idled fields to maps provided in ASIP. | Willing seller, with review by EWA agencies | During transfer. |
| Crop idling | Ensure water is maintained in irrigation and drainage canals to provide movement corridors. | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Field verify for adequate return ditch flows. | Willing seller to maintain water levels, EWA agencies to assess compliance | During transfer |
| Crop idling | Ensure block size of idled rice parcels will be limited to 160 acres. | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Verify through field visits or aerial photography. | Reclamation and DWR with willing seller | Prior to and during transfer |
| Crop idling | Ensure mowing along irrigation and drainage canals will be minimized and mowers will be elevated to at least 6 inches above ground level. | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Field verify. | Willing seller to maintain vegetation, EWA agencies to assess compliance | During transfer |
| Crop idling | Ensure that, if canal maintenance such as dredging is required, vegetation will be maintained on at least one side. | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Field verify for maintenance of irrigation ditch habitat. | Willing seller, with review by the EWA agencies | During transfer |
| Crop idling | Maximize geographic dispersal of idled fields. | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Compare idled fields to maps. | Reclamation and DWR with willing seller | Prior to transfer |
| Crop idling | Avoid purchasing water from the same field for more than two consecutive years or from a rice field that was idled for another program in the previous two consecutive years. | Protect the GGS, which is highly dependent on rice fields and associated irrigation ditches. | Verify through field visits or aerial photography. | Reclamation and DWR with willing seller | Prior to transfer |
| <i>Greater Sandhill Crane</i> | | | | | |
| Crop idling | Avoid or minimize actions near known wintering areas in the Butte Sink (from Chico in the north to the Sutter Buttes and from Sacramento River in the west to Highway 99) that could adversely affect foraging and roosting habitat. | Limit reduction in the amount of over-winter forage for migratory birds. | Compare idled fields to wintering areas on ASIP maps. | Reclamation and DWR with willing seller | Prior to transfer |

Section 5
Mitigation Monitoring and Reporting Program

| EWA Asset Acquisition/ Management Action | Environmental Measures Incorporated into the Project/ Conservation Measures | Objective | Monitoring/Reporting Action | Responsible Party | Timing |
|--|---|--|---|---|--------------------|
| Black Tern | | | | | |
| Crop idling | Avoid EWA crop idling actions that could result in the substantial loss or degradation of suitable habitat in areas that support core populations of evaluated species that are essential to maintaining the viability and distribution of evaluated species. | Limit reduction in the amount of nesting and forage habitat during the summer rearing season. | GGS actions on rice fields will also benefit the black tern; therefore, the actions identified above for GGS will address this measure. | Reclamation and DWR with willing seller | Prior to transfer. |
| Crop idling | Maintain quantities of water in agriculture return flow ditches that maintain existing wetland habitat. | Limit reduction in the amount of nesting and forage habitat during the summer rearing season. | Field verify for adequate return ditch flows. | Willing seller | During transfer. |
| Western Pond Turtle | | | | | |
| Crop idling | Maintain water levels in irrigation and drainage canals to within 6 inches of non-program conditions and do not completely dry out canals. | Ensure effects of crop idling actions on western pond turtle habitat are avoided or minimized. | Field verify for maintenance of irrigation ditch habitat. | Willing seller | During transfer. |
| Non-tidal Freshwater Permanent Emergent, Natural Seasonal Wetland, Valley/Foothill Woodland and Forest, and Valley/Foothill Riparian Communities | | | | | |
| Crop idling, groundwater substitution | Well adequacy review. (See Groundwater mitigation measures in Table 5-2.) | | | | |
| Crop idling, groundwater substitution | Monitoring program. (See Groundwater mitigation measures in Table 5-2.) | | | | |
| Valley/Foothill Riparian and Montane Riparian Communities | | | | | |
| Stored reservoir water, groundwater substitution, crop idling, stored groundwater purchase | Monitoring program (In cooperation with other programs.) | Ensure long-term effects on these communities are minimized or avoided. | Observe habitat changes as flows in waterways change because of the EWA. | CDFG | Ongoing. |
| Managed Seasonal Wetlands | | | | | |
| Crop idling | Maintain drainage systems at a water level that would maintain existing wetlands providing habitat to covered species. | Maintain flow for landowners of managed seasonal wetlands who depend upon agricultural return flows for part or all of their water supply. | Field verify for maintenance of irrigation ditch habitat. | Willing seller | During transfer. |
| Seasonally Flooded Agricultural Lands | | | | | |
| Crop idling | See measures for GGS. | | | | |
| Regional and Agricultural Economics | | | | | |

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| EWA Asset Acquisition/ Management Action | Environmental Measures Incorporated into the Project/ Conservation Measures | Objective | Monitoring/Reporting Action | Responsible Party | Timing |
|---|--|--|---|--------------------------|--------------------|
| Crop idling | Limit purchase of water via crop idling if more than 20 percent of recent harvested rice or cotton acreage in the county would be idled through EWA water acquisitions. (The EWA would idle less than 20 percent if other reasonable foreseeable transfers under other programs were idling land.) Acquire less water by crop idling when the level of land idling is already larger than historically normal. | Minimize socioeconomic effects on local areas. | Gather data regarding the amount of crop acreage previously harvested and idled in participating counties. Confirm crop idling data by the local Farm Bureau, local University of California Cooperative Extension offices, Agricultural Commissioners Office, or other crop-specific authorities. | Reclamation/DWR | Prior to transfer. |
| Agricultural Social Issues | | | | | |
| Crop idling | See measures for Regional and Agricultural Economics | | | | |
| Cultural Resources | | | | | |
| Stored reservoir water, source shifting | Determine whether reservoir levels would exceed normal historic operating range. | Reduce the EWA's potential effect on historic properties and unique archeological resources. | Forecast end-of-season reservoir levels. | Reclamation | Prior to transfer. |
| | Reach agreement to conduct cultural resources inventory and evaluation. | Reduce the EWA's potential effect on historic properties and unique archeological resources. | Sign agreement between Reclamation, State Historic Preservation Office, and willing seller. | Reclamation | After transfer |
| Indian Trust Assets | | | | | |
| Groundwater substitution | Consult with tribes if potential effect to ITAs is identified). | Reduce the EWA's potential effect on ITAs. | Identify nature of the effect and appropriate mitigation measures. | Reclamation | Prior to transfer. |

Although this conservation measure was included in the 2004 EIS/EIR, it is also added to the Supplement because of its use during a different time of year (October – December) than intended in the 2004 EIS/EIR.

Table 5-2. Mitigation and Monitoring Requirements

| Action | Potential Effect | Mitigation Measure | Monitoring/Reporting Action | Responsible Party | Effectiveness Criteria | Timing |
|--|--|--|---|---|---|--|
| Water Supply | | | | | | |
| Crop idling, groundwater substitution, stored reservoir water, stored groundwater purchase | Change in the rate and timing of Delta inflows and the amount and timing of diversions at the SWP and CVP pumps lowering South Delta water levels. | Actions, such as installation of temporary pumps or dredging, would reduce effects to South Delta water users. The EWA agencies will pay their share for additional actions needed to increase South Delta water levels to the Baseline Condition. | Document diverter complaints and EWA agency contributions to the resolutions. | Reclamation/DWR | Feedback from Diversers in the South Delta indicating that they are not experiencing water levels of concern. | During export pumping of transferred water (typically July through September). |
| Crop idling, groundwater substitution | Decreases in return flows to agricultural drainages used by others, thereby reducing water quantity to agriculture and other water users. | Willing sellers will be required to maintain water levels in drainage systems that do not reduce supplies to downstream users. | Monitoring of water level in district conveyance facilities. | Willing seller | No documented complaints by downstream diversers. | Irrigation season. |
| Groundwater | | | | | | |
| Groundwater substitution | Decrease in water levels in neighboring surface water channels. | Well Review to avoid potential effect. | Well-specific data including location of production and monitoring wells, driller's log giving geology and well construction details, and additional information that characterizes the hydrogeologic environment near the well. | Willing seller to submit well review information; Review Team (Reclamation/DWR hydrologists) to approve well for transfer. | Willing seller provides sufficient information for the Review Team to minimize the risk of substantial changes in surface water flow. | No less than 1 month prior to transfer. |
| Groundwater substitution | Reduction in groundwater levels in excess of seasonal variations. | Pre-Purchase Groundwater Evaluation to avoid potential effect. | <p>If groundwater levels are high compared to historical fluctuations, regional groundwater level data must be submitted.</p> <p>If groundwater levels are within an intermediate or lower range of historical fluctuations, a pre-purchase evaluation must be submitted and include the following: (1) groundwater level fluctuations for existing</p> | Willing seller to develop pre-purchase groundwater evaluation in cooperation with Review Team (Reclamation/DWR hydrologists). | Willing seller provides sufficient information to Review Team to demonstrate transfer would not cause a regional impact. | No less than 1 month prior to transfer. |

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| Action | Potential Effect | Mitigation Measure | Monitoring/Reporting Action | Responsible Party | Effectiveness Criteria | Timing |
|--------------------------|---|--------------------|--|--|--|---|
| | | | <p>monitoring wells; (2) surface water imports and applied water recharge; (3) recent and historical hydrology; (4) expected groundwater extraction activities; and (5) areas of special concern.</p> <p>If selling agency overlies an overdrafted subbasin, groundwater management strategies must be in place to manage the groundwater resources. A formal determination that transfer would not contribute to long-term overdraft is required; this may include the pre-purchase evaluation described above.</p> | | | |
| Groundwater substitution | Reduction in groundwater levels in excess of seasonal variations. | Monitoring Program | Monitoring plan must include the following components: (1) a network of monitoring wells to characterize groundwater levels before, during, and after transfer; (2) periodic flow meter readings at the extraction pumps; (3) periodic measurements of groundwater levels; (4) groundwater quality testing; (5) means to detect land subsidence or a credible analysis demonstrating that subsidence is unlikely; and (6) a coordinated means to collect data and cooperate with other monitoring efforts in the area. | Willing seller to develop monitoring program in cooperation with Review Team (Reclamation/DWR hydrologists). During the transfer, Review Team to verify that willing seller is following monitoring program. | Monitoring is done on proposed schedule; able to produce monitoring records to Review Team during audit. | Submittal of monitoring plans no less than 1 month prior to transfer, monitoring continues throughout transfer, and submittal of monitoring records to Review Team on completion of monitoring program. |
| Groundwater substitution | Reduction in groundwater levels in excess of seasonal variations. | Mitigation Program | Mitigation plan must include the following components: (1) procedure for the seller to receive reports of potential impacts and to report that information to the Review Team; (2) procedure for investigating reported effect; (3) development of mitigation options, in cooperation with the affected party; (4) assurances that adequate financial | Willing seller to develop mitigation plan in cooperation with Review Team (Reclamation/DWR hydrologists). Willing seller to mitigate any significant environmental impact; Reclamation/DWR to determine that mitigation is appropriate | No substantiated claims of an unmitigated environmental impact. | Submittal of mitigation plans no less than 1 month prior to transfer; mitigation conducted in response to verified impact. |

Section 5
Mitigation Monitoring and Reporting Program

| Action | Potential Effect | Mitigation Measure | Monitoring/Reporting Action | Responsible Party | Effectiveness Criteria | Timing |
|------------------------------|--|--|--|--|---|--------------------|
| | | | resources are available to cover reasonably anticipated mitigation needs; and (5) commitment to avoid or mitigate such effects during future transfers to the EWA. | and effective. | | |
| Geology and Soils | | | | | | |
| Crop idling | Increase in soil erosion from idled fields. | Dust Suppression Plan | Dust suppression plan must include a combination of measures that would reduce opacity to less than 20 percent. Such measures could include crop shifting, increasing surface roughness, planting wind breaks, leaving crop residue on the fields from previous year's harvest, or restricting motorized vehicles on the idled land. | Willing seller in coordination with Reclamation/DWR | Approval by the San Joaquin Valley Air Pollution Control District (APCD); no public complaints during transfer to the APCD. | Prior to transfer |
| Air Quality | | | | | | |
| Crop idling | Increase of fugitive dust and PM10 emissions from idled fields. | Dust Suppression Plan | Dust suppression plan must include a combination of measures that would reduce opacity to less than 20 percent. Such measures could include crop shifting, increasing surface roughness, planting wind breaks, leaving crop residue on the fields from previous year's harvest, or restricting motorized vehicles on the idled land. | Willing seller in coordination with Reclamation/DWR | Approval by the San Joaquin Valley Air Pollution Control District (APCD); no public complaints during transfer to the APCD. | Prior to transfer |
| Groundwater substitution | Increase of emissions from use of groundwater pumps. | The use of alternative power including electrical pumps or the requirement that the willing seller to seek offsets for project-related emissions. | Data submitted must include types of pumps to be used for transfer, total emissions anticipated from groundwater substitution, and plan for measures to reduce/offset the emissions. | Willing seller to provide pump and emissions data, as well as plan for mitigation; Reclamation/DWR to approve. | Mitigation plan reduces project-related emissions to a negligible amount. | Prior to transfer |
| Agricultural Land Use | | | | | | |
| Crop idling | Temporary decrease in the amount of land categorized as prime, statewide importance, or unique farmland. | Not idling a particular parcel of land if such idling would result in a lower classification of land as defined under the FMMP and Williamson Act. | Data submitted must include land classifications of cropland and recent idling history of specific parcels. | Reclamation and DWR to gather data regarding land classifications; willing seller to supply data on recent idling history. | No lowering of classification if land is idled for transfer. | Prior to transfer. |
| Power | | | | | | |

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| Action | Potential Effect | Mitigation Measure | Monitoring/Reporting Action | Responsible Party | Effectiveness Criteria | Timing |
|--|---|--|---|-----------------------------------|---|--|
| Crop idling, groundwater substitution, stored reservoir water, stored groundwater purchase, predelivery, source shifting | Shift in pumping times to periods of higher electricity costs. | During times when acquisition of water for EWA would result in the value of power generated later in the summer being less than under the Baseline Condition, the EWA Program is responsible for covering those additional costs, as outlined in the CALFED ROD. | A financial plan shall address: (1) increased Project operating costs, both power and ancillary costs; (2) crediting the EWA for reduced operating costs; (3) crediting the EWA for power benefits; and (4) revenues realized from the sale of EWA assets. Additionally, the EWA agencies will develop alternatives for funding power and other incidental costs, if such costs interfere with the successful operation of the EWA. | Reclamation/DWR | Projects have no additional pumping costs because of EWA transfers. | Financial plan outlined prior to transfer; repayment (if necessary) during and after transfer. |
| Cultural Resources | | | | | | |
| Stored reservoir water, source shifting | Change in water surface elevation exposing cultural resources to increased cycles of inundation, drawdown, and erosion. | Consult with the Forest Service and State Historic Preservation Officer on potential effects and appropriate mitigation measures. | Programmatic agreement. | Reclamation | Concurrence with U.S. Forest Service and State Historic Preservation Officer (SHPO). | After transfer |
| | | Inventory and evaluation identifying cultural resources. | Determination of eligibility and effect. | Willing seller | Concurrence with U.S. Forest Service and SHPO. | After transfer |
| | | Historic property treatment. | Research historical records, previous cultural resources reports and data, and the detailed recording and/or excavation for data recovery. | Reclamation and/or willing seller | Cultural resource preservation. | After transfer |
| | | Mitigation for impacts to resources covered under U.S. Forest Service's California Native American policy (if required). | Notify potentially affected Federally recognized Indian tribes and issue follow up letters identifying potential impacts and appropriate mitigation measures. | Reclamation | Confirmation by U.S. Forest Service. | After transfer |
| Recreation Resources | | | | | | |
| Source shifting | Change in reservoir water surface elevation affecting fishing and recreational opportunities. | For Lake Perris, EWA agencies with input from officials at Lake Perris will set a limitation on the amount of drawdown. For Castaic Lake, input from recreation officials will be considered. | Forecast end of season reservoir levels. | DWR and recreation officials. | Agreed upon amount of drawdown does not cause an impact on recreation as defined in Chapter 14. | Prior to transfer. |

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