

CHAPTER 6

MITIGATION, MONITORING AND REPORTING PROGRAM/ ENVIRONMENTAL COMMITMENTS PLAN

6.1 INTRODUCTION

CEQA (Public Resources Code, Section 21081.6) requires that when a CEQA lead agency makes a finding that changes, or alterations have been required in or incorporated into the project to mitigate or avoid the significant effects on the environment, and the CEQA lead agency approves the project, then the CEQA lead agency also must adopt a mitigation monitoring and reporting program for the project. This program must ensure compliance with mitigation measures during project implementation. 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, CEQ 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 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)).

YCWA is the lead agency and project proponent for CEQA compliance purposes and Reclamation is the lead agency and project proponent for NEPA compliance purposes. For the Proposed Project/Action (i.e., Yuba Accord Alternative), YCWA would be responsible for implementing the actions and commitments that are identified in the MMRP/ECP for the Yuba Region. Because DWR is a CEQA responsible agency and would be a participant in the first phase (see Final EIR/EIS, Chapter 3) of implementing the Yuba Accord Alternative, DWR would be responsible for implementing the actions and commitments described in the MMRP/ECP that relate to the EWA Program (or an equivalent program) and SWP operations. If Reclamation decides to participate in the second phase (see Final EIR/EIS, Chapter 3) of the Yuba Accord Alternative, then Reclamation would be responsible for implementing measures related to CVP operations.

6.1.1 PURPOSE AND OBJECTIVES OF THE MITIGATION MONITORING AND REPORTING PROGRAM/ENVIRONMENTAL COMMITMENTS PLAN

YCWA, Reclamation and DWR developed this chapter to guide mitigation compliance before, during and after implementation of the Proposed Project/Action, as required by CEQA and NEPA. Project approvals include environmental protection and mitigation measures to minimize or eliminate potentially adverse impacts to the project study area. These measures are described in the Draft EIR/EIS and in Chapter 5 of the Final EIR/EIS.

If the Proposed Project/Action is approved, then compliance monitoring and evaluation will be performed by YCWA, Reclamation or DWR, as indicated in the description of each measure. The objectives of this MMRP/ECP are to provide the following:

- ❑ Compliance requirements for the environmental protection and mitigation measures specified in the Draft EIR/EIS and Chapter 5 of the Final EIR/EIS;
- ❑ A reference document containing the environmental protection and mitigation measures for the Proposed Project/ Action;
- ❑ A list of lead agency and responsible agency contacts; and
- ❑ The timing of mitigation measure implementation.

6.1.2 PROJECT LOCATION

The project study area includes those regions that might benefit from or potentially be affected by implementation of the Proposed Project/ Action, which would involve changes in Yuba Project operations and water management of the lower Yuba River. As described in the Draft EIR/EIS, the project study area includes: (1) Yuba Project facilities and the lower Yuba River; (2) the YCWA Member Units and their service areas; (3) local groundwater basins; (4) CVP and SWP storage reservoirs and rivers downstream of these reservoirs; and (5) the Delta. Additionally, San Luis Reservoir and areas served by downstream CVP/SWP contractors (the Export Service Area) are considered. Therefore, the geographic areas influenced by implementation of the Proposed Project/ Action are described and evaluated in the following four primary regions:

- ❑ Yuba Region
- ❑ CVP/SWP Upstream of the Delta Region
- ❑ Delta Region
- ❑ Export Service Area

YCWA would release water from New Bullards Bar Reservoir and through Englebright Reservoir into the lower Yuba River to: (1) implement the flow schedules under the Yuba Accord Alternative; and (2) provide Yuba Accord transfer water to Reclamation and DWR. Reclamation and DWR would receive and convey Yuba Accord transfer water from YCWA in the Sacramento River and the Delta, and potentially may store a portion of this water in San Luis Reservoir before delivering it to the federal and state water contractors in the Export Service Area (**Figure 6-1**).

6.1.3 PROJECT DESCRIPTION

The Yuba Accord Alternative is the result of over two years of work and discussions by Yuba River stakeholders to resolve the controversies regarding RD-1644. The goal of the negotiations and discussions was to find a solution to the challenges of competing interests. The Yuba Accord Alternative includes three separate but interrelated proposed agreements that would protect and enhance fisheries resources in the lower Yuba River, increase local supply reliability, and provide Reclamation and DWR with increased operational flexibility for protection of Delta fisheries resources through the EWA Program and provision of supplemental dry-year water supplies to federal and state water contractors. These proposed agreements, which are in Appendix B and discussed in detail in Chapter 3 of the Draft EIR/EIS, are:



Figure 6-1. Project Study Area

- ❑ *Principles of Agreement for Proposed Lower Yuba River Fisheries Agreement* (Fisheries Agreement);
- ❑ *Principles of Agreement for Proposed Conjunctive Use Agreements* (Conjunctive Use Agreements); and
- ❑ *Principles of Agreement for Proposed Long-term Transfer Agreement* (Water Purchase Agreement).

YCWA, SYRCL, TU, TBI, FOR, CDFG, USFWS, and NMFS developed the Fisheries Agreement. The Fisheries Agreement is the cornerstone of the Yuba Accord Alternative. The Fisheries Agreement contains proposed new instream flow schedules for the lower Yuba River that are intended to increase protection of the river's fisheries resources. In addition to the best available science and data, the interests of the participating state, federal, and local fisheries biologists, fisheries advocates, and policy representatives were considered during development of the Yuba Accord Alternative. A fundamental precept of the Yuba Accord Alternative is the provision of instream flows during specified periods of the year that are higher than the interim instream-flow requirements of RD-1644. Under the Yuba Accord Alternative, YCWA also proposes to execute and implement Conjunctive Use Agreements, which would establish a conjunctive use program that would provide for comprehensive management of the surface water and groundwater supplies within Yuba County, in coordination with the local irrigation districts and mutual water companies that YCWA serves in the county. Under the Water Purchase Agreement, Reclamation and DWR would purchase water from YCWA to improve water supply reliability for the CVP and SWP and to contribute to the security of a long-term EWA Program or a program equivalent to the EWA. Some of the water obtained by the CVP and SWP under the Water Purchase Agreement may be used for fish and wildlife purposes, which may include meeting refuge water supply commitments and helping to achieve Delta outflow requirements.

The analysis in the Draft EIR/EIS for the Yuba Accord Alternative is based on the concept that the Yuba Accord water transfer amounts would be shared equally between the CVP and SWP, and thereafter would be divided among the respective projects' contractors. It is expected that contractual arrangement between the CVP and SWP (the Tier 2 Agreement) would recognize the potential that one project could receive more than 50 percent of the Yuba Accord transfer water, up to 100 percent of the total amount of such water, in a particular year, depending on the relative allocations of each project's supplies to its contractors in that year, and on the willingness of the other project to relinquish some or all of its share of Yuba Accord transfer water in that year.

During the course of the preparation of the Draft EIR/EIS for the Proposed Yuba Accord, some circumstances related to water supplies and water delivery in Northern California have changed, and some of those changes may have implications for the Yuba Accord Alternative. These changed circumstances are discussed in Chapter 3 of the Final EIR/EIS.

6.1.4 SUMMARY OF PROJECT PURPOSE, NEED, AND OBJECTIVES

The purpose of the Yuba Accord Alternative is to resolve instream flow issues in a way that protects and enhances lower Yuba River fisheries, increases local water supply reliability, and protects Delta resources. Additionally, YCWA has a goal of providing revenues for local flood control and water supply projects. As a state agency party to the Yuba Accord Alternative,

DWR also would be involved in the purchase of Yuba Project water for use in the EWA Program (or an equivalent program), and for SWP state water contractor supplies. If Reclamation decides to participate, it would be involved with DWR in the purchase of Yuba Accord transfer for CVP federal water contractor supplies. Meeting the objectives of protecting and enhancing the Yuba River fisheries also is intended to resolve all or almost all of the pending litigation challenging RD-1644.

Various signatories and participants in the Yuba Accord Alternative, as a consequence of their various authorities, may prioritize the above objectives differently. For example, Reclamation and DWR are seeking to enable a long-term acquisition of water for the Delta, for use in the EWA Program or an equivalent program, and to improve water supply reliability for state and federal water contractors. NMFS, USFWS and CDFG are seeking to protect and enhance lower Yuba River fisheries resources and aquatic habitat. YCWA and its participating Member Units are seeking to: (1) protect local water supply reliability; (2) protect the Yuba River fisheries in a way that will settle the litigation challenging RD-1644; and (3) provide a revenue stream to support needed flood control and water-resource improvements in Yuba County.

6.1.5 RESPONSIBLE PARTIES

YCWA, Reclamation, and DWR are responsible for implementation of the environmental commitments and mitigation measures identified in this MMRP/ECP. YCWA, as the CEQA lead agency, would be primarily responsible for MMRP/ECP elements that apply to the Yuba Region. DWR, as a CEQA responsible agency for the Proposed Yuba Accord, would be responsible for the MMRP/ECP elements that relate to the EWA Program and SWP operations. If Reclamation decides to participate in the Yuba Accord, then Reclamation would be responsible for the MMRP/ECP elements that relate to CVP operations.

6.2 ENVIRONMENTAL PROTECTION AND MITIGATION MEASURES

Environmental commitments are measures or practices adopted by a project proponent to reduce or avoid adverse effects that could result from project operations. The following sections describe the environmental commitments, including impact avoidance or mitigation measures that will be implemented by YCWA, Reclamation or DWR to ensure no significant impacts result from the Proposed Yuba Accord.

The lead and responsible agencies have adopted these measures and incorporated them as part of the Proposed Project/Action (i.e., Yuba Accord Alternative) in compliance with applicable federal, state, and local policies or regulations that apply to the project activities. These measures will ensure that the Yuba Accord Alternative will minimize or avoid potentially significant environmental impacts, to the extent feasible. These measures include YCWA monitoring commitments that were developed during the preliminary planning and design phases of the Yuba Accord, and mitigation and monitoring commitments identified by Reclamation and DWR in the Final EWA EIS/EIR (Reclamation *et al.* 2004).

The CEQA Environmental Checklist identifies the conditions under which a project's evaluation may rely upon an earlier analysis of potential impacts. An earlier analysis of a project may be relied upon if the potential impacts were within the scope of the previous analysis, and the impacts were adequately addressed.

Reclamation, DWR, USFWS, NMFS and CDFG (Reclamation *et al.* 2003) completed an environmental analysis of the EWA Program, including characterization of probable water transfer volumes from YCWA. EWA agencies acquire and manage assets to maximize benefits to at-risk native fish species, but asset management can change river flows, Delta outflows and the amount of seasonal wetlands within agricultural areas. The manner in which the EWA agencies apply, acquire, and manage assets will be monitored to ensure that EWA fisheries benefit objectives are met while potential adverse impacts to other species and their habitats, because of EWA actions, are minimized or avoided. To address these considerations, compliance and effectiveness monitoring components (Mitigation Plan) were identified in the Final EWA EIS/EIR (Reclamation *et al.* 2004). Data associated with EWA monitoring efforts are 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. Because the EWA Mitigation Plan identified several environmental protection and mitigation measures related to the YCWA component of EWA acquisitions (e.g., the Yuba Accord Alternative), these EWA measures also have been incorporated into this MMRP/ECP, and are discussed below.

A summary of the proposed environmental protection and mitigation measures described in this MMRP/ECP are provided in **Table 6-1**.

The mitigation measures identified in Table 6-1 and described in the Draft EIR/EIS are designed to reduce impacts to less-than-significant levels. YCWA, Reclamation and DWR also participate in other activities and programs that serve to protect or enhance the natural environment within their respective project and service areas. These activities include involvement in lower Yuba River flow monitoring activities and annual adult salmonid escapement surveys.

In addition to the activities in the Yuba Region, the Yuba Accord Alternative would have the ability to allocate more water for the Delta and for CVP wildlife refuges. These environmental commitments would not be mitigation for potential impacts resulting from the Yuba Accord Alternative, but they would support fisheries management activities in the project study area.

In the Draft EIR/EIS, the analyses showed that implementation of the Yuba Accord Alternative would have the potential to cause significant environmental impacts on some resources. Additionally, some of the commentors that provided comments on the Draft EIR/EIS also requested additional information about the protective measures built into the project to minimize or avoid these impacts. The mitigation measures and environmental commitments for each potentially affected resource are described here.

Table 6-1. Summary of Mitigation Measures and Environmental Commitments Incorporated into the Proposed Project/Action (Yuba Accord Alternative)

Mitigation Measures/ Environmental Commitments	Implementing Agency	Timing
GROUNDWATER RESOURCES		
Mitigation Measure 6-1. A Groundwater Monitoring and Reporting Program will be implemented to minimize and/or avoid potential impacts to local groundwater users in the Yuba Region	YCWA, DWR and the Member Units	Before, during and after groundwater transfer
Mitigation Measure 6-2: A Third-Party Impacts Action Plan will be implemented to minimize and/or avoid potential impacts to local groundwater users in the Yuba Region	YCWA and the Member Units	Before, during and after groundwater transfer
WATER QUALITY		
Mitigation Measure 9-1. Carriage water will be used to maintain salinity and chloride concentrations in the Delta	Reclamation ¹ and DWR	During transfer
Mitigation Measure 9-2. YCWA operational flexibility will be utilized to ensure that refilling of the reservoir will not adversely affect water quality in the Delta	YCWA	Continuous, year-round
FISHERIES AND AQUATIC RESOURCES		
Environmental Commitment 10-1: The RMT would oversee various environmental actions for the lower Yuba River, including operation of water temperature devices, the planning of fisheries monitoring and studies, and habitat enhancement measures	YCWA, CDFG, NMFS, USFWS, Reclamation, and SYRCL (Collectively the RMT)	Continuous and year-round over the duration of the project
<ul style="list-style-type: none"> • RMT Monitoring Measure 1: VAKI RiverWatcher Fish Monitoring 	YCWA/RMT	Continuous, year-round
<ul style="list-style-type: none"> • RMT Monitoring Measure 2: Proposed Lower Yuba River Chinook Salmon Escapement Survey 	YCWA/RMT	Annually from October through December
<ul style="list-style-type: none"> • RMT Monitoring Measure 3: Develop in-river salmonid production indices by monitoring the downstream movement of juvenile salmonids in the lower Yuba River using rotary screw traps 	YCWA/RMT	Continuous, year-round
Environmental Commitment 10-2: EWA mitigation plan for protecting Delta fisheries resources - continuation of actions identified by the Delta Smelt Working Group	Reclamation ¹ and DWR	Continuous, year-round
Environmental Commitment 10-3: EWA mitigation plan for protecting Delta fisheries resources - continuation of actions identified by the Water Operations Management Team	Reclamation ¹ and DWR	Continuous, year-round
AIR QUALITY		
Mitigation Measure 15-1. Provide certification documentation to Reclamation and DWR indication that groundwater pumping sources would not increase emissions, to ensure that no net impacts to air quality would occur.	YCWA and approved by Reclamation ¹ and DWR	Annually, if groundwater substitution operations occur
¹ To become effective as part of the second phase of the Yuba Accord Alternative (see Chapter 3).		

6.2.1 GROUNDWATER RESOURCES

Mitigation Measure 6-1: A Groundwater Monitoring and Reporting Program will be implemented to minimize and/or avoid potential impacts to local groundwater users in the Yuba Region

Action/Commitment: For past groundwater substitution water transfers, YCWA and DWR developed a Groundwater Transfer Monitoring and Reporting Program specific to Yuba County. YCWA has also developed a GMP, which was adopted in March 2005 pursuant to Water Code Sections 10750 *et seq.* Since 2005, YCWA has constructed eight additional groundwater monitoring wells for this program (see DWR, Memorandum Report, "Monitoring Well Construction Technical Assistance," April 2007). Information gathered from the activities specified in the GMP, along with the activities described in this exhibit, will be used to assess effects of groundwater pumping on groundwater resources in the Yuba Region. YCWA will continue to work with DWR and the Member Units to identify and resolve any new groundwater monitoring issues.

Responsible Parties: YCWA, with assistance from DWR and the Member Units

Location: Yuba Region (North Yuba and South Yuba basins)

Timing: Before, during and after groundwater transfers

Monitoring: Groundwater monitoring activities in the Yuba Region would involve:

(1) The water levels in selected production wells geographically dispersed throughout each Member Unit participating in the groundwater substitution program will be measured by the Member Unit before the initial pumping for each year during which a groundwater substitution transfer will take place. Selection of these wells will be by mutual agreement by DWR and Yuba, in consultation with the Member Unit. Upon termination of pumping for the year, the water levels will be measured by the Member Units, and such measurements will continue on a monthly basis until water levels have recovered to the pre-pumping levels, or have stabilized. In no case will water-level measurements be required following spring high water levels in the year following the year of the groundwater substitution pumping. The Member Units will provide the water-level readings to YCWA within 15 days of each reading.

(2) To supplement the GMP-specified monitoring program, water levels in each monitoring well in the YCWA network will be measured at least every two months by YCWA in each year

during which a groundwater substitution transfer is to take place, commencing no later than April. Upon termination of pumping, the monitoring well water levels will be measured, and such measurements will continue on a monthly basis until water levels have recovered to the pre-pumping levels, or have stabilized. In no case will water-level measurements be required following spring high water levels in the year following the year of the groundwater substitution pumping. DWR and YCWA will cooperate in obtaining these measurements.

(3) Readings of flow meters on the discharges of the wells will be recorded every month during the pumping period by Member Units for each production well. In addition, electric meter readings and fuel consumption for diesel pumps will be recorded by the Member Units, and made available to YCWA upon request. The quantities of water pumped between successive readings will be calculated by Member Units and reported to YCWA.

(4) Electrical Conductivity (EC) will be measured for water pumped from selected production wells at the initiation of pumping (or as soon thereafter as practicable), two months after the initial EC measurements and at the termination of pumping.

(5) For selected production wells (to be identified before the monitoring plan is finalized) near YCWA monitoring wells, drawdown analyses (of distance and time) will be completed, and comparisons made to monitoring well water levels.

Reporting Requirements: All monitoring data will be reported on a semi-monthly basis, and in an annual final summary report prepared by YCWA that will evaluate the impacts of the groundwater substitution pumping transfer program for that year. The final report will include water-level contour maps for the groundwater basin showing initial water levels and final, recovered water levels.

Description of Activities: See above for a description of the groundwater monitoring activities that would be implemented when groundwater substitution transfers are occurring.

Using data obtained from the monitoring activities, YCWA will determine the amount of water that can be pumped within the safe yield of the basin without contributing to long-term overdraft, and without resulting in any significant unmitigated third-party impacts to other groundwater users in the basin. Section 1 of Exhibit 3 to the Water Purchase Agreement (see Appendix M of this Final EIR/EIS) describes the monitoring plan that will be used to obtain information from which the determination will be made of the condition of the groundwater basin in the spring of the year during which groundwater

substitution pumping is planned. Based on this condition, YCWA will determine the expected response of the groundwater basin to the proposed pumping for that year and the resulting condition of the basin at the conclusion of the pumping. Determination of the expected condition at the conclusion of the pumping will be made by examining the historic response of the basin during previous years when pumping occurred and by examining the recovery of the basin during pumping years and successive years, and by comparing these basin responses with the planned pumping. Analysis of the historical responses of the basin to pumping will be used to develop empirical relationships between pumping and basin drawdown and recovery. These empirically derived relationships will be the formulas that will be used to determine basin response to the proposed pumping.

Effectiveness Criteria:

The determination of the groundwater basin response to the proposed pumping will result in an estimated basin condition at the end of pumping and an estimated condition for the spring of the next year. This estimated condition will be compared to historical groundwater levels in the basin. In 1991, YCWA and the Member Units completed a groundwater substitution transfer to provide water to other parts of California under the Governor's Emergency Drought Water Bank in response to a severe statewide drought. The groundwater levels that occurred in the fall of 1991 at the end of pumping did not result in any overdraft of the groundwater basin or any significant unmitigated third-party impacts. Groundwater levels had been lower than these levels during the 1980's, but the extent of effects of these lower levels on groundwater users in the basin is not well known. Therefore, the fall 1991 groundwater levels will be used for comparison with the estimated condition of the basin that will result from the proposed groundwater pumping under the Yuba Accord Alternative.

If the estimated levels are above the fall 1991 levels, then significant unmitigated third-party impacts will not be expected. If the estimated levels are below the fall 1991 levels, then further examination of potential impacts and consultation with the Member Units and the GMP Water Advisory Group (discussed below) will be required.

The GMP Water Advisory Group is a group that was formed under the GMP to provide input and guidance on groundwater issues. The GMP Water Advisory Group comprises representatives from local groundwater users, including municipal water purveyors, Member Units, reclamation districts and others. Groundwater substitution pumping that would result in levels near the fall 1991 levels will occur only if the Member Units and the GMP Water Advisory Group agree to allow such pumping. Even if the determination is that estimated levels

resulting from proposed pumping will be above the fall 1991 levels, the Member Units still will be consulted, and each Member Unit must individually approve the proposed pumping in its area or such pumping will not occur. If the amount of proposed pumping that will not cause fall groundwater levels to drop below 1991 levels cannot be confirmed using the procedures described above, then a lower amount of pumping that satisfies the conditions of this section will be determined using these procedures.

The monitoring requirements and the associated adaptive management strategy discussed above together will reduce any potential unforeseeable impacts occurring as a result of transfers to less than significant levels. Under the Yuba Accord Alternative, YCWA also would implement the adaptive management program for future planning of transfers based on the changing conditions of the basin during previous transfers. If necessary, the adaptive management program would change the volumes and locations of future groundwater-substitution pumping to avoid adverse impacts to the basin and other groundwater users in the basin.

Mitigation Measure 6-2: A Third-Party Impacts Action Plan will be implemented to minimize and/or avoid potential impacts to local groundwater users in the Yuba Region

Action/Commitment:

The purpose of this Third-Party Impacts Action Plan is to describe actions that will be undertaken by YCWA and the Member Units to respond to impacts to third parties that occur because of groundwater substitution pumping for transfers under the Water Purchase Agreement. Third parties include local groundwater users that could be affected by fluctuations in groundwater levels because of the pumping of such groundwater substitution water. YCWA and the Member Units agree that prompt responses to and mitigation of potential impacts to third parties are an important requirement for YCWA's present and future groundwater substitution transfers.

The action plan includes a series of steps that will be taken to ensure that the groundwater substitution component of the Water Purchase Agreement does not cause significant, unmitigated impacts to third parties. Under this action plan, groundwater substitution pumping must not produce significant unmitigated impacts on third parties, impacts must be identified and mitigated as quickly as possible, and there must be ongoing, open communications with affected third parties. Because not all potential impacts can be known in advance, this plan provides a process for responding to concerns expressed by local groundwater users who believe that their water-production facilities are being or will be impacted by groundwater

substitution pumping under the Water Purchase Agreement that is part of the Yuba Accord Alternative.

Responsible Parties: YCWA and the Member Units

As a contractual condition of a Member Unit participating in the groundwater substitution component of the Water Purchase Agreement, the Member Unit will identify a contact person or persons who will be responsible for initially responding to a notification of a potential third-party impact, and take the other action specified in this section. The contact person for a Member Unit will be the person designated by the Member Unit.

The responsibilities of YCWA will be carried out by the General Manager, or by a person designated by the General Manager. The contact persons for the Member Units will also serve on a Yuba Groundwater Substitution Program Advisory Group ("Advisory Group") for either the area north of the Yuba River or the area south of the Yuba River.

Location: Yuba Region

Timing: Before, during and after groundwater substitution transfer

Monitoring: Upon either YCWA or the Member Unit receiving notification of a potential third-party impact, YCWA or the Member Unit will immediately notify the other party of the nature of the potential impact. The Member Unit will promptly (within one day) contact the third party and obtain all available information regarding the nature and extent of the potential impact, and provide that information to YCWA. The Member Unit also will regularly update YCWA on the status of the Member Unit's response.

If the third party is not within the boundaries of any Member Unit of YCWA, then YCWA will either: (a) determine if it is evident that the third party is in close proximity to the groundwater-production facilities within a Member Unit that are involved in the groundwater substitution program, and designate the Member Unit or Member Units responsible for responding to the potential impact; or (b) consult with the Advisory Group concerning which Member Unit or Member Units should be designated for responding to the potential impact.

Reporting Requirements: No specific reporting requirements

Description of Activities: It is the intention of this action plan that: (a) any third-party impact that is reasonably likely to have been caused by implementation of the groundwater substitution program will be promptly and substantially mitigated; (b) as to any third-party

impact that is not reasonably likely to have been caused by implementation of the groundwater substitution program, the third party will be provided information to reasonably demonstrate the reasons that there were no impacts; and (c) YCWA, the Member Units and the Advisory Group will be involved in the implementation of the action plan.

After the third party has been contacted and the relevant information regarding the potential impact has been received, the Member Unit will develop an approach (subject to approval by YCWA) to: (a) determine whether the third party has actually been impacted by groundwater pumping by the Member Unit, and, if so; (b) mitigate for the impact. YCWA will be available to provide assistance to the Member Unit in developing the foregoing approach. YCWA and the Member Unit will consult with the applicable Advisory Group in developing the approach.

Actions that will be taken to mitigate an impact include, but are not limited to, deepening of the impacted third party's well or lowering of pump bowls, cessation of pumping in the area of the impacted well, and providing a temporary or permanent alternative water supply to the third party.

Effectiveness Criteria: Groundwater transfers should not result in unmitigated third party impacts or cause overdraft.

YCWA will resolve any dispute concerning implementation of this action plan, including which Member Unit will be responsible for mitigating a potential impact, whether it is reasonably likely that there was a third-party impact, and the measures to be taken by the Member Unit to mitigate the impact. If a Member Unit fails to carry out its responsibilities under this action plan, then YCWA will be authorized (but not required) to perform the responsibilities of the Member Unit and recover its reasonable costs in doing so from the Member Unit, including deducting these costs from payments due the Member Unit for the groundwater substitution transfer. YCWA will consult with the applicable Advisory Group in carrying out its responsibilities described in Exhibit C to the Water Purchase Agreement (see Appendix M of this Final EIR/EIS).

6.2.2 SURFACE WATER QUALITY

Pursuant to the provisions originally identified for the EWA Program (Reclamation *et al.* 2003), the following protective measures have been incorporated into the project to continue with standard operating procedures and to improve the water quality to users in and south of the Delta.

Mitigation Measure 9-1: Carriage water will be used to maintain salinity and chloride concentrations in the Delta

Action/Commitment:	Carriage water includes water supplemental to transferable water volumes that provides for any incidental loss of transferable water volumes or increases Delta outflows in association with water transfer events, for the purpose of maintaining or enhancing water quality. As an example, if an entity like the EWA Program (or an equivalent program), wanted to pump 80 AF of water from the Delta, then the entity would have to buy 100 AF of water. The 100 AF of water would be provided as inflow to the Delta and 20 AF of this water would be used to increase Delta outflow to ensure that chloride concentrations would not increase due to the 80 AF of increased pumping from the Delta.
Responsible Parties:	Reclamation and DWR
Location:	Delta Region
Timing:	During transfer
Monitoring:	In the last two years, Reclamation and DWR have developed a method of using DSM2 on a real time basis to estimate the amount of carriage water needed in that year to pump EWA water (or any other water supply including SWP water users, the CVP, and other entities purchasing water upstream from the Delta) without causing an increase in chloride concentration in the Delta.
Reporting Requirements:	Yearly
Description of Activities:	Reclamation's and DWR's work over the past few years indicates that the carriage water percentage required to maintain Delta water quality can range from 0 to 25 percent, or more. Given these newly developed techniques, the EWA can purchase water upstream from the Delta, but for every acre-foot purchased, 0 to 25 percent or more of that acre-foot must be dedicated to increase Delta outflow. The remainder may be pumped at the CVP/SWP pumping plants without causing any increase in chloride concentrations within the Delta due to the EWA Program.
Effectiveness Criteria:	Potential increases in concentrations in the Delta due to increased SWP and CVP pumping of EWA water during the summer months would not occur because of the utilization of carriage water to ensure no significant changes in Delta water quality during the periods of increased pumping.

Mitigation Measure 9-2: YCWA operational flexibility will be utilized to ensure that refilling of the reservoir will not adversely affect water quality in the Delta and export service areas south of the Delta

Action/Commitment:	Refill conditions in New Bullards Bar Reservoir generally occur during February and March. During this time, YCWA has the operational flexibility to ensure that refilling of the reservoir will not adversely affect water quality in a manner that could potentially impact beneficial uses in the Delta and export service areas south of the Delta.
Responsible Parties:	YCWA
Location:	New Bullards Bar Reservoir and the Delta Region
Timing:	Continuously, year-round over the duration of the project
Monitoring:	If it is anticipated that reductions in lower Yuba River flow during the refill period would impact water quality conditions in the Delta, then YCWA would apply a water accounting procedure to determine the volume of water that would have been stored in the reservoir during the winter refill period. The amount of water foregone will be accounted for and repaid by YCWA via the refill accounting mechanisms described in Appendix E2, Exhibit 5.
Reporting Requirements:	No specific reporting requirements
Description of Activities:	The refilling of New Bullards Bar Reservoir would be based on conditions beginning in January of the current water year.
Effectiveness Criteria:	Concentration levels of any state or federal criteria pollutants do not increase due to implementation of the Yuba Accord Alternative.

6.2.3 FISHERIES AND AQUATIC RESOURCES

Environmental Commitment 10-1: The RMT would oversee various environmental actions for the lower Yuba River, including operation of water temperature devices, the planning of fisheries monitoring and studies, and habitat enhancement measures

Action/Commitment:	The Yuba Accord would provide for the continuation of the RMT and the River Management Fund (RMF). The RMT is composed of representatives from YCWA, CDFG, NMFS, USFWS, Reclamation, and SYRCL, and is charged with providing a forum for consensus-based decisions and actions for management of the lower Yuba River. Primary fisheries resources of concern for monitoring and habitat enhancement in the Yuba River include Central Valley steelhead, spring-run Chinook salmon, fall run Chinook salmon, American shad, and Southern DPS of North American green sturgeon.
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Upon implementation of the Yuba Accord the RMT would oversee various environmental actions for the lower Yuba River, including consulting on various operational decisions, operation of water temperature gages, the planning of fisheries monitoring and studies, and habitat enhancement measures. The specific duties of the RMT are further specified in Sections 5.2 and 5.3 of the Fisheries Agreement. The RMF, which is administered by the RMT, would be funded by YCWA (\$6 million for fisheries monitoring and studies) to finance a long-term fishery monitoring, study, and enhancement program for the lower Yuba River. The purposes of the RMT are specified in Section 5.3 of the Fisheries Agreement, and include:

- Evaluating the condition of fish resources in the lower Yuba River;
- Evaluating the viability of lower Yuba River fall-run Chinook salmon, as well as the lower Yuba River populations of the Central Valley steelhead Distinct Population Segment (DPS) and the spring-run Chinook salmon Evolutionarily Significant Unit (ESU);
- Evaluating the effectiveness of implementation of the Lower Yuba River Accord flow schedules on the condition and viability of lower Yuba River fish resources;
- Implementing habitat improvement and non-flow enhancement actions and activities;
- Implementing flow-based enhancement actions; for example, purchasing water for flows above the flows required by implementation of the Accord flow schedules;
- Retaining expert advise for specific technical questions;
- Retaining expert(s) for disputed resolution process; and
- Paying local shares of grant-funded projects for fish or fish habitat in the lower Yuba River, specifically to facilitate unique grant-matching opportunities

Responsible Parties: YCWA, CDFG, NMFS, USFWS, Reclamation, DWR, and SYRCL

Location: New Bullards Bar Reservoir and the lower Yuba River

Timing: Continuously, year-round over the duration of the project; the timing of each monitoring activity will vary depending on when species-specific life stages are present in the lower Yuba River

Monitoring: Monitoring activities include both core studies that will be undertaken for the entire duration of the Yuba Accord Alternative, and focused studies that will be undertaken to provide additional insights into specific issues or areas of concern. Core studies will include, but are not limited to:

- Collection of water temperature data;
- VAKI RiverWatcher fish monitoring;
- Chinook Salmon Escapement Survey; and
- Monitoring downstream movement of juvenile salmonids using rotary screw traps.

Focused studies may include, but are not limited to:

- Juvenile salmonid habitat use;
- Age-specific survival rates; and
- Salmonid genetic analysis.

Additional criteria for core and focused studies are included in Appendix A to the Fisheries Agreement.

Reporting Requirements: Requirements are dependent on monitoring and/or management strategies

Description of Activities: The RMT will conduct regular meetings to review monitoring data, completed and ongoing fisheries actions in the lower Yuba River, and to advise YCWA to make additional instream flows depending on water availability for the purposes of meeting fisheries resources needs.

Effectiveness Criteria: Through communication with regulatory and management agencies, use reporting mechanisms to determine whether current flow fluctuation and reduction criteria adequately protect Chinook salmon and steelhead redds from dewatering and fry from stranding or isolation. Effectiveness criteria also would be developed in coordination with the RMT.

Environmental Commitment 10-2: EWA mitigation plan for protecting Delta fisheries resources - continuation of actions identified by the Delta Smelt Working Group

Action/Commitment: 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. The manner in which the EWA agencies apply, acquire, and manage assets will continue to 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 (or an equivalent program) are being minimized or avoided.

- Responsible Parties:** The DSWG consists of experts on delta smelt biology and is comprised of representatives from the following agencies: (1) CDFG; (2) USFWS; (3) Reclamation; (4) DWR; and (5) EPA. The responsibilities of each EWA agency may include data collection, analysis, interpretation, findings, and recommendations for changing EWA water asset acquisition and management strategies.
- Location:** Delta Region
- Timing:** Continuous, year-round; the Delta Smelt Working Group (DSWG) generally convenes at least once a month, or more as necessary.
- Monitoring:** Monitoring programs in place under this category include the Fall Midwater Trawl Survey, 20-mm survey, Delta smelt larva survey, Summer Townet Survey and the Spring Kodiak trawl. Data collected and reviewed as part of EWA monitoring efforts is 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.
- Reporting Requirements:** Requirements dependent on monitoring and/or management strategies
- Description of Activities:** The purpose of the DSWG is to take actions to protect delta smelt in a proactive manner prior to salvage events at the CVP and SWP export pumping facilities in the Delta. Reclamation and/or DWR are responsible for monitoring the criteria established in the Delta Smelt Risk Assessment matrix (DSRAM) and reporting back to the USFWS and the DSWG if DSRAM criteria are triggered, which would necessitate a meeting to determine whether to recommend changes in CVP/SWP water project operations (referred to as a “fish action”).

Delta Smelt

As described in the EWA EIR/EIS (Reclamation *et al.* 2004), delta smelt are vulnerable to entrainment at the CVP and SWP export facilities.

The EWA agencies initiate pumping reductions after recommendations from the Data Assessment Team (DAT)¹, which uses data from various fish surveying methods and distribution indicators such as year-type hydrology, rate of export pumping, salvage estimates, location of X2, water quality, water flows and temperature, to assess population and distribution. These multiple data sources are used because salvage estimates alone are a less effective sampling method for larval and early juvenile fish (pers. comm., Poage 2003). The EWA agencies also use these data to determine the effectiveness of EWA actions taken to protect delta smelt. The EWA agencies have incorporated measures into the EWA program to protect and facilitate the recovery of delta smelt. EWA agencies will avoid increased exports when delta smelt are vulnerable by monitoring fish proximity to the Delta pumps.

The EWA agencies will specifically monitor salvage numbers during July before the export of any EWA water. Monitoring data from several surveying methods will be used to estimate population of various life-stages of delta smelt. For adult fish, these tools include the fall and spring mid-water trawls, beach seining, the Chipps Island trawl, and estimation of gonadal development. For larval delta smelt, these methods will include light trapping and 20-mm surveys. For juvenile fish, these methods will include the 20-mm and summer tow-net surveys (pers. comm., Poage 2003). The EWA agencies will utilize data collected from these surveys to monitor delta smelt recovery after EWA measures have been implemented.

Anadromous Salmonids

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 River and the Delta (CALFED 2003). The EWA agencies utilize data collected from these surveys to monitor abundance, escapement, spawning distributions, and juvenile stranding. The EWA agencies use salvage estimates at the Delta export facilities to adhere to biological opinions and permits for Project operations.

Effectiveness Criteria: As described in Reclamation (2004), the EWA agencies initiate fish actions based on a range of data collected in the Delta and upstream rivers. If a fish action is taken, the EWA agencies and

¹ The DAT is an open forum of people representing multiple government agencies (EWA agencies, EPA, Western), water districts (CCWD, Westlands Water District, and Santa Clara Valley Water District), and environmental interest groups (Environmental Defense, The Bay Institute). It reviews information on the distribution and abundance of fish, CVP and SWP operations, and Delta water quality (Reclamation *et al.* 2004).

the DSWG will then follow up on the action to attempt to ascertain its effectiveness of protecting delta smelt and anadromous salmonids. The EWA agencies rely upon the same data used to initiate a fish action to monitor the effectiveness of EWA actions on delta smelt. The EWA agencies also use data from several sources to decide when and how to take fish actions to protect salmon and steelhead in the Delta and upstream rivers. Fisheries 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 also is used to monitor the effectiveness of EWA actions.

Environmental Commitment 10-3: EWA mitigation plan for protecting Delta fisheries resources - continuation of actions identified by the Water Operations Management Team

Action/Commitment:	The EWA agencies, in collaboration with the CALFED Science Program (including the Interagency Ecological Program [IEP]), collect, synthesize, and apply scientific information relevant to the biological needs and population dynamics of anadromous and Delta fish species and to factors affecting the health and function of the Bay-Delta ecosystem. Annual EWA actions and assets are tracked closely throughout the year by the EWA program partners through the DAT and the Water Operations Management Team (WOMT).
Responsible Parties:	Reclamation, USFWS, NMFS, DWR and CDFG
Location:	Delta Region
Timing:	Continuous, year-round
Monitoring:	Water operations monitoring includes those IEP monitoring program elements that generate data and information used in managing CVP and SWP water project operations. Reservoir releases, Delta export levels, and operation of the Delta cross channel gates are all part of water project operations. Water operations monitoring programs include Delta flow and water temperature monitoring and database management, Sacramento and Chipps Island fish trawl surveys, CVP and SWP fish salvage programs.
Reporting Requirements:	No specific reporting requirements
Description of Activities:	Implementation of possible actions related to CVP/SWP water project operations utilize the decision-making process in place for the existing EWA Program (which may continue or be revised for

an equivalent program in the future). EWA actions are taken following discussions involving biologists, project operators, and stakeholders on the DAT, using all available information and the criteria outlined in the decision trees for salmonids and delta smelt (Reclamation *et al.* 2004). The DAT and the DSWG consider incidental take at the pumps, in-stream and Delta environmental conditions, distribution and abundance of the fish species (as indicated by a variety of sampling programs), and, if appropriate, formulate a recommendation for modification of project operations to reduce adverse effects on fish (a “fish action”). Recommendations are taken to the WOMT for discussion and final approval at the management level of the EWA agencies (DWR, Reclamation, CDFG, USFWS and NMFS). Based on an evaluation of this recommendation and the supporting information, the agencies may implement a “fish action,” either as recommended or with adjustments. Although the goal of WOMT is to achieve consensus on decisions, the individual agencies retain their authorized roles and responsibilities.

Effectiveness Criteria: Annual accomplishments include the successful completion of all monitoring programs. Successful near-real time reporting of data on water conditions (e.g., flows and temperature) and fish distributions to the DAT and WOMT for use in managing water project operations (CALFED Bay-Delta Program 2006).

6.2.4 AIR QUALITY

Mitigation Measure 15-1: *Provide certification documentation to Reclamation and DWR indicating that groundwater pumping sources would not increase emissions, to ensure that no net impacts to air quality would occur*

Commitment: To ensure that no net impact air quality would result from groundwater substitution pumping in addition to deficiency pumping during extremely dry years, YCWA will provide to the EWA agencies (i.e., Reclamation and DWR) a statement, with appropriate supporting documentation, demonstrating that the total volume of groundwater to be pumped within Yuba County can be conducted using pumping sources that will not contribute to a air quality impacts. In addition, if the EWA agencies obtain water from groundwater substitution, the EWA agencies and willing sellers would work together to implement one, or a combination, of the following mitigation measures that is appropriate to reduce impacts to a less-than-significant level. The mitigation measures will be implemented within the willing seller’s air district.

EWA agencies will require willing sellers to use electric or propane-fueled pumps. For each propane-fueled pump, a diesel engine within the district that is not a part of the EWA must be

replaced with a propane or electric pump to 'offset' the emissions from the project-related pump.

EWA agencies will require the willing sellers to purchase offsets to compensate for producing project-related emissions.

Responsible Parties:	YCWA, and approved by Reclamation and DWR
Location:	Yuba Region (Sacramento Valley Air Basin - Feather River Air Quality Management District)
Timing:	Monthly, if groundwater substitution operations occur, over the duration of the project
Monitoring:	<p>Verify that water pumped for groundwater substitution transfers either would be obtained: (1) from electric-powered motors; or (2) from diesel-powered motors operating according to an emission offset. YCWA would obtain readings from the groundwater pump flow meters through monthly reports from the participating Member Unit wells during groundwater substitution operations.</p> <p>Certification shall be furnished to the Technical Committee, pursuant to the requirements of the Yuba Accord agreements. During the implementation of groundwater substitution transfers under the Yuba Accord Alternative, YCWA would participate in close monitoring of the groundwater basin. As stated in the EWA Final EIS/EIR released in January 2004, future groundwater transfers to the EWA require an established measurement and monitoring program for groundwater levels and storage, groundwater quality, land subsidence, and groundwater and surface water interactions (Reclamation <i>et al.</i> 2004).</p>
Reporting Requirements:	YCWA would note the type of power used for the groundwater substitution operations pumping. Member Units utilizing a diesel-powered motor would be required to show that a diesel engine (likely a diesel-powered ditch pump) that normally would have been in use, instead is not being used, thereby providing an emission offset.
Description of Activities:	During the implementation of the Yuba Accord Alternative, if monitoring results indicate any potential short-term significant impacts, YCWA would implement a rapid response program to mitigate the impacts. Under the Yuba Accord Alternative, YCWA also would implement the adaptive management program for future planning of transfers based on the changing conditions of the basin during previous transfers. The adaptive management program would change the location and volume of transfer pumping to avoid adverse impacts to the basin and other groundwater users in the basin.
Effectiveness Criteria:	No net impacts to air quality.