Chapter 6
Mitigation Monitoring and Reporting Program

6.1 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.

6.2 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 ASIP. 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 6-1 and 6-2 provide some early guidance for developing the mitigation monitoring and reporting program. Table 6-1 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 6-2 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 the Final EIR provides a summary of effects of the EWA that led to the development of the mitigation measures listed in Table 6-2. In both Tables 6-1 and 6-2, 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.

6.2.1 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 6-1 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 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

[1] The DAT is an open forum of people representing multiple government agencies (EWA agencies, U.S. Environmental Protection Agency, Western Area Power Administration), water districts (Contra Costa Water District, 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.

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 (Poage 2003). The EWA agencies would also use these data to determine the effectiveness of EWA actions taken to protect delta smelt.

The EWA agencies have also 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 (Poage 2003). 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.

6.2.2 Vegetation and Wildlife Monitoring

The conservation measures identified to protect vegetation and wildlife resources are included in the 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. (See Section 3.2 of Volume 1 for more information.) Monitoring will only be done during those times and in those places where EWA actions are taken.

Table 6-1
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					
All species					
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
General Fish Species					
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.	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 DAT will assess vulnerability of fish to current and forecasted export pumping regimes, report their analysis to the WOMT, 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 basic 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)
Delta Smelt					
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

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Salmonids					
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
Central Valley Steelhead					
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. MAs to read temperatures at gages along the river; temperature profile in reservoir	Reclamation to manage water; MAs to request water at times when it will benefit fish.	May to December
Central Valley Fall/Late-Fall Run Chinook Salmon					
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. MAs to read temperatures at gages along the river.	Reclamation to manage water; MAs 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					
All species					
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.
Giant Garter Snake					
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.
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 (Volume III).	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

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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
Greater Sandhill Crane					
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
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, and Valley/Foothill Riparian Communities					
Crop idling, groundwater substitution	Well adequacy review. (See Groundwater mitigation measures in Table 6-2.)				
Crop idling, groundwater substitution	Monitoring program. (See Groundwater mitigation measures in Table 6-2.)				
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.				

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EWA Asset Acquisition/ Management Action	*Environmental Measures Incorporated into the Project/ Conservation Measures*	*Objective*	*Monitoring/Reporting Action*	*Responsible Party*	*Timing*
Regional and Agricultural Economics					
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 UCCE 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.

Table 6-2
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 Diverters 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 diverters.	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.	If groundwater levels are high compared to historical fluctuations, regional groundwater level data must be submitted. 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 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. 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.	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.
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.

Table 6-2
Mitigation and Monitoring Requirements (cont'd)

Action	*Potential Effect*	*Mitigation Measure*	*Monitoring/Reporting Action*	*Responsible Agency*	*Effectiveness Criteria*	*Timing*
Groundwater (cont'd)						
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 resources are available to cover reasonably anticipated mitigation needs; and (5) commitment to avoid or mitigate such effects during future transfers to the EWA.	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 and effective.	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.
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 PM_{10} 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.

Table 6-2
Mitigation and Monitoring Requirements (cont'd)

Action	*Potential Effect*	*Mitigation Measure*	*Monitoring/Reporting Action*	*Responsible Agency*	*Effectiveness Criteria*	*Timing*
Power						
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 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.