

# Chapter 5

## Revisions to the Draft EIS/EIR

This chapter contains all changes to text to the Draft EIS/EIR (now Volumes 1-3). The first section includes changes from the Errata sheets released during the public review period. The second section includes document changes because of public comments. Both sections are organized by page number within each volume. In some instances, both Sections 5.1 and 5.2 may include different changes to the same page number.

### 5.1 Public Draft Errata

The EWA agencies released two sets of errata during the public comment period; one in July 2003 and one on September 10, 2003. These tables were mailed to recipients of the Draft EIS/EIR and included errata found in the Draft EIS/EIR. This section illustrates the revisions to Volumes 1-3 of the EIS/EIR identified in these tables. Indented text indicates text cited from Volumes 1-3. Changes in text are signified by strikeouts where text is removed and by italics where text is added.

#### Volume 1

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

###### *Page 2-2*

The first complete sentence on page 2-2 is revised as follows:

EWA actions in the Delta to protect fish can involve temporary pumping reductions at the Delta or closure of the Delta Cross Channel gates (see Section ~~2.1.4.2~~ *2.4.1.2*).

###### *Page 2-11*

Footnote 2 on page 2-11 is revised as follows:

This use would be pursuant to the Joint Point of Diversion provisions in the Project Agencies' water rights permits. For more information on Joint Point of Diversion, see Section ~~2.3.1.1~~ *2.3.2.1.1* and ~~4.1.3.2~~ *4.1.3.1.2*.

###### *Page 2-25*

The last sentence on page 2-25 is revised as follows:

The stages of Joint Point of Diversion are discussed in more detail in Section ~~4.1.3.2~~ *4.1.3.1.2*.

###### *Page 2-38*

The following sentence in paragraph 2 on page 2-38 is revised as follows:

The Project pumps would not begin to move EWA water until the fish have left the vicinity of the Delta pumps, as discussed in more detail in Section ~~9.2.4.2~~ *9.2.3*.

**Page 2-66**

The following sentence in paragraph 3 on page 2-66 is revised as follows:

Section 2.5.3 ~~includes the environmental commitments, and~~ Section 2.5.4 describes the EWA agencies' acquisition strategy for the Fixed Purchase Alternative.

**Chapter 6, Groundwater Resources**

**Page 6-56**

The following sentence in paragraph 1 on page 6-56 is revised as follows:

Figure ~~6-21~~ 6-22 shows the areas for which the regional declines are estimated.

**Volume 2**

**Chapter 10, Vegetation and Wildlife**

**Page 10-29**

The following sentence in paragraph 2 on page 10-29 is revised as follows:

The relationship between these species and rice production in the Sacramento Valley is described in Table ~~10-7~~ 10-5, Section 10.2.6.1.7.

**Page 10-55**

The following sentence in paragraph 1 on page 10-55 is revised as follows:

The EWA agencies will ensure parcels from which water is to be acquired are outside of mapped proscribed areas (see ASIP Figure ~~3-11~~ 3-13).

**Chapter 11, Regional and Agricultural Economics**

**Page 11-42**

The following sentence in the last paragraph on page 11-42 is revised as follows:

The effects are expressed as a percentage reduction to baseline conditions in Table ~~11-31~~ 11-33.

**Page 11-51**

The following sentence in paragraph 3 on page 11-51 is revised as follows:

The water transfer price data in Figure 11-4 and the amount of water purchases as shown in Table ~~11-41~~ 11-40 suggest that water transfer prices are not determined by the amount of water purchased.

**Chapter 14, Recreation Resources**

**Page 14-37**

The following sentence in paragraph 2 on page 14-37 is revised as follows:

Table ~~14-5~~ 14-6 shows the average water temperature under the Baseline Condition as well as under the Flexible Purchase Alternative.

The following sentence in paragraph 5 on page 14-37 is revised as follows:

As shown in Figure ~~14-11~~ 14-13, water levels in Lake McClure would only increase.

## **Chapter 15, Flood Control**

### ***Page 15-9***

The following sentence in paragraph 3 on page 15-9 is revised as follows:

This aqueduct divides into two branches, the East and West Branches in the Antelope Valley. (See Figure ~~15-4~~ 1-4.)

## **Volume 3**

### **Appendix J**

#### **Table of Contents**

##### ***Page x, List of Figures***

The following figure reference is revised as follows:

~~2-1~~ 1-1 Relationships of CALFED Programmatic and EWA Compliance with NEPA/CEQA and ESA/NCCPA

## **Chapter 2, Description of the EWA Proposed Action**

### ***Page 2-55***

The first bulleted point on page 2-55 is revised as follows:

The EWA agencies will ensure parcels from which water is to be acquired are outside of mapped proscribed areas (see ASIP Figure ~~3-11~~ 3-13).

## **Chapter 4, Species Assessment Methods and Impact Analyses**

### ***Page 4-78***

The following sentence in paragraph 4 on page 4-78 is revised as follows:

Figure ~~3-3~~ 3-4 depicts the distribution of black-crowned night heron rookeries.

### ***Page 4-79***

The following sentence in paragraph 7 on page 4-79 is revised as follows:

Figure ~~3-4~~ 3-5 depicts the distribution of great blue heron rookeries.

### ***Page 4-81***

The following sentence in paragraph 4 on page 4-81 is revised as follows:

Figure ~~3-5~~ 3-6 depicts the distribution of great egret rookeries.

**Page 4-83**

The following sentence in paragraph 2 on page 4-83 is revised as follows:

Figures ~~3-6~~ 3-7 and 3-8 depicts depict the distribution of greater sandhill crane habitat.

**Page 4-85**

The following sentence in paragraph 1 on page 4-85 is revised as follows:

Figure ~~3-6~~ 3-7 depicts the distribution of long-billed curlew habitat.

**Page 4-86**

The following sentence in paragraph 3 on page 4-86 is revised as follows:

Figure ~~3-12~~ 3-10 depicts the distribution of snowy egret rookeries.

**Page 4-88**

The following sentence in paragraph 1 on page 4-88 is revised as follows:

Figure ~~3-9~~ 3-11 depicts the distribution of tricolored blackbird nesting colonies.

**Page 4-90**

The following sentence in paragraph 3 on page 4-90 is revised as follows:

Figure ~~3-8~~ 3-12 depicts the distribution of white-faced ibis rookeries.

**Page 4-92**

The following sentence in paragraph 1 on page 4-92 is revised as follows:

Figure ~~3-10~~ 3-13 depicts the current distribution of giant garter snake population areas in the six counties that are identified for potential rice idling actions.

**Page 4-94**

The first bulleted item on page 4-94 is revised as follows:

The EWA agencies will ensure parcels from which water is to be acquired are outside mapped ~~proscribed~~ avoidance areas (See Figure ~~3-11~~ 3-13.)

**Page 4-100**

The second sentence on page 4-100 is revised as follows:

Figure ~~3-11~~ 3-14 depicts the distribution of western pond turtles.

## Chapter 9, Effects Determination Conclusion

### Page 9-7

The last sentence under Section 9.1.1.1, subtitled *Giant Garter Snake*, on page 9-7 is revised as follows:

~~With these measures, crop~~ Crop idling actions may affect but are not likely to adversely affect giant garter snake populations.

### Page 9-11, Table 9-1

The following sub-heading on Table 9-1, page 9-11, is revised to read as:

~~May Affect, Likely to Adversely Affect~~

The revised heading will also have an attached footnote as follows:

*For the purposes of ESA Section 7 Consultation, “may affect” refers to any effect of the proposed action on a species, including the potential to affect individual members of the population, or the potential to affect the population as a whole. Because the analysis included in this ASIP indicates that there may be incidental take of individual giant garter snakes associated with the proposed action, the EWA agencies have determined that the action “may affect” the giant garter snake. The EWA agencies do not believe there will be an adverse effect on the giant garter snake population as a whole.*

## 5.2 Revisions from Public Comments

Revisions have been made to the EIS/EIR text as a result of comments received on the Draft EIS/EIR. A compilation of the revisions to the EIS/EIR 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.

### Global

Oroville Wyandotte Irrigation District has changed its name to South Feather Water and Power. This change occurs throughout the entire document. All references to Oroville Wyandotte Irrigation District are replaced with South Feather Water and Power.

## Volume 1

### Chapter 1, Introduction

#### Page 1-8

The first paragraph on page 1-8 has been revised as follows (Comment NP05-24):

The conflicts between competing beneficial uses of Bay-Delta water are adversely affecting urban water users, agricultural water users, water quality,

environmental quality, and harming threatened and endangered Delta-dependent species. Consequently, an effective statewide water-management program is needed almost immediately to reduce water-use conflicts.

**Page 1-40 and 1-41**

The first sentence in the last paragraph on page 1-40 has been edited as follows (Comment NP05-27):

When approving a specific water acquisition, the ~~acquiring~~ permitting agency will consider whether it was analyzed on a site-specific basis in this document.

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

**Page 2-11**

The first sentence of the final paragraph on page 2-11 has been changed as follows (Comment NP05-31):

The CALFED ROD estimated that the EWA program would purchase ~~an average of~~ 185,000 acre-feet of water per year, with 35,000 acre-feet coming from areas upstream from the Delta<sup>3</sup> and 150,000 acre-feet from the export service area. The total average annual water quantity estimated to be available from purchases in the Upstream from the Delta Region, purchases in the Export Service Area, and CVP/SWP operational flexibility was 225,000 acre-feet per year.

**Page 2-15**

A typographical error in the first line of page 2-15 has been corrected:

The ROD determined that the EWA would acquire an average annual quantity of 255,000 ~~225,000~~ acre-feet of water plus conveyance capacity and storage facilities.

The first two sentences under point number two on page 2-15 have been revised to read more clearly as follows (Comment NP05-32):

~~2) Under the concept of functional equivalency, SWP borrowing of up to 100,000 acre-feet has been substituted for the initial acquisition and long-term management of water equivalent to 200,000 acre-feet of storage within the Export Service Area because it has not been feasible to establish this asset. Only 100,000 acre-feet of this asset was expected to be used in any single year. During the first 3 years of operation, the EWA agencies have not found it feasible to acquire 200,000 acre-feet of storage in the Export Service Area as described in the CALFED ROD. Under the concept of functional equivalency, the EWA agencies instead have developed an option to borrow up to 100,000 acre-feet from the SWP. Only 100,000 acre-feet of water in storage was expected to be used in any given year;~~

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3 The upstream purchase quantity was the amount of water targeted for the first year; higher amounts were anticipated in subsequent years.

therefore, borrowing this water (100,000 acre-feet) from the SWP would provide approximately the same annual quantity of water as the 200,000 acre-feet of storage in the CALFED ROD. If used, it would have to be replaced before it could be used again, but replacement would not necessarily have to occur in the next year. If the “borrowing” tool is used instead, any debt owed to the SWP under this arrangement may be carried into the subsequent year, when water could be purchased to extinguish a debt. Thus, for this tool to be truly equivalent to the stored water asset, the EWA needs the ability, when necessary, to purchase additional water up to the amount borrowed, not to exceed 100,000 acre-feet.

The following sentence has been deleted (Comment NP01-24):

~~4) EWA water purchase needs may increase in the future to address potential impacts of new facilities operations.~~

#### Page 2-22

The timing for Delta smelt actions in the No Action/No Project Alternative has been clarified:

<b>Table 2-2</b> <b>Pump Reductions in the No Action/No Project Alternative</b>			
<b>Timeframe</b>	<b>Benefiting Fish<sup>14</sup></b>	<b>Reason</b>	<b>Regulatory Mechanism</b>
December – January	Juvenile salmonids	Protect outmigrating juvenile salmonids	Biological opinion
	Adult smelt	Protect upmigrating adult smelt	Biological opinion
February – March	Juvenile salmonids	Protect outmigrating juvenile salmonids	Biological opinion
	Adult smelt	Protect upmigrating adult smelt	Biological opinion
April – May 31 days	Salmon smolts	Determine how export pumping affects survival and passage of salmon smolts through the Delta	D-1641 (VAMP) (SWP may not follow if not reimbursed)
April - June	Juvenile smelt	Protect juvenile smelt near the pumps	Biological opinion

The first sentence of the third paragraph in Section 2.3.1.1.2 is revised as follows:

Closing the DCC gates ~~increases the likelihood~~ ensures that juvenile spring-run and winter-run Chinook salmon and steelhead smolts remain in the mainstem Sacramento River, improving their likelihood of successful outmigration through the western Delta and San Francisco Bay.

<sup>14</sup> “Benefiting Fish” only include the fish that require pumping reductions through a regulatory mechanism. Incidental benefits to other fish would also result from some reductions.

**Page 2-23**

The discussion of Delta Cross Channel gate closures within the regulatory baseline has been revised to clarify that these closures are required (Comment SA05-1). Item 2 on page 2-23 is revised as follows:

- 2) State Water Resources Control Board Decision 1641 ~~allows for~~ requires the following operations of the DCC gates:

**Page 2-25**

The text on Stage 1 of the Joint Point of Diversion has been updated to clarify the purpose of the Water Level Response Plan (Comment SA05-2) by revising the fourth paragraph on page 2-25 as follows:

- Stage 1: the CVP can use Banks Pumping Plant to divert water for selected CVP contractors, and either Project could use the others' facilities to recover export reductions to protect fish if the Projects complete a Water Level Response Plan ~~that outlines the responses to changing water levels in the south Delta to prevent lowering water levels in the south Delta to the injury of water users in the south Delta.~~

A new sentence has been added after the descriptions of Stage 1, Stage 2, and Stage 3 to further clarify the purpose of the Water Level Response Plan (Comment SA05-2):

*Under all stages of JPOD, Reclamation and DWR are also required to have a response plan to prevent water quality in the south and central Delta from being significantly degraded through operations of JPOD to the injury of diverters in the south and central Delta.*

In the discussion of Stage 2 of the Joint Point of Diversion on page 2-25, the following footnote has been included after the first sentence to explain the conditions for permitted diversions (Comment SA05-3):

**Stage 2:** the Projects can divert water from either pumping plant for any of their permitted purposes up to permitted capacity.

*Footnote: JPOD diversions at the Banks Pumping Plant are limited under D-1641 to 13,870 acre-feet per day or a 3-day average diversion of 13,250 acre-feet per day, except from mid-December to mid-March when San Joaquin River flow at Vernalis exceeds 1,000 cubic feet per second, during which times diversions into Clifton Court Forebay may be increased by one-third of the San Joaquin River flow at Vernalis. This is also the current limit established by the U.S. Army Corps of Engineers' permit for the Banks Pumping Plant.*

In the discussion of Stage 2 of the Joint Point of Diversion on page 2-25, a footnote has been added after the last sentence to read (Comment SA05-5):



**Stage 2:** the Projects can divert water from either pumping plant for any of their permitted purposes up to permitted capacity. The Projects must submit an operations plan to protect fish and wildlife and other legal users of water.

*Footnote: The State Resources Control Board's Executive Director approved Stage 2 type JPOD diversions after D-1641 for a short-term basis for limited specified purposes without completion of all the requirements for Stage 2.*

In the discussion of Stage 3 of the Joint Point of Diversion on page 2-25, the following footnote has been included after the description to clarify the water level protection requirement (Comment SA05-4):

**Stage 3:** the Projects can divert water from either pumping plant up to the physical plant capacity if they completed an operations plan to protect aquatic resources and their habitat and protect other legal users of water and if they implement water barriers or other water level protection.

*Footnote: D-1641 requires that water level protection under Stage 3 be adequate for diversion of water for agricultural uses. The Stage 3 water level protection requirement is not conditioned on the agricultural users having water rights.*

#### **Page 2-26**

The first paragraph on page 2-26 has been amended as follows (Comment SA05-5):

Prior to the CALFED ROD, the Projects were in Stage 1 and Stage 2 of the implementation process and could use Joint Point of Diversion to replace water that had been lost during pump reductions to protect fish. It is reasonably foreseeable that ~~without the CALFED ROD in the No Action/No Project Alternative,~~ the Project Agencies would have completed the requirements to move into Stage 3 in which they could use the Joint Point of Diversion to supply water to their contractors in the Export Service Area.

#### **Page 2-27**

The following sentence in the last paragraph on page 2-27 has been deleted as follows (Comment NP05-34):

~~The Flexible Purchase alternative would allow the EWA agencies the ability to acquire up to 600,000 acre-feet of water assets to address pump reductions, fish actions, and to compensate the CVP/SWP for water otherwise lost due to those actions. Any alternative has to be able to allow the EWA agencies to use water for a broader range of fish actions than envisioned in the CALFED ROD.~~

#### **Page 2-29**

Section 2.4.1.1 on page 2-29 has been clarified as follows to indicate that the action alternatives would provide increased fish actions from the No Action/No Project Alternative (Comment LA06-25):

The general times of year for pump reductions that benefit specific fish types would be similar to the No Action/No Project Alternative, *but the reductions would be more frequent because* ~~the~~ EWA agencies would not necessarily wait to reach “reconsultation level” conditions identified in the Biological Opinions before calling for export reductions.

**Page 2-30**

The last sentence in the second paragraph of Section 2.4.1.1.1 has been deleted:

This reduction would increase the survival of juvenile Chinook salmon smolts (including winter-run presmolts and spring-run yearlings) migrating through the Delta in the winter. It is scientifically supported by several years (1993 – 2002) of mark/capture data that indicate the survival of juvenile late fall-run Chinook salmon in the central Delta decreases as exports increase. ~~Further support for a pump reduction is based on a recent analysis that indicates that December is an important migration period for winter run pre-smolts and that the Delta Cross Channel gate closures during December appear to be correlated with low winter run salvage at the export facilities later in the year.~~

**Page 2-31**

Export reductions in April and May have been clarified by adding information to the first sentence in Section 2.4.1.1.3:

Reducing Delta exports during April and May would help out-migrating juvenile fall-run *and spring-run* Chinook salmon.

The first sentence in the second paragraph of Section 2.4.1.1.4 has been corrected:

Pumping reductions would decrease the effects of CVP/SWP export facilities on listed resident fish in the south Delta and would enable juvenile resident estuarine and anadromous species to migrate away from the export facilities where they are less vulnerable to direct loss and/or ~~indirect direct~~ mortalities associated with export operations.

The last sentence in the second paragraph of Section 2.4.1.1.4 has been clarified:

~~Additional information indicates that, generally, a gradual increase in export pumping could minimize entrainment loss of Delta smelt by delaying the increase until most of them have moved to the north and west away from the influence of the pumping when the export rate increases rapidly under low Delta inflow and fish densities are high in the south/central Delta, fish losses at the facilities can be high.~~

The last paragraph in Section 2.4.1.2 has been clarified as follows to indicate that the action alternatives would provide increased fish actions from the No Action/No Project Alternative (Comment LA06-25):

~~When DCC gates are closed outside the regulatory baseline, With the Flexible Purchase Alternative, EWA agencies could take action to close the DCC gates above the regulatory baseline included in the No Action/No Project Alternative. EWA must compensate for water supply losses from these reductions. Additional gate closures would typically occur in November, December, January, May, or June, if additional closures were needed after the regulatory requirements of the No Action/No Project were met.~~

**Page 2-33**

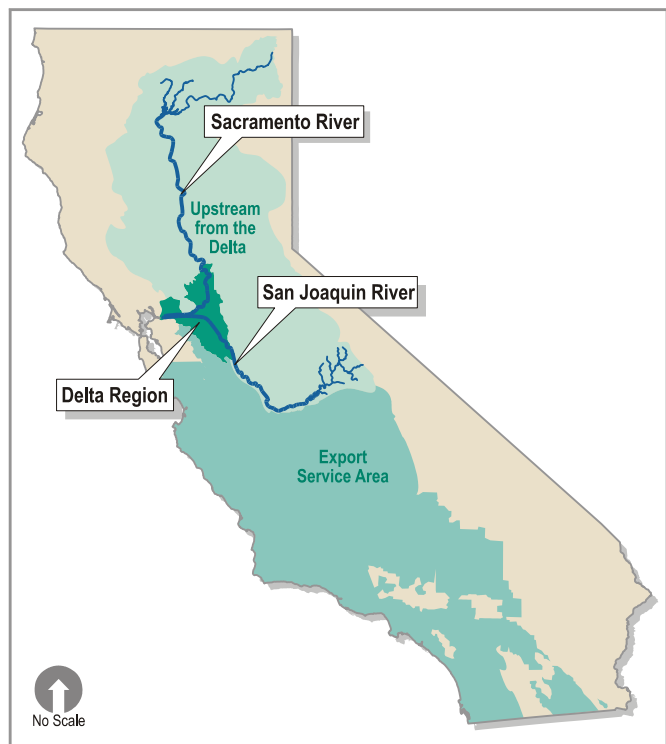
The second paragraph in Section 2.4.1.4 has been updated to more accurately describe augmenting Delta outflows (Comment LA03-14):

In addition to taking direct actions to augment Delta outflows, other actions within the Flexible Purchase Alternative would have the secondary benefit of increasing Delta outflows. ~~When the EWA agencies reduce Delta export pumping, the water that would have been pumped instead becomes Delta outflow. Delta outflow would also increase during the summer months when EWA assets are moved through the Delta because the transfers must include outflow water (carriage water) to maintain water quality (see Section 2.4.2.1 for additional information). When the EWA agencies reduce Delta export pumping, outflows would increase initially as water that would have been pumped becomes Delta outflow. (Water released from Project reservoirs takes 3-5 days to reach the Delta; therefore, water released prior to the announcement of pump curtailment would contribute to Delta outflow for up to 5 days. The Projects could reduce releases upon~~

~~announcement of pump curtailment; however, this would only occur if the Management Agencies concluded it would be environmentally benign. In the past 3 years of EWA operation, no reductions in releases were made during EWA-related pump reductions.)~~

**Page 2-34**

Figure 2-3 on page 2-34 has been amended to include Santa Clara Valley Water District in the Export Service Area (Comment LA16-18).



**Figure 2-3**  
**Asset Acquisition and Management Areas**

**Page 2-38**

The last paragraph on page 2-38 has been revised as follows to reflect that the estimated water conveyance losses could be re-evaluated in the future (Comment LA14-5):

Transfers along the San Joaquin River are charged a 10 percent conveyance loss to include seepage and evaporation losses. *Project Agencies could re-evaluate this number using more up-to-date information.* The EWA agencies must factor Delta carriage and conveyance losses into the determination of the total amount of water that must be acquired to fully compensate for EWA actions to benefit fish and the environment.

**Page 2-44**

A sentence was added to the first paragraph on page 2-44 to indicate that groundwater substitution transfers would be subject to local regulations (Comment NP05-43):

The EWA Project Agencies may engage in groundwater substitution transfers with Glenn-Colusa Irrigation District, Reclamation District 108, Natomas Central Mutual Water Company, Anderson Cottonwood Irrigation District, Western Canal Water District, the Joint Water Districts, Garden Highway Mutual Water Company, Yuba County Water Agency, and Merced Irrigation District. *Several of these agencies would need to obtain permits pursuant to local groundwater regulations; Chapter 6 describes these regulations in detail.* The sections below describe the operations associated with each of these potential acquisitions.

**Page 2-45**

The second paragraph on page 2-45 has been revised as follows to correct the agency maintaining releases for New Bullards Bar Reservoir (Comment LA18-9):

Yuba County Water Agency, on the Yuba River, owns New Bullards Bar Reservoir and would store groundwater substitution assets there until release. Water elevations in New Bullards Bar Reservoir would be slightly higher than without the EWA from April through June as a result. During the release period, the ~~EWA~~ *Yuba County WA* would try to maintain relatively constant flows on the Yuba River because of fish concerns;

**Page 2-46**

The first paragraph on page 2-46 has been revised to better characterize groundwater substitution on the Merced River (Comments LA06-15 and LA06-18):

The Merced Irrigation District is on the Merced River and would store EWA water in its reservoir, Lake McClure, until release (see Figure 2-11). ~~Water elevations in Lake McClure would be slightly higher from April through November than they would be without the EWA.~~ The EWA agencies would convey a Merced Irrigation District groundwater substitution transfer through

the Merced and San Joaquin Rivers. Under groundwater substitution, surface water flows that would have been released for downstream users' irrigation needs would be held in the reservoir for release in October and November. Farmers would instead use groundwater for irrigation. Water elevations in Lake McClure would be slightly higher from April through November than they would be without the EWA. River flows would therefore decrease on a short stretch of the Merced River between New Exchequer Dam and Lake McSwain (the typical point of diversion). The amount of tailwater leaving the fields that have been irrigated with groundwater would be the same as the amount that would leave the fields if irrigated with surface water. Therefore, flows on the Merced River below the point of diversion would be the same with or without the EWA. EWA agencies have worked together to schedule these transfers for periods when the transfer would reach the Delta with minimal losses and the temperature would be acceptable for fish migration. Assets would be transferred via the rivers in October and November, increasing flows during those times and providing an attraction flow for spawning salmon.

**Page 2-47**

Page 2-47 has been revised to clarify how Water Code Section 1745.05(b) relates to the 20 percent threshold for crop idling (Comment NP05-44). The second bullet has been revised as follows:

- Water Code Section 1745.05 (b) requires a public hearing under some circumstances where water from land idling exceeds 20 percent of the water that would have been applied or stored absent the water transfer. *Third parties would be able to attend the hearing and could argue to limit the transfer based on its economic effects.*

**Page 2-48**

The first sentence in the second paragraph under Section 2.4.2.1.4 has been revised as follows to clarify the potential for purchasing water from the Sacramento Groundwater Authority (Comment NP05-45):

The EWA Project Agencies ~~would~~ *could* purchase water from the SGA, which would deliver water through an exchange at Folsom Lake. Agencies in the authority would exchange some of their allotment in Folsom Lake with the EWA and pump previously stored groundwater<sup>25</sup> within their agencies to make up for the decrease in surface water supply.

**Page 2-56**

The last sentence beginning on page 2-56 under the Groundwater Storage definition in Section 2.4.2.3.2, which describes how the EWA agencies could store assets in a groundwater storage facility, has been amended as follows to include information

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<sup>25</sup> If the EWA agencies enter into a contract with Sacramento Groundwater Authority, the EWA agencies would verify that the water was previously stored to prevent effects to local groundwater.

regarding losses assessed by Kern County groundwater banking programs (Comment LA08-7):

Assets stored in water banks are generally charged 15 percent for out-of-county interests in Kern County groundwater storage facilities for losses upon both recharge and extraction. If the EWA agencies acquire water banking capacity, the assets would probably be charged a small percentage of loss representing basin losses. Upon extraction, similar losses would be applied.

**Page 2-60**

The second full paragraph on page 2-60 has been revised as follows so as not to imply that the EWA Acquisition Strategy included in Appendix E would not change (Comment NP05-90):

The following text describes how the EWA agencies would pursue water acquisitions as the year type unfolds. In all years, the EWA agencies would begin negotiating with willing sellers in the prior summer and fall, well in advance of knowing hydrologic conditions. In some cases, multi-year agreements, most involving options, would be in place. ~~The purchases would be structured largely as described in Appendix E, EWA Acquisition Strategy for 2003, except that the EWA agencies anticipate more multi-year agreements.~~

**Page 2-63**

The final paragraph on page 2-63 under Section 2.4.4 has been revised as follows to indicate that the EWA Acquisition Strategy serves as an example and the actual strategy would change after the EIS/EIR is finalized (Comment NP05-90):

The Draft Final EWA Acquisition Strategy for 2003 is included in Appendix E *as a past example of what an EWA Acquisition Strategy would look like*. The sections below describe several components of the strategy that *would continue into the future and* are relevant to assessing the environmental effects of the Flexible Purchase Alternative.

**Page 2-64**

Page 2-64, Section 2.4.4.1 has been updated to clarify what supplies were diminishing in the export service area. The paragraph has been revised as follows (Comment NP05-47):

Acquisitions in the export service area generally follow the same pattern: stored groundwater purchase is less expensive, more flexible, and has fewer environmental effects than crop idling transfers. Unfortunately, potential *stored groundwater* supplies in the export service areas are decreasing, and may not be available into the future (*see Section 2.4.2.3.1*).

Page 2-65

A new section, Section 2.4.5, has been added to discuss science and adaptive management in the Flexible Purchase Alternative (Comments FA01-10, LA03-1, LA08-1, LA08-3, LA15-6, LA16-5, NP06-4, and FA01-2).

### **2.4.5 Science and Adaptive Management**

*According to the CALFED ROD, “the purpose of the CALFED Science Program is to provide a comprehensive framework and develop new information and scientific interpretations necessary to implement, monitor, and evaluate the success of the CALFED Program (including all program components), and to communicate to managers and the public the state of knowledge of issues critical to achieving CALFED goals.” The Science Program’s evaluation efforts include two levels of independent review: a standing Independent Science Board for the entire CALFED Program, and a variety of Science Panels focused on specific programs.*

*The EWA Review Panel (Panel) includes distinguished scientists with local expertise and relevant discipline knowledge. These scientists would evaluate the EWA program at the end of every water year prior to the planning process for the following year. The review would consider the overall concept of the EWA program, EWA agencies’ actions (uses of water and actions to protect fish), and justifications for actions that took place during the year. The CALFED ROD indicated that the panel would make recommendations in 2004 about the implications of using the EWA strategy for the long-term for managing flows and/or changing pumping operations for environmental protection (especially protection of listed fish species), water supply reliability, and water quality (CALFED 2002). The EWA agencies would incorporate future recommendations, such as a broader range of asset use, into the manner in which they make purchases and take fish actions.*

*Adaptive management is a key component of the EWA and Science Programs. Adaptive management treats actions as partnerships between scientists and managers by designing those actions as experiments with a level of risk commensurate with the status of those species involved, and bringing science to bear in evaluating the feasibility of those experiments. New information and scientific interpretations would be developed through adaptive management, as the programs progress, and would be used to confirm or modify problem definitions, conceptual models, research, and implementation actions (CALFED 2000b).*

*Adaptive management provides a process to change EWA fish actions or asset acquisitions depending on the recommendations of the Science Panel. Chapter 7 of the ASIP (Volume III) contains additional information about adaptive management.*

*The Panel prepares a report after reviewing the EWA program each water year. These reports can be found at [http://science.calwater.ca.gov/workshop/past\\_workshops.shtml](http://science.calwater.ca.gov/workshop/past_workshops.shtml). Reports have been prepared for the first 3 years of EWA and are summarized below.*

*In the report for year one, the Panel found that the CALFED and EWA programs were successfully able to purchase and use water. Additionally, the agency biologists and project operators exhibited a high degree of cooperation and collaboration. However, the Panel noted that: (1) the EWA goals appear to be “weighted” differently between scientists, resource managers, water managers, and stakeholders; (2) knowledge gaps need to be filled in order to base EWA decisions on statistically rigorous and sound science; (3) the CALFED team needs to be strengthened and knowledge gaps filled; and (4) the EWA agencies and CALFED need to maximize the program’s flexibility.*

*As stated in the report for year two, the Panel found that, even though all of the agencies were to be commended for their efforts, there are several areas that require attention. The EWA program needs to (1) overcome the growing burden of expectations placed on EWA, (2) better integrate EWA into other CALFED restoration activities, (3) improve scientific analysis and data synthesis, (4) focus on more ecologically appropriate biological performance measures; and (5) allocate sufficient resources to accomplish the EWA program’s stated goals. To accomplish these tasks, the Panel recommends (1) identification of the causes of entrainment at the pumps; (2) estimation of growth and mortality rates, habitat use, and movement patterns of Chinook salmon; (3) quantitative synthesis of the delta smelt and Chinook salmon life cycles; (4) determination of how DCC operations might be optimized to reduce entrainment; and (5) determination if and how EWA water can be used to make reservoir releases that improve salmon spawning habitat (CALFED 2002).*

*The goal of the Year Three Technical Review of the Environmental Water Account and Science Symposium (October 15-17, 2003) was to provide a synthesis of the scientific information gained and a description of how this information has affected (or could affect) management of environmental water (CALFED 2003). The Panel noted (1) increased diversification of water resources and the development of models of water acquisition, storage and debt, (2) evidence of increasing cooperation among agencies and in the design and execution of field experiments, (3) completion of several successful symposia and workshops, (4) further progress on addressing past recommendations, and (5) avoidance of fish and water crises. The Panel was generally impressed with the EWA program’s activities in the last year, but found areas in which additional attention and effort are required. Major recommendations included (1) continue the annual reviews of the EWA, (2) review and summarize the accomplishments and lessons learned from past years, (3) better integrate EWA with other CALFED programs, (4) review background regulatory requirements regularly and provide new scientific information that is as adaptive as possible, and (5) explore creative ways to address EWA’s many scientific challenges.*

**Page 2-66**

The first paragraph under Section 2.5.1 on page 2-66 has been clarified as follows to indicate that the action alternatives would provide increased fish actions from the No Action/No Project Alternative, which only includes actions that are regulatorily required (Comment LA06-25):



Under the Fixed Purchase Alternative, the EWA agencies could take the following actions to protect fish and the environment: (1) reduce export pumping, (2) close the Delta Cross Channel gates, (3) increase instream flows, and (4) augment Delta outflow. ~~These actions are described in more detail in Sections 2.3.1 and 2.4.1.~~ *Section 2.3.1 describes these actions as part of the No Action/No Project Alternative; the Fixed Purchase Alternative would include increased amounts of the same actions. Section 2.4.1 further describes the types of EWA actions, including the timing.*

**Page 2-69**

A new section, Section 2.5.4, has been added to discuss how the Science Panel and adaptive management would work with the Fixed Purchase Alternative (Comments FA01-10, LA03-1, LA08-1, LA08-3, LA15-6, LA16-5, NP06-4, and FA01-2).

### **2.5.4 Science and Adaptive Management**

*Section 2.4.5 describes the CALFED Science Program, its role in reviewing the success of the EWA program, and a summary of past recommendations. It also describes the Adaptive Management process as it applies to the EWA. This same review and adaptive management process would apply to the Fixed Purchase Alternative. The Fixed Purchase Alternative, however, would have less flexibility to modify its actions should the Science Panel recommend changes based upon the Panel's review. Alterations in actions under the Fixed Purchase Alternative would primarily include changes in timing because the amount of water available for actions is constrained.*

## **Chapter 3, Introduction to Environmental Setting, Impacts, and Mitigation Measures**

**Page 3-13**

The last sentence on page 3-13 has been updated to include the location of a document repository for the documents incorporated by reference (Comment NP01-31):

As discussed in Chapter 1 (Section ~~1.5.1~~ 1.6.1), the CALFED PEIS/EIR is incorporated by reference into this document for the purpose of providing background information about the CALFED Plan and context for this EWA EIS/EIR. *The documents listed on pages 3-14 and 3-15 are available on the CALFED web site (<http://calwater.ca.gov/CALFEDDocuments/CALFEDDocuments.shtml>) and on the DWR web site (<http://www.dwr.water.ca.gov/>). Additionally, documents incorporated by reference are at the California Bay-Delta Authority office at 650 Capitol Mall, 5th Floor, Sacramento, CA 95814.*

**Page 3-15**

The following text has been added below the bulleted text on page 3-15 to summarize the documents incorporated by reference and to describe the relationship of the document to the EWA program. (Comment NP01-31):

- ~~Acquisition of Water from the Western Canal Water District for Use in the 2001 Dry Year Water Purchase Program. The California Department of Water Resources, May 2001.~~
- *California Department of Water Resources, May 2001. Initial Study and Proposed Negative Declaration, Acquisition of Water from Western Canal Water District for Use in the 2001 Dry Year Water Purchase Program.*

*Abstract: The Western Canal Water District (Western Canal WD) Initial Study/Proposed Negative Declaration (IS/PND) addressed DWR's 1-year program for facilitation of water transfers from willing sellers in northern California to seven agencies participating in the 2001 Dry Year Water Purchase Program. The willing sellers provided water by reducing their consumptive use of surface water by using groundwater (groundwater substitution), making additional reservoir releases, or idling land. Under this program, DWR proposed to acquire approximately 140,000 acre-feet for conveyance through SWP Delta pumping and aqueduct systems. The IS/PND addressed water transfers only for the 2001 calendar year.*

*Western Canal WD, located in Butte and Glenn Counties of the northern Sacramento Valley, and Yuba County Water Agency (Yuba County WA) and Browns Valley Irrigation District, located in the southern Sacramento Valley, were the willing sellers identified for the water acquisition. Proposed water acquisition from Western Canal WD was via rice crop idling. The DWR proposal called for transfer of 16,754 acre-feet of water, involving 5,077 acres, from participating farmers. This would increase the percentage of idled rice land in the district from 9 to 18 percent. Water acquired from Western Canal WD would be stored in Lake Oroville, transferred through the Delta, and stored in San Luis Reservoir prior to release to contractors served by the California Aqueduct.*

*DWR also proposed to acquire water from Yuba County WA from water stored in New Bullards Bar Reservoir (52,912 acre-feet) and groundwater substitution (61,140 acre-feet). Browns Valley Irrigation District also proposed to provide water through groundwater substitution (3,500 acre-feet) and stored water from Collins Reservoir (4,500-acre feet).*

*DWR proposed to conduct water transfers during the summer and fall months, with potential benefits to migrating winter-run salmon and minimizing effects to Delta smelt. Impacts to wildlife were determined to be less than significant. No impacts to power were predicted because the dry year purchases would augment exports to levels reflecting normal year pumping rates.*

*Relationship to the EWA EIS/EIR: The Western Canal WD IS/PND describes water acquisition via groundwater substitution, surface water, and crop idling in the upstream from the Delta Region. The document also describes conveyance of the acquired water through the Delta. Information in this document was used to describe similar actions proposed for the EWA program.*

- ~~Arvin Edison Water Management Project Negative Declaration, May 1996 (expansion of groundwater bank).~~
- Arvin-Edison Water Storage District, 1996. Arvin-Edison Water Management Project, Negative Declaration.

*Abstract: This document describes Arvin-Edison Water Storage District's (Arvin Edison WSD) proposal to increase its conjunctive use program's peak capacity for groundwater storage and recovery. Arvin Edison WSD is in the southern San Joaquin Valley and provides water to irrigate 130,000 acres. The proposed project included construction of spreading basins to recharge groundwater, groundwater pumping wells, pumping stations, and distribution pipelines. Water not required for crop irrigation would be diverted to the spreading basins for groundwater recharge. All the land involved in the project was farmland and all effects of construction and operations were determined to be less than significant.*

*Relationship with EWA EIS/EIR: EWA agencies could use the facilities for groundwater storage in the Flexible and Fixed Purchase Alternatives. The document is therefore incorporated by reference.*

- ~~Final EIR for the Semitropic Groundwater Banking Project, July 1994 (construction and operation of groundwater bank).~~
- Semitropic Improvement District of Semitropic Water Storage District and Metropolitan Water District of Southern California, 1994. Semitropic Groundwater Banking Project, Draft Environmental Impact Report, Environmental Planning Technical Reports

*Abstract: The Semitropic Water Storage District (Semitropic WSD) is in north central Kern County in the southern San Joaquin Valley, with approximately 163,000 irrigated acres. Prior to connection with the SWP, it relied entirely on stored groundwater as its water supply. In 1994 Semitropic WSD was receiving SWP surface water from Kern County Water Agency (Kern County WA). Metropolitan Water District of Southern California (Metropolitan WD), a project cosponsor, serves urban, industrial, and agricultural customers in southern California.*

*The proposed project addressed in the EIR was intended to optimize the use and distribution of water resources, to recharge groundwater and reduce overdraft, and to increase operational reliability and flexibility of Semitropic WSD's water delivery system. Management of the under-utilized groundwater basin using surface water supplies would provide Semitropic WSD and Metropolitan WD additional capability to manage their water supplies. Semitropic WSD's acquisition of pool water from Kern County WA would reduce the overdraft status in its service area. The proposed project would also make Semitropic WSD less reliant on SWP supplies during periods (droughts) when supplies are less reliable.*

*The EIR addresses three alternatives: the No Action, Desalination of Agricultural Return Flows, and the Semitropic Groundwater Banking Project (the proposed project). The Semitropic Groundwater Banking Project includes groundwater management features along with use of Metropolitan WD's SWP allocation water in lieu of pumping groundwater for irrigation or use of the surface water to recharge the aquifer. Semitropic WSD would then return to Metropolitan WD its previously stored water, either through groundwater pumping or through transfer of an equivalent quantity of its SWP allocation. The primary environmental effects of the proposed project were determined to be temporary and related to the construction of project facilities.*

*Relationship to the EWA EIS/EIR: The Semitropic EIR describes source shifting and groundwater management practices similar those proposed for EWA water management. EWA agencies could use the Semitropic groundwater facilities for groundwater storage in the Flexible and Fixed Purchase Alternatives and the document is incorporated by reference.*

- ~~Kern Water Bank EIR, 1986 (operation of groundwater bank).~~
- California Department of Water Resources, December 1986. *Final Environmental Impact Report, Artificial Recharge, Storage, and Overdraft Correction Program, Kern County, California (Kern Water Bank EIR).*

*Abstract: The Kern Groundwater Bank was established to address a portion of the requirements of the SWP for development of water storage facilities that provide dependable water supplies to SWP customers. This EIR covered the aspects of land acquisition to reduce groundwater overdraft through irrigation reduction and in enhancing wildlife habitat. The proposed action addressed in the EIR was intended to increase SWP firm yield by approximately 160,000 acre-feet annually. The project stores SWP water in the Kern County Groundwater Basin during wet years and withdraws the water during dry years. Through conjunctive use of ground and surface waters, overdraft conditions for the Kern County Groundwater Basin could be addressed. Development of the Kern Water Bank was intended to be completed in multiple phases.*

*This EIR analyzed the effects of the first phase from acquisition of lands and design/construction/operation of groundwater recharge areas. Alternatives analyzed in the Kern Water Bank EIR included alternative groundwater sites or the construction of a Los Banos Grandes Reservoir. The proposed action described in the EIR includes acquisition of 46,000 acres, construction of a 10-mile lined canal with three pumping plants with capacities ranging from 200 to 500 cfs, construction of 1,600 acres of spreading grounds, construction of 60 new wells and conversion of 50 existing wells, construction of roads and other operation facilities, construction of surface facilities to connect new canals to spreading basins and wells to conveyance facilities, and mitigation for biological and physical effects of project construction.*

*Relationship to EWA EIS/EIR: EWA agencies could use the Kern Water Bank for stored groundwater purchase, source shifting, and groundwater storage. The Kern Water Bank EIR describes the effects of groundwater management in the Kern Basin and is therefore incorporated into this document by reference.*

- ~~Arvin Edison Water Management Project Negative Declaration, May 1996 (contract between Arvin Edison and the Metropolitan Water District (WD) to allow Metropolitan WD to make use of the additional storage in Arvin-Edison's groundwater basin).~~
- ~~Semitropic Groundwater Banking Project Environmental Impact Report, July 1994 (construction and operation of groundwater bank).~~

## **Chapter 4, Surface Water Supply and Management**

### **Page 4-4**

The first paragraph in Section 4.1.2.1.2 on page 4-4 has been updated to describe Glenn Colusa ID's water rights and its diversions from the Sacramento River, Stony Creek, and other tributaries. Additionally, the text has been updated to clarify the application of Term 91 curtailments (LA07-4 and LA07-5):

*Glenn Colusa ID diverts water during the irrigation season under a CVP settlement contract from the Sacramento River and Stony Creek. Glenn Colusa ID may, according to its contract, also divert water for beneficial use. Glenn Colusa ID holds pre- and post-1914 appropriative water rights to divert water from the Sacramento River, Stony Creek, and other tributaries thereto. Glenn Colusa ID diverts water during the irrigation season in accordance with the terms of its Sacramento River Settlement Contract with Reclamation. The Sacramento Settlement Contract also provides for annual deliveries of CVP water during July and August and for beneficial use from November through March (typically for rice straw decomposition) to the extent authorized by California law, subject to Water Right Term 91 curtailments.<sup>4</sup> Water Right Term 91 curtailments only apply to Water Rights Permit No. 21101 and not to GCID's pre-1914 or other post-1914 water rights.*

### **Page 4-12**

The fourth complete paragraph on page 4-12 under Section 4.1.3 has been updated to clarify the conditions that prompt export pumping of the Sacramento River (Comment LA17-17):

*More than two-thirds of the land in the south Delta receives irrigation water from the Middle River, Old River, Grant Line Canal, and associated sloughs. The San Joaquin River is the major tributary flowing into the south Delta; however, due to flow depletions upstream from the Delta, San Joaquin River flows are often very low. At such times, water from the Sacramento River is drawn to the south Delta by a combination of SWP/CVP pumping and other diversions (Entrix 1996). Both the San Joaquin and Sacramento Rivers flow into the*

*south Delta; however, the San Joaquin River is the major contributor. During times when San Joaquin River flows are low, additional Sacramento River water is drawn to the south Delta by a combination of SWP/CVP pumping and other diversions.*

**Page 4-13**

The fourth sentence in the first paragraph in Section 4.1.3.1 has been deleted because it is regarding water quality and not water supply (Comment LA17-10):

Water conditions in the south Delta area are influenced in varying degrees by natural tidal fluctuation; San Joaquin River flow and quality; local agricultural drainage water; CVP and SWP export pumping; local diversions; inadequate channel capacity; and regulatory constraints. These factors affect water levels and availability at some local diversion points. When the CVP and SWP are exporting water, water levels in local channels can be drawn down, causing problems for landowners that need to divert from these areas. ~~If local agricultural drainage water is pumped into the channels where circulation is poor, such as shallow, stagnant, or dead-end channels, water quality can be affected.~~ Channels that are too shallow and narrow also restrict flow and the volume of water available for agricultural lands.

**Page 4-14**

The reference in the first sentence of the second full paragraph on page 4-14 has been updated as follows (Comment SA05-9):

According to DWR's Response Plan for Water Level Concerns in the South Delta Under D-1641 (DWR 2002 2003)...

**Page 4-15**

The last sentence of the first full paragraph on page 4-15 describing the Joint Point of Diversion stages has been revised to more clearly explain Stages 1 through 3 and the mitigation requirements at each stage (Comment SA05-8):

~~The stages are not sequential, but they vary as to magnitude and required mitigation (See Table 4-2).~~ *The various stages of JPOD allow for incremental increases in pumping from Stage 1 to Stage 3. Although Stage 1 JPOD and rediversions may be conducted at a higher instantaneous rate under certain circumstances than Stage 2 diversions, effectively, higher total quantities of pumping are allowed under Stage 2 and even higher quantities under Stage 3. Authorization for Stage 1 JPOD pumping to recover export reductions prohibits the Projects from annually exporting more water than the individual Projects would have exported without the use of each other's pumping facilities; Stages 2 and 3 JPOD authorizations do not include such limitations. In addition, the mitigation measures for each Stage of JPOD incorporate and add to the requirements of the previous stage. (See Table 4-2.)*

**Page 4-16**

The last sentence of the first paragraph on page 4-16 is revised to clarify information regarding conveyance of water to Santa Clara Valley WD (Comment LA16-9):

Imported water is conveyed to the district through ~~two~~ <sup>three</sup> main conveyance systems ~~pipelines~~: the South Bay Aqueduct, which ~~conveys~~ <sup>carries</sup> water from the SWP, and the ~~San Felipe Division Santa Clara Conduit and Pacheco Conduit~~, which ~~conveys~~ <sup>bring</sup> water from the CVP.

**Page 4-21**

The following text has been added to the end of the last paragraph in Section 4.2.3.1.1 to describe how multi-year transfers would affect refill criteria (Comment LA18-4):

*South Feather Water and Power would then pay back the Projects the following summer for any quantity of water taken at a time when the Projects could have pumped the water (when the Delta is in balanced conditions). Stored reservoir water purchased from South Feather Water and Power would not be purchased a second year in a row if the reservoirs did not refill the previous year.*

Section 4.2.3.1.2 on page 4-21 has been modified to clarify that EWA agencies intend refill to work in the same manner as in previous years. The refill criteria as presented in Section 4.2.3.1.2 describe refill in a shortened form (a paragraph) compared to the pages that make up the actual refill criteria agreement. The text has been changed as follows (Comment LA18-10):

*Refill would occur generally as described in this paragraph; a sample of a refill criteria agreement for illustrative purposes only can be found at [http://calwater.ca.gov/Programs/EnvironmentalWaterAccount/adobe\\_pdf/EWA\\_YC\\_WA\\_Final\\_Draft.pdf](http://calwater.ca.gov/Programs/EnvironmentalWaterAccount/adobe_pdf/EWA_YC_WA_Final_Draft.pdf). The water released from New Bullards Bar Reservoir would be refilled from Yuba River flows in the winter and spring months following the transfer.*

The first paragraph of Section 4.2.4 on page 4-21 has been revised to more clearly describe the effects of the No Action Alternative (Comment LA17-19):

~~If the EWA were not implemented, actions to protect fish would continue as described in the affected environment section; fish actions would occur only in response to ESA take limits. pump curtailments would occur only in response to regulatory requirements (primarily ESA take limits). Compliance with the biological opinions, which represent the regulatory baseline, would result in pumping reductions, resulting in reduced deliveries. Reduced deliveries would be more likely in dry years because in wet years the Projects would be more likely to be able to recover from export reductions for fish protection. Pumping reductions would result in reduced deliveries, which would be more likely in dry years because in wet years the Projects would be more likely to be able to recover from export reductions for fish protection. DWR and Reclamation would continue to attempt to re-operate the SWP and CVP, respectively, to avoid decreased deliveries to export users. These actions are described in Section 2.2.2.3.~~

The following text has been added to the end of the last paragraph in Section 4.2.3.1.2 to describe how multi-year transfers would affect refill criteria (Comment LA18-4):

*If full refill did not occur, Yuba County WA would consider selling less water the following year. The EWA agencies would not purchase water if the transfer would cause a significant effect on water supply.*

The following text has been added to the end of the last paragraph in Section 4.2.3.1.3 to describe how multi-year transfers would affect refill criteria (Comment LA18-4):

*If the EWA agencies acquired water through a multi-year contract with Placer County WA, water could be transferred during a second year, even if the reservoirs did not refill the year before, as long as the two reservoirs did not drop below a combined 50,000 acre-feet of storage (minimum operating levels).*

**Page 4-30**

The reference in the first sentence of the third paragraph on page 4-30 has been updated as follows (Comment SA05-9):

According to DWR's Response Plan for Water Level Concerns in the South Delta Under D-1641 (DWR ~~2002~~ 2003),...

**Page 4-34**

In the first paragraph on page 4-34, the following footnote has been added between the following sentences to clarify the conditions for dredging in the Southern Delta (Comment SA05-10):

As mentioned in Section 4.2.3.1, DWR installs temporary pumps to make irrigation possible at low water levels; permanent solutions, such as dredging, are also being considered. These practices would continue with the EWA such that the water supply would not be decreased to south Delta water users.

*Footnote: Dredging is contingent upon DWR and USBR obtaining Corps dredging permits as required by the SWRCB.*

**Page 4-36**

The last paragraph on page 4-36 has been revised to more accurately describe the potential for effects of source shifting on Metropolitan WD (Comment LA03-18):

EWA agencies' management of water via source shifting ~~would~~ *may* change the pattern of reservoir level fluctuations. Metropolitan WD ~~has~~ *may have* adequate alternative supplies and storage to provide for a maximum of 100,000 acre-feet of water that may be necessary for source shifting. It is anticipated that Metropolitan WD would ~~not~~ participate in source shifting if adequate supplies were ~~not~~ available for their water users. ~~The 200,000-acre-feet represent about 10 percent of the Southern California storage capacity available to Metropolitan WD. Because of the relatively small quantity of~~



~~water being deferred and the large variety of local sources for providing a temporary in lieu supply during the period of deferment, the action would not affect the reliability of Metropolitan WD's water supplies. Therefore, the effect on water supply is less than significant. Because Metropolitan WD has developed a diverse portfolio of resources to utilize depending on water supply conditions, the action would not affect the reliability of Metropolitan WD's water supplies during the deferment period (although additional operational actions had to be taken in the past to compensate for adverse water quality impacts). There are both water quality and capacity concerns with the payback of this deferment; however, because of Metropolitan WD's operational flexibility, the effect on water supply would be less than significant.~~

**Page 4-37**

The last sentence of the first paragraph on page 4-37 has been revised to more accurately describe the potential for beneficial effects from predelivery (Comment LA03-18):

Because Metropolitan WD would be receiving the water earlier than it would under the Baseline Condition, the effect on water supply ~~is~~ *could be* beneficial.

**Page 4-43**

Text has been added to the end of the paragraph in Section 4.2.8.1 to include the following clarification (Comment NP05-14):

The EWA agencies will require the willing seller of water *from* crop idling to maintain their drainage systems at a water level that would not reduce the supplies of downstream users. *This water would not be purchased by the EWA; it is part of the water that the willing seller would have diverted and returned to the system without the EWA.*

Text has been added as the first paragraph in Section 4.2.8.2 to further explain mitigation for south Delta water levels (Comment LA17-23):

*The SWRCB and the Response Plan identify many measures that the DWR and Reclamation must take to mitigate for impacts to south Delta water users. These measures include modifications to agricultural diversion structures, including changes in the intake structures that would facilitate agricultural diversions from shallow water; dredging to ensure that agricultural water diverters have adequate water depths at their points of diversion to divert water during JPOD operations; and a commitment by DWR and Reclamation to work in good faith with local diverters and the South Delta WA providing portable pumps or suspending JPOD operations when water levels of concern have been experienced. The SWRCB (under the Response Plan) deems these mitigation measures as sufficient to address concerns of the south Delta water users; these measures are likewise sufficient to reduce potential impacts to a less-than-significant level in the EWA EIS/EIR. Increased export pumping from the Delta in July through September compared to the Baseline Condition could*

~~lower south Delta water levels and affect irrigation supply for agricultural water users. Actions taken by DWR, such as installation of temporary pumps or dredging, would reduce effects to South Delta water users. If EWA pumping decreases south Delta water levels, the EWA agencies will pay their share for additional actions needed to increase reduce effects to south Delta water levels users to the Baseline Condition.~~

**Page 4-44**

Footnote 18 on page 4-44 is revised to clarify that transfers between Project contractors and other users may not be part of the Dry Year Program, but are analyzed with this program because the operations and effects are similar (Comment LA07-6):

<sup>18</sup> Transfers negotiated between CVP and SWP contractors and other water users, such as the Forbearance Agreement with Westlands WD and the recent crop idling acquisition by Metropolitan WD from water agencies upstream from the Delta, are *evaluated as part of the Dry Year Program. Although not a part of the Dry Year Program, the effects of these transfers would be similar to those under the Dry Year Program. Additionally, these types of transfers could be a part of the Dry Year Program in the future.*

**Page 4-51**

The seventh reference listed in Section 4.3 has been changed to reflect more up-to-date information, as follows (Comment SA05-9):

DWR. 2002. 2003. Response Plan for Water Level Concerns in the South Delta Under Water Rights Decision 1641.

## **Chapter 5, Water Quality**

**Page 5-8**

The text under Section 5.1.2.7 has been revised as follows to remove all discussion pertaining to Order WR 2001-05 (Comment SA05-11):

The WQCP for the Bay-Delta Estuary contains the current water quality objectives. *SWRCB Decision-1641 (D-1641) and Order WR 2001-05 contains the current water right requirements to implement the Bay-Delta flow dependent objectives. D-1641 includes both long-term and temporary requirements. Order WR 2001-05 requires partial implementation that will remain in effect up to 35 years. In D-1641 and in Order WR 2001-05, the SWRCB assigned responsibilities, for specified periods, to water users (including the U.S. Bureau of Reclamation (Reclamation) and the Department of Water Resources (DWR) in D-1641, and DWR in Order WR 2001-05) in the watersheds of the San Joaquin River upstream of Vernalis, the Mokelumne River, Putah Creek, Cache Creek, within the boundaries of the North Delta Water Agency, and within the Bear River watershed for meeting these requirements. These responsibilities require that the water users CVP and SWP be operated in these watersheds will contribute specified amounts of water to protect water*

quality, and that DWR and/or Reclamation will ensure that the objectives are met in the Delta (SWRCB 1997).

## **Chapter 6, Groundwater Resources**

### **Page 6-17**

Figure 6-7 has been revised to more accurately define the contours (Comment LA16-11).

(Figure 6-7 is located at the end of this chapter).

### **Page 6-19**

Figure 6-8 has been revised to more accurately define the contours (Comment LA16-11).

(Figure 6-8 is located at the end of this chapter).

### **Page 6-42**

The second paragraph on page 6-42 has been updated as follows to include definitions of groundwater substitution, groundwater purchase, and crop idling (Comment LA16-14):

EWA actions that could affect groundwater resources include the acquisition of water through groundwater substitution (*users forego their surface water supplies and pump an equivalent amount of groundwater as an alternative supply*), groundwater purchase (*groundwater that was previously stored by the selling agency with the intent to sell a portion of the water at a later date*), and crop idling (*farmers idle land that they would otherwise have placed in production*), in addition to the storage of acquired EWA water in groundwater banking facilities.

### **Page 6-44**

The last sentence of the first paragraph on page 6-44 is revised to clarify how groundwater pumping may affect surface water (Comment LA16-12):

The close hydrologic interaction of surface water and groundwater makes this determination difficult because increased pumping of groundwater may induce increased recharge from a surface water body *to groundwater, or may prevent groundwater from flowing to surface water in cases where groundwater naturally recharges surface bodies*, and thereby reduce the amount of surface water that is actually available to downstream users.

### **Page 6-45**

The first sentence on page 6-45 is revised for clarification (Comment LA16-13):

Regional groundwater level declines are provided here to illustrate the magnitude of regional storage reduction and are not intended to measure significance *in the local context*.

**Page 6-47**

Units of ‘acre-feet’ have been added to the “EWA Acquisition Range” in Table 6-6 (Comment LA16-15):

<b>Table 6-6 Flexible Alternative Estimate of the Groundwater Drawdown for the Redding Basin</b>	
EWA Acquisition Range	10,000 to 40,000 <i>acre-feet</i>
Estimated Regional Drawdown based on Range of Possible One-Year EWA Asset Acquisition	5 to 19 feet
Normal Year Seasonal Fluctuations	2-3 feet (unconfined) 2 – 5 feet (semi confined – confined)
Drought Year Seasonal Fluctuations	4-10 feet (unconfined) 4-16 feet (semi-confined and confined)

Source for groundwater level fluctuations: DWR Northern District 2002

**Page 6-48**

The following text has been added to the second sentence of the third full paragraph on page 6-48 (Comment LA16-17):

To reduce these effects, the groundwater mitigation measures specify that Anderson-Cottonwood ID establish a monitoring program (*see Section 6.2.7.2.3 for a complete description of the monitoring program*) in addition to existing monitoring within the district prior to an EWA-related groundwater substitution transfer.

**Page 6-51**

The following text has been added to the third sentence of the second full paragraph on page 6-51 (Comment LA16-17):

Through the Well Review process identified in the groundwater mitigation measures (*see Section 6.2.7.2.1 for a complete description of the Well Review process*), the purchasing agency would review the location and screened interval of the proposed production wells.

The final paragraph on page 6-51 has been revised as follows to clarify the objective of the monitoring and mitigation program required by sellers (Comment NP05-59):

EWA groundwater substitution transfers could decrease groundwater levels that could cause potentially significant effects on land subsidence. To reduce these effects, the groundwater mitigation measures stipulate that all sellers to the EWA Project Agencies have a monitoring and mitigation program in place to ~~address~~ assess potential land subsidence effects *and reduce effects to a less-than-significant level.*

The following footnote has been added after the words, “review team” in the last line on page 6-51 (Comment LA16-17):

*Footnote: For a definition and discussion of the responsibilities of the Review Team, see Section 6.2.7.2.*

**Page 6-53**

The second to last sentence in the first paragraph on page 6-53 has been revised as follows to clarify the objective of the monitoring and mitigation program required by sellers (Comment NP05-60):

The groundwater mitigation measures further stipulate that all sellers to the EWA Project Agencies have a monitoring *program to detect adverse effects* and a mitigation program ~~in place to address~~ *mitigate* adverse effects should they occur.

The last sentence in the last paragraph on page 6-56 has been revised so that its relationship to the section is clearer. (Comment LA16-20):

As shown in Table 6-8, the potential groundwater level declines resulting from the EWA acquisitions would range from one to ten feet in addition to seasonal fluctuation. The magnitude of this potential drawdown is within the range of seasonal fluctuations. According to well data for Glenn Colusa ID (Table 6-9), ~~60 percent~~ *only 50 percent* of the district's domestic wells and 10 percent of their agricultural wells are 110 feet deep, or shallower. *With an estimated maximum drawdown of 10 feet*, it is unlikely that the transfers would result in regional effects to existing wells.

**Page 6-63**

A reference to a BMO definition (Comment LA16-22) is included in the first sentence in the last paragraph on the page 6-63:

Glenn County Ordinance No. 1115 calls for the development of BMOs (*see page 6-4 for definition*) and a monitoring network designed to detect changes in groundwater level, quality, and land subsidence.

**Page 6-64**

An explanation of the Technical Advisory Committee has been added to the second line of the first paragraph on page 6-64 as a footnote (Comment LA16-23):

*Footnote: The Glenn County Technical Advisory Committee (TAC) is a nine-person committee nominated by the Water Advisory Committee and appointed by the Glenn County Board of Supervisors. The committee includes representatives of the Glenn County Departments of Public Works and Development Services, the Cooperative Extension, the Environmental Health Office, the Agricultural Commissioner, and DWR, and also includes four at-large members selected to represent the north, south, central and east areas of Glenn County. All members are knowledgeable in groundwater management and hydrology. The TAC collects pertinent hydrologic data,*

*investigates possible causes for the BMO noncompliance, and recommends actions to resolve the BMO noncompliance to the Water Advisory Committee.*

**Page 6-71**

The third-to-last sentence in the third paragraph has been clarified (Comment NP05-63):

~~To reduce these effects, the~~ The groundwater mitigation measures stipulate that all sellers have a monitoring and mitigation program in place to ~~address~~ reduce potential land subsidence effects.

**Page 6-80**

The third paragraph, sixth sentence on page 6-80, has been corrected (Comment LA18-12):

Subsequent to the development of the *Yuba River Development Program* ~~Yuba River Operating Program~~, deliveries of surface water began with the completion of the initial phase of the South Yuba Canal in 1983.

**Page 6-81**

The first sentence on page 6-81 has been modified to clarify the transfer amount from the North Yuba subbasin (Comment LA18-13):

For example, Grinnell 2002, indicated regional declines associated with a ~~65,000~~ 47,500 acre-foot transfer from the North Yuba subbasin (*65,000 acre-foot total transfer from the North and South Yuba basins*) were on the order of 10 feet.

**Page 6-82**

Table 6-14 and the following paragraph have been modified to remove the duplication between the 2001 EWA and Dry Year Program (Comment LA18-14):

<b>Table 6-14</b>							
<b>Yuba County WA Past Groundwater Transfers (acre-feet)</b>							
<b>Water Agency</b>	<b>Browns Valley ID</b>	<b>Brophy WD</b>	<b>Ramirez WD</b>	<b>Hallwood ID</b>	<b>South Yuba WD</b>	<b>Dry Creek MWC</b>	<b>Cordua ID</b>
1991 State Drought Water Bank	2,700	36,000	13,300	6,500	17,300		6,500
1992 State Drought Water Bank	4,800	-	-	-	-	-	-
SAFCA Transfer <sup>1</sup>	3,681	-	-	-	-	-	-
1994 State Drought Water Bank	3,800	-	12,700	-	-	-	9,600
2001 Dry Year Purchase Agreement <sup>3</sup>	8,000 <sup>2</sup>	-	17,000	12,000	9,000	9,100	-
<del>2001 EWA</del>	<del>3,300</del>		<del>17,000</del>	<del>12,000</del>	<del>10,000</del>	<del>9,200</del>	<del>14,000</del>
2002 EWA	5,217	10,901	8,786	7,381	8,193	5,417	9,363

<sup>1</sup>Groundwater substitution transfer that occurred in the mid-1990s to SAFCA.

<sup>2</sup>May include some reservoir release from Collins Reservoir.

<sup>3</sup>Contract Amount

As shown in Table 2-5 in Chapter 2, Yuba County WA could transfer 85,000 acre-feet via groundwater substitution under the Flexible Purchase Alternative. This amount exceeds the ~~total amounts of 54,400 and 55,258 acre-~~feet transferred to the EWA Program in ~~2001 and 2002, respectively,~~ yet is close to the amount transferred to the 1991 State Drought Water Bank (82,300 acre-feet). As discussed above, Yuba County WA has experienced and mitigated impacts resulting from previous transfers and has developed a monitoring program for prior EWA-related transfers.

#### **Page 6-120**

The following sentence has been inserted before the last sentence of the first paragraph on page 6-120 to better characterize land subsidence (Comment LA09-1):

The CEQA environmental review addressed the potential for further subsidence from the Semitropic Banking Project, and concluded that banking activities would not decrease groundwater elevations below that which would have occurred if Semitropic WSD had not established a bank. *DWR also monitors subsidence in the Kern Water Bank area, and no significant permanent subsidence has been measured, nor is it likely to occur in the future (Steele 2003).* Consequently, this review concluded that the banking project would not induce subsidence.

Text has been added after the second sentence in the fourth paragraph on page 6-120 to further explain monitoring in the Kern Fan Element (Comment LA09-2):

Groundwater in the Kern Fan Element banking projects is monitored routinely for TDS and constituents that may be of concern, including DBCP, EDB, and nitrates. These constituents have been detected at elevated concentrations in shallow groundwater north of the Kern River and west of Enos Lane. *The Kern Water Bank Authority has tested monitoring wells and supply wells for DBCP and EDB; neither constituent has been detected. Nitrate concentrations in all wells included within the Kern Water Bank are below the State maximum contaminant level of 45 mg/L (Steele 2003).* Uranium is also monitored in several areas of concern, and arsenic was recently added as an element to monitor. Additionally, California Code of Regulations Title 22 drinking water analyses of public supply wells in the local area and neighboring agencies actively monitor groundwater quality (KCWA 1995c).

**Page 6-121**

Text has been added before the last sentence of the second paragraph on page 6-121 to make note of water quality arsenic concentrations in the Stored Recovery Unit within the Semitropic water bank.

The placement and operation of these wells are consistent with the criteria set forth in a February 1992 draft KWB Groundwater Monitoring Program that was designed originally for the banking projects in the Kern Fan Element (Semitropic WSD 1994). *The Kern County groundwater basin has an average arsenic concentration of 10 µg/L (Saracino-Kirby, Inc. 2000). According to the Stored Water Recovery Unit Supplemental EIR (Bookman-Edmonston 1999), arsenic concentrations in four operating wells within the Semitropic WSD ranged from 23 µg/L to 42 µg/L, near the upper end of the acceptable range but less than the Federal and State MCL for arsenic of 50 µg/L. Groundwater with higher arsenic concentrations would need to be blended with water taken from other wells with lower arsenic concentrations, or treated in some other manner. It cannot be established that extraction of stored water will have an adverse impact on regional or downstream water quality since the groundwater currently complies with current MCLs (Bookman-Edmonston 1999).* For any new groundwater storage unit, additional monitoring wells are to be installed in the northwestern section of the district to monitor for groundwater levels and groundwater quality (Semitropic WSD 2000b).

**Page 6-146**

The fifth paragraph on page 6-146 has been revised to reiterate that the Pre-Purchase Groundwater Evaluation examines regional effects, some of which may be outside the willing seller's boundaries (Comment NP05-61):

Prior to the evaluation, the selling agency and the Review Team will discuss and agree on the level of the Pre-Purchase Evaluation. *They will use*



*groundwater information within the seller's boundaries as well as information from immediately surrounding areas.*

**Page 6-152**

The text in Section 6.2.7.3 has been revised to reflect that tribes will be notified if a groundwater transfer will potentially adversely affect Indian Trust Assets regardless of the distance from Indian trust land (Comments NA01-1, NA01-2):

*EWA groundwater transfers may not cause significant adverse effects to nearby federally reserved Indian Trust Assets (ITAs). To ensure this prevent adverse effects, EWA agencies will require groundwater extractions within 1-2 miles of Indian trust will require to include a more detailed pre-purchase groundwater evaluation, which can would include estimates of potential interference effects to nearby Indian wells ITAs. Before finalizing acquisition contracts, formal consultation will take place between the potentially affected Indian tribe, the willing seller, and appropriate EWA agencies. If EWA agencies find that a proposed groundwater transfer could potentially adversely affect ITAs, EWA agencies and the willing seller will consult with the potentially affected tribe(s) and the Bureau of Indian Affairs, before finalizing acquisition contracts. During this consultation, additional commitments will would be developed to further minimize negate or minimize potential effects. Such commitments can could include more frequent groundwater monitoring and, or the discontinuation of EWA groundwater pumping, if groundwater levels are drawn down to a level of concern near federally reserved Indian Trust Assets. that would cause one or more of the effects that are found in Section 6.2.2. The consultation process would ensure that all potential adverse effects are addressed prior to an EWA transfer.*

**Page 6-153**

The text in the fifth full paragraph on page 6-153 has been revised to reflect that there are many ways to implement a project and avoid significant impacts (Comments LA07-3 and LA18-16):

*These cumulative effects could be potentially significant if these programs are not coordinated. It is assumed that each program will institute groundwater mitigation measures similar to those stipulated under the EWA Program. The approach in the EWA EIS/EIR is one based primarily on measures designed to avoid causing adverse groundwater effects; other programs may take other approaches, such as mitigating impacts on a site-specific basis.*

**Chapter 8, Air Quality**

**Page 8-14**

The text describing the assessment methods for groundwater substitution has been updated to include more information regarding the assumptions for pump mixture

within each county. The following text has been added as a new paragraph after the last line in Section 8.2.1.1 (Comment LA18-3):

*Research was conducted to determine the actual pump mixture (diesel, electric, or propane) within each district. Calls were made to the County Farm Bureaus, Agricultural Commissioners, Planning Departments, pump companies, and Farm Advisors through U.C. Davis Cooperative Extension. Pump mixture data were available through these sources only for Yuba and Colusa Counties. Yuba County has 35 percent diesel pumps (Grinnell 2003) and Colusa County has 95 percent diesel pumps (Price 2003). For Yuba and Colusa Counties, these figures are carried forward as assumptions for the pump mixture that would be used for pumping groundwater for the EWA. The conservative estimate of 100 percent diesel is used for the remaining counties.*

**Page 8-16**

The source for Table 8-4 has been changed to more accurately reflect the information obtained from the California Farm Bureau Federation by revising the Source text under Table 8-4 as follows:

*Source: NO<sub>x</sub> grams/bhp-hr for emissions estimates for diesel and propane pumps obtained from Greg Gilbert, Sacramento Metropolitan Air Quality Management District, as reported in California Farm Bureau Federation, 1999.*

**Page 8-29**

The first bullet in Section 8.2.7.1 has been updated as follows to include a quantification of the mitigation measure (Comments FA01-18 and LA03-22):

*EWA agencies will require willing sellers to use only electric pumps (see Tables 8-11 and 8-12 for Flexible Purchase and Fixed Purchase Alternatives' project-related emissions after mitigation). For each groundwater pump that is not electric that is used for groundwater substitution for the EWA, the willing seller will retrofit non-program pumps in amounts necessary to offset the maximum increases in project-related air pollutant emissions; or*

<b>Table 8-11</b> <b>Flexible Purchase Alternative</b> <b>Groundwater Substitution Emissions Using Electric Pumps</b>					
<b>County</b>	<b>Maximum Transfer Amount (AF)</b>	<b>Project Emissions NO<sub>x</sub> tons/year</b>	<b>CARB SIP Budget NO<sub>x</sub> tons/year</b>	<b>Project Emissions PM<sub>10</sub> tons/year</b>	<b>CARB SIP Budget PM<sub>10</sub> tons/year</b>
Sacramento	10,000	0.55	138.70	0.04	10.95
Yolo	5,000	0.27	1,565.90	0.02	113.15
Sutter	15,000	0.82	751.90	0.05	54.75
Butte	83,000	4.52	94.90	0.30	7.30
Shasta	40,000	2.16	NA	0.14	NA
Colusa	30,000	1.64	58.40	0.11	1.83
Glenn	42,000	2.29	76.65	0.15	3.65
Yuba	85,000	4.62	NA	0.31	NA
Merced	40,000	1.37	357.70	0.09	25.55

Note: Shasta and Yuba Counties are not included in CARB's estimate.

<p align="center"><b>Table 8-12</b>  <b>Fixed Purchase Alternative</b>  <b>Groundwater Substitution Emissions Using Electric Pumps</b></p>					
<b>County</b>	<b>Maximum Transfer Amount (AF)</b>	<b>Project Emissions NO<sub>x</sub> tons/year</b>	<b>CARB SIP Budget NO<sub>x</sub> tons/year</b>	<b>Project Emissions PM<sub>10</sub> tons/year</b>	<b>CARB SIP Budget PM<sub>10</sub> tons/year</b>
Sacramento	10,000	0.55	138.70	0.04	10.95
Yolo	5,000	0.27	1,565.90	0.02	113.15
Sutter	15,000	0.82	751.90	0.05	54.75
Butte	35,000	1.89	94.90	0.13	7.30
Shasta	35,000	1.89	NA	0.13	NA
Colusa	30,000	1.64	58.40	0.11	1.83
Glenn	35,000	1.89	76.65	0.13	3.65
Yuba	35,000	1.89	NA	0.13	NA
Merced	35,000	1.89	357.70	0.13	25.55

Note: Shasta and Yuba Counties are not included in CARB's estimate.

The second bullet in Section 8.2.7.1 has been deleted and incorporated into the first bullet as shown above.

~~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.~~

The mitigation measures for groundwater substitution have been expanded to include other options for emissions reduction. The following text has been added to the end of bullet 3 in Section 8.2.7.1 (Comment LA03-21):

- EWA agencies will require the willing sellers to purchase offsets to compensate for producing project-related emissions. *Offsets can incorporate a variety of emission reduction options including conversion of diesel pumps to electric or propane (as stated above), reduced fossil fuel consumption because of crop idling transfers (approximately 15 percent reduction), an accelerated pump repair schedule (approximately 20 percent reduction), or conversion to solar pumps (complete reduction in emissions). The willing seller can also include additional emission reduction options; however, the willing seller must include quantitative data indicating how those options lower the emissions to levels shown in Tables 8-11 and 8-12 (emission quantities if water pumped with electric motors).*

The last sentence of the last paragraph on page 8-29 is revised as follows:

~~Willing sellers will work with~~ EWA agencies *will work with the willing sellers* and the APCD to establish these plans, using mitigation measures described in ~~Table 8-11~~ 8-13 that are appropriate for each site.

#### **Page 8-30**

The table number on page 8-30 has been changed from Table 8-11 to Table 8-13.

## Chapter 9, Fish and Aquatic Ecosystems

### Page 9-252

Two references to the SWRCB Interim Water Quality Control Plan have been revised to reference SWRCB Water Rights Decision No. 1641. The third paragraph on page 9-252 has been revised as follows (Comments LA03-10 and LA15-16):

The model simulations conducted for the Flexible Purchase Alternative included conformance with *the* export requirements set forth in ~~the SWRCB Interim Water Quality Control Plan~~ SWRCB Water Rights Decision No. 1641. Thus, ~~the~~ Delta E/I ratios under the Flexible Purchase Alternative and Baseline Condition would not exceed the maximum export ratio as set by ~~the SWRCB Interim Water Quality Control Plan~~ SWRCB Water Rights Decision No. 1641. (Refer to Appendix H pgs. A49-A60.) However, relaxation...

### Page 9-255

The first paragraph under the subheading "Delta Smelt" has been revised as follows (Comment LA03-23):

Under the Flexible Purchase Alternative (Maximum Water Purchase Scenario), a net reduction in delta smelt salvage would occur over the 15-year period of record included in the analysis, relative to the Baseline Condition. ~~Average~~ ~~a~~Annual salvage estimates with implementation of the Flexible Purchase Alternative under the Maximum Water Purchase Scenario decrease by 135,887 delta smelt relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-56.)

### Page 9-256

The first paragraph under the subheading "Chinook Salmon" has been revised as follows (Comment LA03-23):

With implementation of the Flexible Purchase Alternative under the Maximum Water Purchase Scenario, a net reduction in Chinook salmon salvage would occur over the 15-year period of record *included in the analysis*, relative to the Baseline Condition. ~~Average~~ ~~a~~Annual salvage estimates under the Maximum Water Purchase Scenario would decrease by 1,123,826 Chinook salmon, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-57.)

### Page 9-257

The first paragraph under the subheading "Steelhead" has been revised as follows (Comment LA03-23):

A net reduction in steelhead salvage would occur with implementation of the Flexible Purchase Alternative under the Maximum Water Purchase Scenario, relative to the Baseline Condition, over the 15-year period of record included in the analysis. ~~Average~~ ~~a~~Annual salvage estimates under the Maximum

Water Purchase Scenario would be reduced by 28,928 steelhead, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-58.)

**Page 9-258**

The first paragraph under the subheading “Splittail” has been revised as follows (Comment LA03-23):

With implementation of the Flexible Purchase Alternative under the Maximum Water Purchase Scenario, there would be a net reduction in splittail salvage, relative to the Baseline Condition, over the 15-year period of record included in the analysis. ~~Average a~~ Annual salvage estimates with implementation of the Flexible Purchase Alternative under the Maximum Water Purchase Scenario would decrease by 1,014,290 splittail, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-59.)

**Page 9-259**

The first paragraph under the subheading “Striped Bass” has been revised as follows (Comment LA03-23):

With implementation of the Flexible Purchase Alternative under the Maximum Water Purchase Scenario, there would be a net reduction in striped bass salvage, relative to the Baseline Condition, over the 15-year period of record included in the analysis. ~~Average a~~ Annual salvage estimates with implementation of the Flexible Purchase Alternative under the Maximum Water Purchase Scenario would decrease by 8,935,211 striped bass, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-60.)

**Page 9-265**

The first paragraph under the subheading “Delta Smelt” has been revised as follows (Comment LA03-23):

Under the Flexible Purchase Alternative (Typical Water Purchase Scenario), a net reduction in delta smelt salvage would occur over the 15-year period of record included in the analysis, relative to the Baseline Condition. ~~Average a~~ Annual salvage estimates with implementation of the Flexible Purchase Alternative under the Typical Water Purchase Scenario decrease by 93,690 delta smelt relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-65.)

**Page 9-266**

The first paragraph under the subheading “Chinook Salmon” has been revised as follows (Comment LA03-23):

With implementation of the Flexible Purchase Alternative under the Typical Water Purchase Scenario, a net reduction in Chinook salmon salvage would occur over the 15-year period of record, relative to the Baseline Condition.

~~Average~~ Annual salvage estimates under the Typical Water Purchase Scenario would decrease by 895,433 Chinook salmon, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-66.)

**Page 9-267**

The first paragraph under the subheading “Steelhead” has been revised as follows (Comment LA03-23):

A net reduction in steelhead salvage would occur with implementation of the Flexible Purchase Alternative under the Typical Water Purchase Scenario, relative to the Baseline Condition, over the 15-year period of record included in the analysis. ~~Average~~ Annual salvage estimates under the Typical Water Purchase Scenario would be reduced by 20,386 steelhead, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-67.)

**Page 9-268**

The first paragraph under the subheading “Splittail” has been revised as follows (Comment LA03-23):

With implementation of the Flexible Purchase Alternative under the Typical Water Purchase Scenario, there would be a net reduction in splittail salvage, relative to the Baseline Condition, over the 15-year period of record included in the analysis. ~~Average~~ Annual salvage estimates with implementation of the Flexible Purchase Alternative under the Typical Water Purchase Scenario would decrease by 656,597 splittail, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-68.)

**Page 9-269**

The first paragraph under the subheading “Striped Bass” has been revised as follows (Comment LA03-23):

With implementation of the Flexible Purchase Alternative under the Typical Water Purchase Scenario, there would be a net reduction in striped bass salvage, relative to the Baseline Condition, over the 15-year period of record included in the analysis. ~~Average~~ Annual salvage estimates with implementation of the Flexible Purchase Alternative under the Typical Water Purchase Scenario would decrease by 7,087,274 striped bass, relative to the Baseline Condition *over the 15-year period of record*. (Refer to Table 9-69.)

**Page 9-303**

The third sentence regarding source shifting in the first full paragraph of page 9-303 has been deleted (Comment LA03-25):

The DRIPP, CVPIA Water Acquisition Program, and the EWA Program would operate in the Export Service Area under the EWA cumulative condition. Stored reservoir water is not available for purchase from San Luis, Anderson, Castaic, Perris, Mathews, and Diamond Valley reservoirs in the Export Service

Area. ~~In addition, source shifting would only occur under the EWA Program.~~  
Source shifting is not likely to occur in dry or below normal years....

## Volume 2

### Chapter 10, Vegetation and Wildlife

#### Page 10-53

The first bulleted point on page 10-53, Section 10.2.3 has been revised to read:

- ~~Adversely affect~~ *Cause a substantial adverse effect, either directly or through habitat modifications, to any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations. (See sections 17.11 or 17.12.) A substantial effect is one that affects the population of a species as a whole, not individual members.*

#### Page 10-55

The following conservation measure will be moved to the section beginning "The EWA agencies will ensure through contract terms or other requirements that the following conservation measures will be implemented:...." This conservation measure will also be revised as follows:

The EWA agencies will avoid purchasing water from the same rice field more than 2 consecutive years *or from a rice field that was idled for another program in the previous year.*

#### Page 10-82

The following sentence in the first paragraph has been corrected:

Because the species is adaptive and responds to changes in environmental conditions, the effect ~~due~~ *due* to idling of flooded rice fields is considered to be less than significant.

### Chapter 11, Regional and Agricultural Economics

#### Page 11-33

The third full paragraph on page 11-33 has been revised to include the following effect to landowners (Comment LA03-26):

Land enrollment in the EWA program is voluntary and farmers would be paid to participate. If farmers participate, the expected net return from the water transfer must exceed the expected net return from growing the crop to be idled, so farmers expect to be better off. *EWA would bring in outside, supplementary revenue to growers, relieving stress on agricultural incomes.* If they do not participate, they are no worse off, at least with respect to their own farming decision.

**Page 11-59**

Table 11-43, Footnote 4 on page 11-59 has been revised as follows to correct the amount of water to be acquired upstream from the Delta (Comment NP05-74):

(4) The Fixed Purchase is based on the assumption that ~~50,000~~ 35,000 acre-feet of water is to be acquired in the Upstream from the Delta Region and 150,000 acre-feet of water is to be acquired in the export services areas, and all water comes from idling.

**Page 11-62**

The following text has been added to Section 11.2.8.1.2 (at the top of page 11-62) to clarify how EWA agencies would determine which programs are included in the cumulative analysis for regional and agricultural economics (Comment NP01-9):

*EWA agencies would use the Agricultural Commissioners Reports to determine how much land is in rice or cotton production in each county. If the reports show a substantial decrease in farmed acreage, EWA agencies would not purchase water through rice or cotton idling in these counties. For example, the EWA agencies would consider the Westlands Global Land Settlement Program.*

~~The cumulative analysis also considers the Westlands Global Land Settlement Program.~~ The Westlands Global Land Settlement Program ~~program~~ proposes to retire 200,000 acres of cropland in the Westlands Water District in western Fresno and Kings Counties.

## **Chapter 12, Agricultural Social Issues**

**Page 12-22**

The sixth citation on page 12-22 has been removed because it is no longer used as a reference in the chapter (Comment NP01-21):

~~California Farm Bureau Federation. 2002. Central Valley Land Use Report. 4 October 2002. Accessed: 6 December 2002. Available from: <http://www.cfbf.com/NewsRequest.asp>~~

## **Chapter 13, Agricultural Land Use**

**Page 13-20**

The third sentence in the second paragraph is revised to state that the EWA agencies will mitigate any significant land use effects (Comment NP05-80):

If idling the crops would change the classification to levels less than Prime Farmland, Farmland of Statewide Importance, or Unique Farmland under the FFMP and Prime Farmland under the Williamson Act, the EWA agencies *shall* ~~could~~ implement mitigation measures to avoid changing land classifications (see Section 13.2.8). Consequently, land use effects would be less than significant with mitigation.



**Page 13-22**

The second full sentence on page 13-22 is revised to indicate that the EWA agencies will mitigate any significant effects associated with multi-year transfers, and to indicate where these mitigation measures are described (Comment NP05-81):

The EWA agencies *shall* ~~would~~ implement mitigation measures if land classifications under the Williamson Act and FMMP should change (*see Section 13.2.7 for a description of the mitigation measures*).

**Page 13-25**

The first sentence in Section 13.2.7 is revised to emphasize that the EWA agencies will mitigate any significant land use effects (Comment NP05-83):

To decrease *significant* adverse land use effects, the EWA agencies will implement ~~would consider~~ the following measures:

**Page 13-26**

The third paragraph on page 13-26 has been revised:

The Westlands Global Land Settlement Program is a land retirement program that proposes to permanently remove 200,000 acres of cropland from production in western Fresno and Kings Counties. Currently, the program does not specify the types and locations of cropland intended for retirement. Any land retired under the program would be used for wildlife habitat or dryland farming. The retirement program likely would change land classifications, depending on the location and current classification of the land. *If these changes occur, they would contribute to a cumulative effect of reducing the acreage of lands categorized as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland under the FMMP and Prime Farmland under the Williamson Act.* ~~If changes occur, a cumulative effect could be considered significant. Environmental documentation for the program should address the potential cumulative effect.~~ With the mitigation measures identified in this chapter, the EWA would not contribute to the cumulative effect.

## Chapter 16, Power

### Page 16-4

Table 16-1 has been revised to include energy production and the data source has been changed from Reclamation 2001 to Western's 2001 Annual Report (Comment FA02-2):

<b>Table 16-1</b>		
<b>Power Resources of the Central Valley Project</b>		
<b>Unit</b>	<b>Maximum Generating Capacity (kW)</b>	<b>Net Generation FY 2001 (GWh)</b>
<b>Sacramento River Service Area</b>		
Carr <sup>(4)</sup>	154,000	362
Lewiston <sup>(1)(4)</sup>	350	N/A
Keswick	105,000	399
Shasta	629,000	1,763
Spring Creek <sup>(4)</sup>	200,000	388
Trinity <sup>(4)</sup>	140,000	385
Subtotal	1,228,350	3,297
<b>American River Service Area</b>		
Folsom	215,000	362
Nimbus	14,000	47
Subtotal	229,000	409
<b>Delta Export and San Joaquin Valley</b>		
New Melones	383,000	370
O'Neill <sup>(2)</sup>	29,000	6
San Luis <sup>(2),(3)</sup>	202,000	92
Subtotal	614,000	468
<b>TOTAL</b>	<b>2,071,350</b>	<b>4,174</b>

Source: Western Area Power Administration 2001 Statistical Appendix to the Annual Report.

<sup>(1)</sup> Not marketed to CVP.

<sup>(2)</sup> Pump-generating plant.

<sup>(3)</sup> Jointly owned, pumping and generating facility, Federal share only.

<sup>(4)</sup> CVP power plants unaffected by EWA actions.

The text immediately following Table 16-1 and footnote have been revised to include a discussion of First Preference Customers as follows (Comment FA02-3):

Power produced by the CVP hydropower system first meets *First Preference Customer*<sup>1</sup> needs and Project water pumping loads, ~~or~~ " (Project use power)," at CVP pumping facilities (Table 16-2). Western markets power that is surplus to *First Preference Customer and Project use* as "commercial power" under long-

term, firm contracts to municipal and governmental entities (preference customers <sup>1</sup>) at cost-based rates (based on generating/pumping costs).

- 1 *First Preference Customers are customers wholly located in Trinity, Calaveras, or Tuolumne Counties, California, as specified under the Trinity River Division Act (69 Stat. 719) and the New Melones provisions of the Flood Control Act of 1962 (76 Stat. 1173, 1191-1192). In both cases, the customers of the counties are entitled to 25 percent of the additional CVP energy resulting from the operational integration of their specific unit/division into the CVP.*

Preference customers are those who have contracts subject to the requirements of Reclamation law....

**Page 16-5**

The last sentence prior to Table 16-2 has been deleted and replaced with the following (Comment FA02-4):

~~Western has completed and is in the process of implementing its post-2004 Marketing Plan for CVP hydropower resources that are surplus to Project use power needs after the long-term preference customer contracts expire in 2004. The expiration of Western's long-term contracts with its preference customers is tied to the impending termination of Contract 14-06-200-2948A, a resource integration and transmission contract with the Pacific Gas and Electric Company. The expiration of this contract is tied to the end of the 1994 Power Marketing Plan and the initiation of the 2004 Power Marketing Plan. Beginning January 1, 2005, Western will market excess hydropower resources which are surplus to Project Use Power and First Preference Customer needs on a daily available basis.~~

**Page 16-19**

The determination of significance has been changed, and the reference to mitigation in Section 16.3.9 has been removed from the last paragraph on page 16-19 (Comment LA18-18).

Power generation along the Yuba River would be decreased while water was held in New Bullards Bar Reservoir and increased when released between July and September. Effects would be similar to those described above for groundwater substitution on the Sacramento and Feather Rivers. *It is anticipated that Yuba County Water Agency would incorporate provisions for potential decreases in revenue from power production into the contractual arrangements made with the EWA agencies. The effects on power would therefore be less than significant. Effects related to the value of power generated later in the summer could be potentially significant. Mitigation measures listed in Section 16.3.9 would reduce these potentially significant effects on power production and energy to less than significant.*

**Page 16-21**

The determination of significance has been changed and the reference to mitigation in Section 16.3.9 has been removed in the first and second paragraphs in Section 16.3.4.1.5 (Comment LA18-18).

Water acquired by the EWA agencies would be held in New Exchequer Reservoir during the irrigation season and released during October through December. Fewer releases from April through September would result in less generation during that period. However, the increase in surface elevation during the summer months compared to the Baseline Condition would increase the head and therefore the efficiency of power generation. As described above for the Sacramento River, delaying water release (power production) until the fall could produce beneficial effects. *It is anticipated that Merced Irrigation District would incorporate provisions for potential decreases in revenue from power production into the contractual arrangements made with the EWA agencies. The effects on power would therefore be less than significant. Effects related to the value of power generated later in the fall could be potentially significant. Mitigation measures listed in Section 16.3.9 would reduce these potentially significant effects on power production and energy to less than significant.*

Power production at McSwain is regulated at the dam's gates and is minimally reliant on head. Decreased flows from McSwain would decrease energy generation. *It is anticipated that Merced Irrigation District would incorporate provisions for potential decreases in revenue from power production into the contractual arrangements made with the EWA agencies. The effects on power would therefore be less than significant. Effects related to the value of power generated later in the fall could be potentially significant. Mitigation measures listed in Section 16.3.9 would reduce these potentially significant effects on power production and energy to less than significant.*

**Page 16-32**

Table 16-10 has been updated to reflect the change in significance determination for power because of groundwater substitution (Comment LA18-18):

Significance of Flexible Purchase Alternative

~~Potentially significant~~ *Less than significant impact; Less than significant impact with mitigation measures.*

Significance of Fixed Purchase Alternative

~~Potentially significant~~ *Less than significant impact; Less than significant impact with mitigation measures.*

**Page 16-34**

Table 16-10 has been updated to reflect the change in significance determination for power in the Merced/San Joaquin River Regions (Comment LA18-18):

Significance of Flexible Purchase Alternative

~~Potentially significant~~ *Less than significant impact; Less than significant impact with mitigation measures.*

Significance of Fixed Purchase Alternative

~~Potentially significant~~ *Less than significant impact; Less than significant impact with mitigation measures.*

**Chapter 20, Indian Trust Assets**

**Page 20-3**

The second-to-last sentence on the page has been corrected:

The Paskenta Band of Nomlaki Indians has a large tract of trust land in ~~Glenn~~ Tehama County, just northwest of Orland, near I-5.

**Page 20-9**

Revision of Section 20.2.5.1.1 incorporates specific language that is protective of tribal resources and clarifies the consultation process (Comments NA01-1 and NA01-3):

**20.2.5.1.1 Sacramento, Feather, Yuba, and Merced Rivers**

EWA acquisition of water from Sacramento River Contractors, Feather River Contractors, Yuba County Water Agency, and Merced Irrigation District via groundwater substitution would decrease groundwater levels. Landowners and tribes in the vicinity of a groundwater substitution transfer could experience drawdown in wells relative to the Baseline Conditions, which could increase costs of bringing water to the surface or potentially dry out wells. Section 6.2.7, Groundwater Mitigation Measures, contains specifications for monitoring and mitigation plans that reduce potential third party effects. ~~Water acquisitions shall require notification of EWA agencies, and if potential effects to ITAs are identified, then consultation by EWA agencies with the affected federally recognized tribe(s) will commence before the water acquisition is finalized. in order for the EWA agencies to fully execute their Federal Indian trust responsibilities. The EWA agencies in Consultation with affected tribes will result in identifying tribal concerns, issues, tribal regulations, and recommendations that could further minimize effects to ITAs.~~

*In order for the EWA agencies to execute Federal trust responsibilities, hydrologists from EWA agencies will evaluate each groundwater substitution well proposed by a willing seller in the Sacramento Valley (regardless of its distance from Indian trust land) for its potential to adversely affect ITAs. If the EWA agencies find that a*

*proposed groundwater substitution well could potentially adversely affect ITAs, then EWA agencies will consult with the potentially affected tribe(s) and the Bureau of Indian Affairs, as described in Section 6.2.7.3. Consultation will commence before the water acquisition is finalized, and will identify tribal concerns, issues, tribal regulations, and recommendations that could further minimize effects to ITAs. Sellers will annually provide EWA agency hydrologists groundwater monitoring data on wells proposed for continued service, to ensure such wells will not potentially adversely affect ITAs. Annual reviews will give specific attention to cumulative effects potentially caused by new programs, projects, or groundwater users.*

Single year and multi-year contracts for sale of water to EWA agencies are contingent on the abovementioned groundwater mitigation measures. Transfers should:

- not exceed significance criteria found in Groundwater Section 6.2.2;
- assure that use of extraction wells minimizes risk to surface and groundwater quality;
- incorporate an adequate monitoring program; and
- proceed ~~through~~ *only after* appropriate tribal consultation ~~has been completed~~, if federally-recognized ITAs are potentially affected.

All groundwater mitigation measures *for use of substitution wells* must be implemented before the EWA agencies authorize a second year of *well use* for groundwater acquisitions.

**Page 20-10**

Revision of Section 20.2.6.1.1 reflects the revised consultative process as follows (Comments NA01-1 and NA01-3):

**20.2.6.1.1 Sacramento, Feather, Yuba, and Merced Rivers**

EWA acquisition of water from Sacramento River Contractors, Feather River Contractors, Yuba County Water Agency, and Merced Irrigation District via groundwater substitution would decrease groundwater levels. Landowners and tribes in the vicinity of a groundwater substitution transfer could experience drawdown in wells relative to the Baseline Condition, which could increase costs of bringing water to the surface or potentially dry out wells. Section 6.2.7, Groundwater Mitigation Measures, contains specifications for monitoring and mitigation plans that reduce potential third party effects. ~~Water acquisitions shall require notification of EWA agencies, and if potential effects to ITAs are identified, then consultation by EWA agencies with the affected federally-recognized tribe(s) will commence before the water acquisition is finalized. in order for the EWA agencies to fully execute their Federal Indian trust responsibilities. The EWA agencies in Consultation with~~

~~affected tribes will result in identifying tribal concerns, issues, tribal regulations, and recommendations that could further minimize effects to ITAs.~~

*In order for the EWA agencies to execute Federal trust responsibilities, hydrologists from EWA agencies will evaluate each groundwater substitution well proposed by a willing seller in the Sacramento Valley (regardless of its distance from Indian trust land) for its potential to adversely affect ITAs. If the EWA agencies find that a proposed groundwater substitution well could potentially adversely affect ITAs, then EWA agencies will consult with the potentially affected tribe(s) and the Bureau of Indian Affairs, as described in Section 6.2.7.3. Consultation will commence before the water acquisition is finalized, and will identify tribal concerns, issues, tribal regulations, and recommendations that could further minimize effects to ITAs. Sellers will annually provide EWA agency hydrologists groundwater monitoring data on wells proposed for continued service, to ensure such wells will not potentially adversely affect ITAs. Annual reviews will give specific attention to cumulative effects potentially caused by new programs, projects, or groundwater users.*

Single year and multi-year contracts for sale of water to EWA agencies are contingent on the abovementioned groundwater mitigation measures. Transfers should:

- not exceed significance criteria found in Groundwater Section 6.2.2;
- assure that use of extraction wells minimizes risk to surface and groundwater quality;
- incorporate an adequate monitoring program; and
- ~~proceed through~~ *only after* appropriate tribal consultation ~~has been completed~~, if federally-recognized ITAs are potentially affected.

All groundwater mitigation measures *for use of substitution wells* must be implemented before the EWA agencies authorize a second year of *well use* for groundwater acquisitions.

#### **Page 20-13**

Revision of the first paragraph in Section 20.2.8 removed reference to the 1-2 mile radius that triggered consultation (Comment NA-02):

Groundwater substitution could result in increased depth to groundwater in neighboring vicinities and/or increasing costs of groundwater pumping. This action could interfere with federally reserved water rights. ~~For groundwater transfers occurring within 1-2 miles of ITAs associated with the Redding Rancheria, Colusa Rancheria, or Paskenta Band of Nomlaki Indians would undergo consultation with the affected federally recognized tribal government, EWA agencies, the Bureau of Indian Affairs, the Office of the~~

~~Solicitor, and the Office of American Indian Trust, in the Sacramento Valley, EWA agency hydrologists will determine if the proposed transfer requires consultation with the Redding Rancheria, Colusa Rancheria, or Paskenta Band of Nomlaki Indians (see Section 20.2.1 for more information on this process).~~

**Page 20-14**

Revisions of the first full paragraph on page 20-14 reflect that there are many ways to implement a project and avoid significant impacts (Comment LA18-5) and the revised notification and tribal consultation process (Comments NA-01 and NA-03).

It is reasonable to assume that other groundwater usage programs could evolve in the foreseeable future. As discussed in Chapter 6, Groundwater Resources, *other programs may take different approaches to avoiding or mitigating impacts. all are required to have monitoring and mitigation plans that prevent third party effects, similar to those that apply to EWA actions.* Careful monitoring and management is necessary to mitigate any potential effects to a less-than-significant level. Additionally, all EWA groundwater substitution acquisitions in the ~~vicinity of an ITA~~ Sacramento Valley require notification of the ~~United States~~ EWA agencies before such acquisitions are finalized in order for the ~~United States~~ EWA agencies to fully execute ~~its~~ their Indian trust responsibilities, *as described in 20.2.5.1.1, 20.2.6.1.1, and 6.2.7.3.* After deliberation by subject matter experts and ~~appropriate tribal~~ consultation *with appropriate tribal and Bureau of Indian Affairs officials,* mitigation may reduce effects to a less-than-significant level.

## **Chapter 22, Cumulative Effects**

**Page 22-4**

The fourth sentence in the second paragraph is updated to reflect more recent information (Comment LA07-7):

~~In 2005~~ *By June 1, 2007,* Phase 8 upstream users are to provide 185,000 acre-feet of water to meet water quality standards through implementation of conjunctive management programs (SVWMA 2002).

**Page 22-5**

The title of Section 22.2.1.2 has been revised to indicate that the Dry Year Water Purchase Program and other purchases are evaluated together (Comment LA03-19):

### **22.2.1.2 Dry Year Water Purchase Program and Other Contractors' Purchases**

**Page 22-8**

A new paragraph has been added after the first partial paragraph and before the first full paragraph on page 22-8. Additionally, several sentences in the first full paragraph are revised. These changes indicate that the WAP purchases water for both Level 4



refuge demand and to provide water for the Vernalis Adaptive Management Plan (Comment LA14-11).

*In addition to purchasing Level 4 water for State and Federal wildlife refuges, the CVPIA WAP, in conjunction with DWR via a cost sharing agreement under the CVPIA, purchases up to 185,000 acre-feet of water for meeting the Vernalis Adaptive Management Plan (VAMP) spring pulse flow targets and fall flow requirements for anadromous fish contained in the San Joaquin River Agreement (SJRA). VAMP is a science-based adaptive fishery management plan to evaluate the relationships between water flows, export rates, and other factors on anadromous fish survival in the Sacramento River - San Joaquin River Delta. The SJRA is a cooperative, multi-interest partnership of State and Federal agencies, various water and irrigation districts including some SWP/CVP contractors (collectively known as the San Joaquin River Group Authority [SJRGa]), and environmental parties. Annually, the CVPIA WAP and DWR pay the SJRGa and in return the SJRGa provides water to increase flow on the San Joaquin River and its tributaries. The SJRA experiment began in 1999 and is scheduled to terminate in 2010.*

Like EWA acquisitions, CVPIA water acquisitions must not create an involuntary reallocation of CVP yield for refuges. Priority resources for water acquisitions are primarily reservoirs and secondarily groundwater substitution opportunities throughout the State. Idling is also a secondary source of water for CVPIA acquisitions. Strategies for water transfers include use of options, 1-year transfers, groundwater banking, and carryover into the San Luis Reservoir. The CVPIA WAP will purchase in total up to 348,000 ~~120,000~~ acre-feet from willing sellers to meet Level 4 refuge supplies and instream flow requirements pursuant to the SJRA ~~during wet and dry years~~. The CVPIA WAP will also purchase varying amounts of additional water supplies per year, on an as-needed basis, to support the instream flow objectives of the Anadromous Fish Restoration Program. The CVPIA WAP has higher pumping and conveyance capacity priority than the EWA at the CVP pumps, and capacity is shared equally at the SWP pumps (DWR 2002). Detailed coordination among the CVPIA Water Acquisition Program, the Environmental Water Program, and EWA requires Reclamation, USFWS, and other CALFED agencies to determine how to address individual program goals while pursuing joint acquisitions.

**Page 22-11**

The second paragraph in Section 22.2.2.1.1 is revised to include a sentence about how increased Banks capacity could allow the EWA program to pump surplus water (Comment LA03-28):

Therefore, under the cumulative condition, if an EWA action reduces pumping, the lost opportunity for conveyance would be greater with the increased export capacity than it would be with the existing capacity. Because the EWA must repay export users for water that was not delivered during

pumping reductions, EWA would have to repay more water if pumping were reduced from the higher capacity than it would if pumping were reduced at the existing capacity. However, because increased export capacity would be available, EWA agencies could purchase more water upstream from the Delta at lower costs. Presumably, on average, the cost savings available with less expensive upstream purchases would offset the costs of EWA repayments required when reducing pumping at the larger export capacity. *Increased capacity at the Banks Pumping Plant may provide additional opportunities for the EWA program to pump surplus water in the winter at a time not harmful to fish. When the Banks increases capacity, the EWA agencies must complete a new environmental analysis. Therefore, the EWA described in this document will not operate with the increased Banks capacity.*

**Page 22-13**

The last sentence of the third full paragraph has been revised to indicate TOC concentrations would need to stay below the target levels in the CALFED ROD because no Delta standards exist for TOC (Comment FA01-14):

*It is possible that TOCs could increase in the stored water above target levels identified in the CALFED ROD Delta quality standards and, therefore, constrain the supply available from the Delta Wetlands Project.*

**Page 22-14**

The section on the SWP/CVP Intertie has been clarified:

**22.2.2.4 ~~SWP/CVP~~ Delta-Mendota Canal/California Aqueduct Intertie**

The CALFED ROD identifies the construction of a number of interties and bypasses in the water system. A proposed intertie between the *Delta-Mendota Canal (DMC) and the California Aqueduct west of ~~SWP and CVP facilities at or near~~ Tracy* could affect the cumulative condition. *The average daily pumping capacity at the Tracy Pumping Plant is limited to 4,600 cubic-feet per second (cfs), which is the existing capacity of the upper DMC and its intake channel. However, because of conveyance limitations in the lower DMC and other factors, pumping at Tracy Pumping Plant is almost always less than 4,600 cfs. DMC conveyance capacity is affected by subsidence; canal siltation and deposition; the amount, timing, and location of water deliveries from the DMC; the facility design; and other factors. By linking the DMC with the California Aqueduct, the Intertie would allow year-round pumping at Tracy Pumping Plant up to 4,600 cfs, subject to all applicable export pumping restrictions for water quality and fishery protections. Tracy Pumping Plant would remain limited in its authorized pumping capacity of 4,600 cfs. ~~Currently, the CVP facility has a maximum pumping capacity of 4,600 cfs. The canal downstream from the pump narrows at the final pools, reducing the maximum capacity that can be delivered to O'Neill Forebay to 4,200 cfs. An intertie would be built between the project facilities to accommodate the additional 400 cfs that cannot be moved through the final pool of the canal.~~*

The canal would potentially increase export capacity for the programs. For example, if the CVP allocations to its contractors were less than 100 percent *and the CVP did not need all of the capacity for its own purposes*, unused capacity in the intertie could provide additional capacity for the EWA to move water through the Delta. ~~assuming that the CVP is not using the capacity for its own purposes. This capacity would typically be available during summer months, but the exact amounts are unknown.~~

**Page 22-16**

The third sentence in the second paragraph in Section 22.4.3 on page 22-16 has been replaced to reflect that there are many ways to implement a project and avoid significant impacts (Comment LA18-5):

During dry years more groundwater substitution transfers may occur in the acquisition programs because there will be a greater capacity for transport at the pumps. These cumulative effects could be potentially significant if these programs are not coordinated. ~~It is assumed that each program will institute similar groundwater mitigation measures as those stipulated under the EWA Program.~~ *The approach in the EWA EIS/EIR is one based primarily on measures designed to avoid causing adverse groundwater effects; other programs may take other approaches, such as mitigating impacts on a site-specific basis.* The EWA's groundwater mitigation measures require a pre-purchase evaluation for areas in which groundwater levels (prior to transfer) are sufficiently low to warrant potential regional adverse effects.

**Page 22-21**

The second sentence of the first paragraph in Section 22.4.17 has been revised to reflect that there are many ways to implement a project and avoid significant impacts (Comment LA18-5):

This ITA cumulative analysis focuses only on those programs that potentially pose incrementally detrimental effects through groundwater substitution in all areas of the State. As discussed in Chapter 6, Groundwater Resources, *other programs may take different approaches to avoiding or mitigating impacts, but the end result of no significant impacts would be the same for the EWA as other programs.* ~~all are required to have monitoring and mitigation plans that prevent third party effects, similar to those that apply to EWA actions.~~

**Page 22-22**

The last few lines of Section 22.4.17 have been changed to reflect the revised notification and tribal consultation process (Comments NA01-1; Comment LA18-5):

~~Additionally, all EWA groundwater substitution acquisitions in the vicinity of an ITA require the United States to be notified before such acquisitions are finalized in order for the United States EWA agencies must to fully execute its~~ *their Indian trust responsibilities, as described in 20.2.5.1.1, 20.2.6.1.1, and 6.2.7.3,*

*before they finalize groundwater substitution transfers in the Sacramento Valley. After deliberation by subject matter experts and ~~appropriate tribal~~ consultation with appropriate tribal and Bureau of Indian Affairs officials, mitigation may reduce effects to a less-than-significant level.*

## Volume 3

### Appendix J

#### Chapter 1, Introduction

##### Page 1-5

Figure 1-1 has been modified to add the following text into the blank box in the original figure:

*CALFED Programmatic MSCS*

#### Chapter 2, Description of the EWA Proposed Action

##### Page 2-8

The timing for Delta smelt actions under the existing baseline level of fisheries protection has been clarified:

<b>Table 2-2 Pump Reductions Under the Existing Baseline Level of Fisheries Protection</b>			
<b>Timeframe</b>	<b>Benefiting Fish<sup>4</sup></b>	<b>Reason</b>	<b>Regulatory Mechanism</b>
December – January	Juvenile salmonids	Protect outmigrating juvenile salmonids	Biological opinion
	Adult smelt	Protect upmigrating adult smelt	Biological opinion
February – March	Juvenile salmonids	Protect outmigrating juvenile salmonids	Biological opinion
	Adult smelt	Protect upmigrating adult smelt	Biological opinion
April – May 31 days	Salmon smolts	Determine how export pumping affects survival and passage of salmon smolts through the Delta	D-1641 (VAMP) (SWP may not follow if not reimbursed)
April - June	Juvenile smelt	Protect juvenile smelt near the pumps	Biological opinion

##### Page 2-9

The first sentence of the second paragraph in Section 2.3.3 is revised to clarify how closing the DCC gates aids fish:

*Closing the DCC gates increases the likelihood ~~ensures~~ that juvenile spring-run and winter-run Chinook salmon and steelhead smolts remain in the mainstem Sacramento River, improving their likelihood of successful outmigration through the western Delta and San Francisco Bay.*

<sup>4</sup> “Benefiting Fish” only include the fish that require pumping reductions through a regulatory mechanism. Incidental benefits to other fish would also result from some reductions.

The discussion of Delta Cross Channel gate closures within the regulatory baseline has been revised to clarify that these closures are required (Comment SA05-1). Item 2 on page 2-9 is revised as follows:

- 2) State Water Resources Control Board Decision 1641 ~~allows for~~ requires the following operations of the DCC gates:

**Page 2-11**

The text on Stage 1 of the Joint Point of Diversion has been updated to clarify the purpose of the Water Level Response Plan (Comment SA05-2) by revising the last paragraph on page 2-11 as follows:

- Stage 1: the CVP can use Banks Pumping Plant to divert water for selected CVP contractors, and either Project could use the others' facilities to recover export reductions to protect fish if the Projects complete a Water Level Response Plan ~~that outlines the responses to changing water levels in the south Delta to prevent lowering water levels in the south Delta to the injury of water users in the south Delta.~~

**Page 2-12**

A new sentence has been added after the descriptions of Stage 1, Stage 2, and Stage 3 to further clarify the purpose of the Water Level Response Plan (Comment SA05-2):

*Under all stages of JPOD, Reclamation and DWR are also required to have a response plan to prevent water quality in the south and central Delta from being significantly degraded through operations of JPOD to the injury of diverters in the south and central Delta.*

In the discussion of Stage 2 of the Joint Point of Diversion on page 2-12, the following footnote has been included after the first sentence to explain the conditions for permitted diversions (Comment SA05-3):

**Stage 2:** the Projects can divert water from either pumping plant for any of their permitted purposes up to permitted capacity.

*Footnote: JPOD diversions at the Banks Pumping Plant are limited under D-1641 to 13,870 acre-feet per day or a 3-day average diversion of 13,250 acre-feet per day, except from mid-December to mid-March when San Joaquin River flow at Vernalis exceeds 1,000 cubic feet per second, during which times diversions into Clifton Court Forebay may be increased by one-third of the San Joaquin River flow at Vernalis. This is also the current limit established by the U.S. Army Corps of Engineers' permit for the Banks Pumping Plant.*

In the discussion of Stage 2 of the Joint Point of Diversion on page 2-12, a footnote has been added after the last sentence to read (Comment SA05-5):

**Stage 2:** the Projects can divert water from either pumping plant for any of their permitted purposes up to permitted capacity. The Projects must submit an operations plan to protect fish and wildlife and other legal users of water.

*Footnote: The State Water Resources Control Board's Executive Director approved Stage 2 type JPOD diversions after D-1641 for a short-term basis for limited specified purposes without completion of all the requirements for Stage 2.*

In the discussion of Stage 3 of the Joint Point of Diversion on page 2-12, the following footnote has been included after the description to clarify the water level protection requirement (Comment SA05-4):

**Stage 3:** the Projects can divert water from either pumping plant up to the physical plant capacity if they completed an operations plan to protect aquatic resources and their habitat and protect other legal users of water and if they implement water barriers or other water level protection.

*Footnote: D-1641 requires that water level protection under Stage 3 be adequate for diversion of water for agricultural uses. The Stage 3 water level protection requirement is not conditioned on the agricultural users having water rights.*

The third paragraph on page 2-12 has been amended as follows to describe the future events without the EWA to establish the baseline condition (Comment SA05-5):

Prior to the CALFED ROD, the Projects were in Stage 1 and Stage 2 of the implementation process and could use Joint Point of Diversion to replace water that had been lost during pump reductions to protect fish. It is reasonably foreseeable that ~~without the CALFED ROD~~ *in the baseline level of fisheries protection, the Project Agencies would have completed the requirements to move into Stage 3 (which would require new environmental documentation or changes in existing biological opinions) in which they could use the Joint Point of Diversion to supply water to their contractors in the Export Service Area.*

#### **Page 2-16**

Section 2.4.2.1 on page 2-16 has been clarified as follows to indicate that the Proposed Action would provide increased fish actions from the baseline level of fisheries protection, which only includes actions that are regulatorily required (Comment LA06-25):

The general times of year for pump reductions that benefit at-risk fish species would be similar to the baseline level of fisheries protection, *but the reductions would be more frequent because* ~~the~~ *the* EWA agencies would not necessarily wait to reach "reconsultation level" conditions identified in the Biological Opinions before calling for export reductions.

The last sentence in the fifth paragraph of Section 2.4.2.1.1 has been deleted:

This reduction would increase the survival of juvenile Chinook salmon smolts (including winter-run presmolts and spring-run yearlings) migrating through the Delta in the winter. It is scientifically supported by several years (1993 – 2002) of mark/capture data that indicate the survival of juvenile late fall-run Chinook salmon in the central Delta decreases as exports increase. ~~Further support for a pump reduction is based on a recent analysis that indicates that December is an important migration period for winter run pre-smolts and that the Delta Cross Channel gate closures during December appear to be correlated with low winter run salvage at the export facilities later in the year.~~

**Page 2-17**

Export reductions in April and May have been clarified by adding information to the first sentence in Section 2.4.2.1.3:

Reducing Delta exports during April and May would help out-migrating ~~juvenile fall-run Chinook salmon smolts, juvenile spring-run Chinook salmon, and delta smelt.~~

The first sentence in the second paragraph of Section 2.4.2.1.4 has been corrected:

Pumping reductions would decrease the effects of CVP/SWP export facilities on listed resident fish in the south Delta and would enable juvenile resident estuarine and anadromous species to migrate away from the export facilities where they are less vulnerable to direct loss and/or ~~indirect direct~~ mortalities associated with export operations.

The third sentence in the second paragraph of Section 2.4.2.1.4 has been clarified:

~~Additional information indicates that, generally, a gradual increase in export pumping could minimize entrainment loss of Delta smelt by delaying the increase until most of them have moved to the north and west away from the influence of the pumping when the export rate increases rapidly under low Delta inflow and fish densities are high in the south/central Delta, fish losses at the facilities can be high.~~

**Page 2-18**

The last paragraph in Section 2.4.2.2 has been clarified as follows to indicate that the Proposed Action would provide increased fish actions from the baseline level of fisheries protection, which only includes actions that are regulatorily required (Comment LA06-25):

~~When DCC gates are closed outside the regulatory baseline, With the Proposed Action, the EWA Management Agencies could close the DCC gates to protect fish for more days than provided in the regulatory baseline EWA agencies would compensate water users for water supply losses from these reductions. EWA must compensate for water supply losses from these reductions. Additional gate~~

closures would typically occur in November, December, January, May, or June, if additional closures were needed after the regulatory requirements of baseline level of fisheries protection were met.

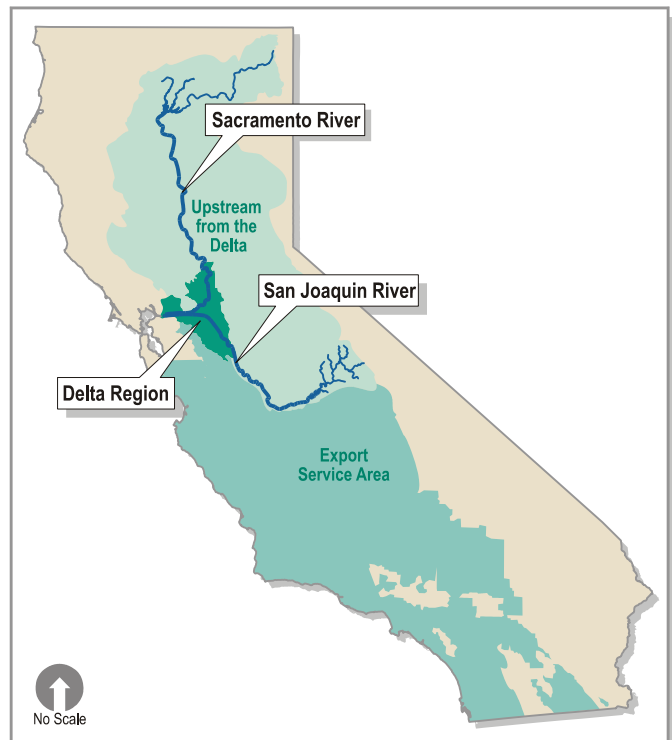
**Page 2-19**

The second paragraph in Section 2.4.2.4 has been updated to more accurately describe augmenting Delta outflows (Comment LA03-14):

In addition to taking direct actions to augment Delta outflows, other actions within the Proposed Action would have the secondary benefit of increasing Delta outflows. ~~When the EWA agencies reduce Delta export pumping, the water that would have been pumped instead becomes Delta outflow. Delta outflow would also increase during the summer months when EWA assets are moved through the Delta because the transfers must include outflow water (carriage water) to maintain water quality (see Section 2.4.3.1 for additional information).~~ When the EWA agencies reduce Delta export pumping, outflows would increase initially as water that would have been pumped becomes Delta outflow. (Water released from Project reservoirs takes 3-5 days to reach the Delta; therefore, water released prior to the announcement of pump curtailment would contribute to Delta outflow for up to 5 days. The Projects could reduce releases upon announcement of pump curtailment; however this would only occur if the Management Agencies concluded that it would be environmentally benign. In the past 3 years of EWA operation, no reductions in releases were made during EWA-related pump reductions.) Delta outflow would return to baseline flow over time if reservoir releases were reduced in response to pump curtailments.

**Page 2-21**

Figure 2-4 on page 2-21 has been amended to include Santa Clara Valley Water District in the Export Service Area (Comment LA16-18).



**Figure 2-4**  
**Asset Acquisition and Management Areas**



**Page 2-24**

The last paragraph on page 2-24 has been revised as follows to reflect that the estimated conveyance losses could be re-evaluated in the future (Comment LA14-5):

Transfers along the San Joaquin River are charged a 10 percent conveyance loss to include seepage and evaporation losses. *Project Agencies could re-evaluate this number using more up-to-date information.* The EWA agencies must factor Delta carriage and conveyance losses into the determination of the total amount of water that must be acquired to fully compensate for EWA actions to benefit fish and the environment.

**Page 2-28**

A statement informing that local regulations are not only applicable if the basin is in overdraft in the first paragraph on page 2-28 was not added because it could be read as misleading. However, after listing the agencies that may participate, the paragraph was changed as follows (Comment NP05-43):

Groundwater substitution transfers would withdraw additional water from the groundwater basin below the participating users, so this option could only be used in basins that are not in a state of groundwater overdraft, or in areas where the water supplier determines that the water transfer would not contribute to the groundwater overdraft.<sup>5</sup> *Several of these agencies would need to obtain permits pursuant to local groundwater regulations; Chapter 6 of Volume 1 describes these regulations in detail.* The sections below describe the operations associated with each of these potential acquisitions.

**Page 2-31**

The second paragraph on page 2-31 has been revised as follows to correct the agency maintaining releases for New Bullards Bar Reservoir (Comment LA18-9):

Yuba County Water Agency, on the Yuba River, owns New Bullards Bar Reservoir and would store groundwater substitution assets there until release. Water elevations in New Bullards Bar Reservoir would be slightly higher than without the EWA from April through June as a result. During the release period, the ~~EWA~~ *Yuba County WA* would try to maintain relatively constant flows on the Yuba River because of fish concerns;

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<sup>5</sup> According to California Water Code 1745.10: A water user that transfers surface water pursuant to this article may not replace that water with groundwater unless the groundwater use is either of the following:

- (a) Consistent with a groundwater management plan adopted pursuant to State law for the affected area.
- (b) Approved by the water supplier from whose service area the water is to be transferred and that water supplier, if a groundwater management plan has not been adopted, determines that the transfer will not create, or contribute to, conditions of long-term overdraft in the affected groundwater basin.

The last paragraph on page 2-31 has been revised to better characterize groundwater substitution on the Merced River (Comment LA06-18):

The Merced Irrigation District is on the Merced River and would store EWA water in its reservoir, Lake McClure, until release (see Figure 2-12). ~~Water elevations in Lake McClure would be slightly higher from April through November than they would be without the EWA.~~ The EWA agencies would convey a Merced Irrigation District groundwater substitution transfer through the Merced and San Joaquin Rivers. *Under groundwater substitution, surface water flows that would have been released for downstream users' irrigation needs, would be held in the reservoir for release in October and November. Farmers would instead use groundwater for irrigation. Water elevations in Lake McClure would be slightly higher from April through November than they would be without the EWA. River flows would therefore decrease on a short stretch of the Merced River between New Exchequer Dam and Lake McSwain (the typical point of diversion). The amount of tailwater leaving the fields that have been irrigated with groundwater would be the same as the amount that would leave if the fields were irrigated with surface water. Therefore, flows on the Merced River below the point of diversion would be the same with or without the EWA.* EWA agencies have worked together to schedule these transfers for periods when the transfer would reach the Delta with minimal losses and the temperature would be acceptable for fish migration.

**Page 2-34**

The first sentence in the second paragraph under Section 2.4.3.1.4 has been revised as follows to clarify the potential for purchasing water from the Sacramento Groundwater Authority (Comment NP05-45):

The EWA Project Agencies ~~would~~ could purchase water from the Sacramento Groundwater Authority, which ~~would~~ could deliver water through an exchange at Folsom Lake. Agencies in the authority would exchange some of their allotment in Folsom Lake with the EWA and pump previously stored groundwater<sup>6</sup> within their agencies to make up for the decrease in surface water supply.

**Page 2-42**

The third sentence of the second paragraph on page 2-42 has been amended as follows to include information regarding losses assessed by Kern County groundwater banking programs is incorporated into the Groundwater Storage definition in Section 2.4.3.3.2, which describes how the EWA agencies could store assets in a groundwater storage facility (Comment LA08-7):

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<sup>6</sup> If the EWA agencies enter into a contract with Sacramento Groundwater Authority, the EWA agencies would verify that the water was previously stored to prevent effects to local groundwater.

Assets stored in water banks are generally charged *15 percent for out-of-county interests in Kern County groundwater storage facilities* for losses upon both recharge and extraction. If the EWA agencies acquire water banking capacity, the assets would probably be charged a small percentage of loss representing basin losses. Upon extraction, similar losses would be applied.

**Page 2-48**

The final paragraph on page 2-48 has been revised as follows to indicate that the EWA Acquisition Strategy serves as an example and the actual strategy would change after the EIS/EIR is finalized (Comment NP05-90):

The sections below describe several components of the strategy that *would continue into the future and* are relevant to assessing the environmental effects of the Proposed Action.

**Page 2-49**

Page 2-49, Section 2.4.5.1 has been updated to clarify that the following paragraph is referring to the potential for stored groundwater to diminish in the future. Page 2-54 in Volume 1 discusses this issue in more detail and explains that less stored groundwater would be available from Kern County Water Agency in the future. The paragraph has been revised as follows (Comment NP05-47):

Acquisitions in the export service area generally follow the same pattern: stored groundwater purchase is less expensive, more flexible, and has fewer environmental effects than crop idling transfers. Unfortunately, potential *stored groundwater* supplies in the export service areas are decreasing, and may not be available into the future (*see Section 2.4.3.3.1*).

**Page 2-56**

The following conservation measure will be moved to the section beginning “The EWA agencies will ensure through contract terms or other requirements that the following conservation measures will be implemented...”. This conservation measure will also be revised as follows:

The EWA agencies will avoid purchasing water from the same rice field more than two consecutive years *or from a rice field that was idled for another program in the previous year*.

**Chapter 4, Species Assessment Methods and Impact Analyses**

**Page 4-15**

Two references to the SWRCB Interim Water Quality Control Plan have been revised to reference SWRCB Water Rights Decision No. 1641. The first paragraph on page 4-15 has been revised as follows (Comment LA15-16):

The model simulations conducted for the Proposed Action included conformance with *the* export requirements set forth in ~~the SWRCB Interim~~

~~Water Quality Control Plan~~ SWRCB Water Rights Decision No. 1641. Thus, ~~the~~ Delta E/I ratios under the Proposed Action and basis of comparison would not exceed the maximum export ratio as set by ~~the SWRCB Interim Water Quality Control Plan~~ SWRCB Water Rights Decision No. 1641. (Refer to Appendix H pgs. A49-A60.) However, relaxation....

**Page 4-16**

The first paragraph under the subheading “Delta Smelt” has been revised as follows (Comment LA03-23):

Under the Proposed Action (Maximum Water Purchase Scenario), a net reduction in delta smelt salvage would occur over the 15-year period of record included in the analysis, relative to the basis of comparison. ~~Average a~~ Annual salvage estimates with implementation of the Proposed Action under the Maximum Water Purchase Scenario decrease by 135,887 delta smelt relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-5.)

**Page 4-18**

The first paragraph under the subheading “Chinook Salmon” has been revised as follows (Comment LA03-23):

With implementation of the Proposed Action under the Maximum Water Purchase Scenario, a net reduction in Chinook salmon salvage would occur over the 15-year period of record included in the analysis, relative to the basis of comparison. ~~Average a~~ Annual salvage estimates with implementation of the Proposed Action under the Maximum Water Purchase Scenario would decrease by 1,123,826 Chinook salmon, relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-6.)

**Page 4-19**

The first paragraph under the subheading “Steelhead” has been revised as follows (Comment LA03-23):

A net reduction in steelhead salvage would occur with implementation of the Proposed Action under the Maximum Water Purchase Scenario, relative to the basis of comparison, over the 15-year period of record included in the analysis. ~~Average a~~ Annual salvage estimates under the Maximum Water Purchase Scenario would be reduced by 28,928 steelhead, relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-7.)

**Page 4-20**

The first paragraph under the subheading “Splittail” has been revised as follows (Comment LA03-23):

With implementation of the Proposed Action under the Maximum Water Purchase Scenario, there would be a net reduction in splittail salvage, relative to the basis of comparison, over the 15-year period of record included in the

analysis. ~~Average a~~ Annual salvage estimates with implementation of the Proposed Action under the Maximum Water Purchase Scenario would decrease by 1,014,290 splittail, relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-8.)

**Page 4-25**

The first paragraph under the subheading “Delta Smelt” has been revised as follows (Comment LA03-23):

Under the Proposed Action (Typical Water Purchase Scenario), a net reduction in delta smelt salvage would occur over the 15-year period of record included in the analysis, relative to the basis of comparison. ~~Average a~~ Annual salvage estimates with implementation of the Proposed Action under the Typical Water Purchase Scenario decrease by 93,690 delta smelt relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-13.)

**Page 4-26**

The first paragraph under the subheading “Chinook Salmon” has been revised as follows (Comment LA03-23):

With implementation of the Proposed Action under the Typical Water Purchase Scenario, a net reduction in Chinook salmon salvage would occur over the 15-year period of record, relative to the basis of comparison. ~~Average a~~ Annual salvage estimates under the Typical Water Purchase Scenario would decrease by 895,433 Chinook salmon, relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-14.)

**Page 4-27**

The first paragraph under the subheading “Steelhead” has been revised as follows (Comment LA03-23):

A net reduction in steelhead salvage would occur with implementation of the Proposed Action under the Typical Water Purchase Scenario, relative to the basis of comparison, over the 15-year period of record included in the analysis. ~~Average a~~ Annual salvage estimates under the Typical Water Purchase Scenario would be reduced by 20,386 steelhead, relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-15.)

**Page 4-28**

The first paragraph under the subheading “Splittail” has been revised as follows (Comment LA03-23):

With implementation of the Proposed Action under the Typical Water Purchase Scenario, there would be a net reduction in splittail salvage, relative to the basis of comparison, over the 15-year period of record included in the analysis. ~~Average a~~ Annual salvage estimates with implementation of the

Proposed Action under the Typical Water Purchase Scenario would decrease by 656,597 splittail, relative to the basis of comparison *over the 15-year period of record*. (Refer to Table 4-16.)

**Page 4-77**

The last sentence in Section 4.10.3 is revised as follows:

Crop idling actions may affect but are *not* likely to adversely affect black tern populations with the implementation of the following conservation measures.

**Page 4-91**

The following sentence in the third full paragraph is revised as follows:

Because the species is adaptive and responds to changes in environmental conditions, the effect ~~due~~ *due* to idling of flooded rice fields is considered to be less than significant.

**Page 4-92**

The following sentence in the second paragraph is revised as follows:

If the USFWS determines that the proposal is not consistent with the programmatic, or additional effects not previously analyzed may occur, then additional compensatory giant garter snake mitigation may be required, consistent with the *ESA* ~~REA~~ and the giant garter snake Recovery Plan.

**Page 4-95**

The following conservation measure will be moved to the section beginning “The EWA agencies will ensure through contract terms or other requirements that the following conservation measures will be implemented...”. This conservation measure will also be revised as follows:

The EWA agencies will avoid purchasing water from the same rice field more than two consecutive years *or from a rice field that was idled for another program in the previous year*.

**Chapter 6, Effects of the Proposed Action on NCCP Communities inside the Action Area**

**Page 6-32**

Different sources of data were used to estimate the total rice acreage in the Sacramento Valley. To clarify inconsistencies, the second sentence in Section 6.15.1 has been modified to read:

These counties typically harvest a total of ~~496,820~~ 448,158 acres of rice (USDA, ~~1997~~ County Agricultural Commission Reports, 1995-1997).

**Page 6-35**

Table 6-4 has been modified to include the source of the acreages in column 2.

**Table 6-4. Seasonally Flooded Agriculture Acreage and Waste Grain Reductions in Each County Based on Crop Idling Maximum Purchases under the Flexible Purchase Alternative**

	Rice Acreage (AC) <sup>(1)</sup>	Idled Acreage (AC)	Percent Rice Acreage (%)	Waste Grain per Acre (lbs)	Total Waste Grain (million lbs)	Waste Grain Loss (million lbs)	Percent Waste Grain Loss (%)	Total Acre-Feet of Water Available for EWA Fish Actions (TAF)	Potential Square Miles Idled
Butte	95,120	19,000	20%	350	33.3	6.6	20%	62.7	30
Colusa	132,338	26,460	20%	350	46.3	9.2	20%	87.3	41
Glenn	83,777	16,750	20%	350	29.3	5.7	20%	55.2	26
Placer	16,379	3,280	20%	350	5.7	1.1	20%	10.8	5
Sutter	96,722	19,340	20%	350	33.9	6.8	20%	63.8	30
Yolo	23,822	4,770	20%	350	8.3	1.7	20%	15.7	7
Total	448,158	89,608	20%	350	156.9	31.1	20	295.7	140

(1) The figures representing total rice acres within the counties are based on a 5-year average to take into account any recent land trends in rice production. These data are taken from the County Agricultural Commissioners Reports from 1995 to 1999.

## Chapter 7, Monitoring, Adaptive Management, and other Disclosures

### Page 7-2

The following discussion of the EWA Monitoring Program Review has been modified to include more information on the EWA Review Panel and adaptive management.

*According to the CALFED ROD, "the purpose of the CALFED Science Program is to provide a comprehensive framework and develop new information and scientific interpretations necessary to implement, monitor, and evaluate the success of the CALFED Program (including all program components), and to communicate to managers and the public the state of knowledge of issues critical to achieving CALFED goals." The Science Program's evaluation efforts include two levels of independent review: a standing Independent Science Board for the entire CALFED Program, and a variety of Science Panels focused on specific programs.*

*The EWA Review Panel (Panel) includes distinguished scientists with local expertise and relevant discipline knowledge. These scientists would evaluate the EWA program at the end of every water year prior to the planning process for the following year. The review would consider the overall concept of the EWA program, EWA agencies' actions (uses of water and actions to protect fish), and justifications for actions that took place during the year. The CALFED ROD indicates that the panel would make recommendations in 2004 about the implications of using the EWA strategy for the long-term for managing flows and/or changing pumping operations for environmental protection (especially protection of listed fish species), water supply reliability, and water quality (2002 EWA Review Panel Report). The EWA agencies would*

*incorporate future recommendations, such as a broader range of asset use, into the manner in which they make purchases and take fish actions.*

*Adaptive management is a key component of the EWA and Science Programs. Adaptive management treats actions as partnerships between scientists and managers by designing those actions as experiments with a level of risk commensurate with the status of those species involved, and bringing science to bear in evaluating the feasibility of those experiments. New information and scientific interpretations would be developed through adaptive management, as the programs progress, and would be used to confirm or modify problem definitions, conceptual models, research, and implementation actions (CALFED 2000b).*

*Adaptive management provides a process to change EWA fish actions or asset acquisitions depending on the recommendations of the Science Panel. Section 7.2 of the ASIP contains additional information about adaptive management.*

*The Panel prepares a report after reviewing the EWA program each water year. These reports can be found at [http://science.calwater.ca.gov/workshop/past\\_workshops.shtml](http://science.calwater.ca.gov/workshop/past_workshops.shtml). Reports have been prepared for the first 2 years of EWA and are summarized below.*

*In the report for year one, the Panel found that the CALFED and EWA programs were successfully able to purchase and use water. Additionally, the agency biologists and project operators exhibited a high degree of cooperation and collaboration. However, the Panel noted that (1) the EWA goals appear to be “weighted” differently between scientists, resource managers, water managers, and stakeholders; (2) knowledge gaps need to be filled in order to base EWA decisions on statistically rigorous and sound science; (3) the CALFED team needs to be strengthened and knowledge gaps filled; and (4) the EWA agencies and CALFED need to maximize the program’s flexibility.*

*As stated in the report for year two, the panel found that, even though all of the agencies were to be commended for their efforts, there are several areas that require attention. The EWA program needs to (1) overcome the growing burden of expectations placed on EWA, (2) better integrate EWA into other CALFED restoration activities, (3) improve scientific analysis and data synthesis, (4) focus on more ecologically appropriate biological performance measures; and (5) allocate sufficient resources to accomplish the EWA program’s stated goals. To accomplish these task, the Panel recommends (1) identification of the causes of entrainment at the pumps; (2) estimation of growth and mortality rates, habitat use, and movement patterns of Chinook salmon; (3) quantitative synthesis of the delta smelt and Chinook salmon life cycles; (4) determination of how DCC operations might be optimized to reduce entrainment; and (5) determination if and how EWA water can be used to make reservoir releases that improve salmon spawning habitat (CALFED 2002). ~~The EWA monitoring program will be subject to an annual review by peers with knowledge of the Bay Delta system and its tributaries. This can be accomplished through the CALFED Science Program. The purpose of the review would be to allow for independent evaluation of EWA monitoring efforts that would also allow for the~~*



development of independent recommendations regarding future EWA asset management actions.

*The goal of the Year Three Technical Review of the Environmental Water Account and Science Symposium (October 15-17, 2003) was to provide a synthesis of the scientific information gained and a description of how this information has affected (or could affect) management of environmental water (CALFED 2003). The Panel noted (1) increased diversification of water resources and the development of models of water acquisition, storage, and debt; (2) evidence of increasing cooperation among agencies and in the design and execution of field experiments; (3) completion of several successful symposia and workshops; (4) further progress on addressing past recommendations; and (5) avoidance of fish and water crises. The Panel was generally impressed with the EWA program's activities in the last year, but found areas in which additional attention and effort are required. Major recommendations included (1) continue the annual reviews of the EWA, (2) review and summarize the accomplishments and lessons learned from past years, (3) better integrate EWA with other CALFED programs, (4) review background regulatory requirements regularly and provide new scientific information that is as adaptive as possible, and (5) explore creative ways to address EWA's many scientific challenges.*

*The EWAT Monitoring Subteam will be responsible for assessing suggested changes as provided by the independent review.*

## Chapter 9, Effects Determination Conclusion

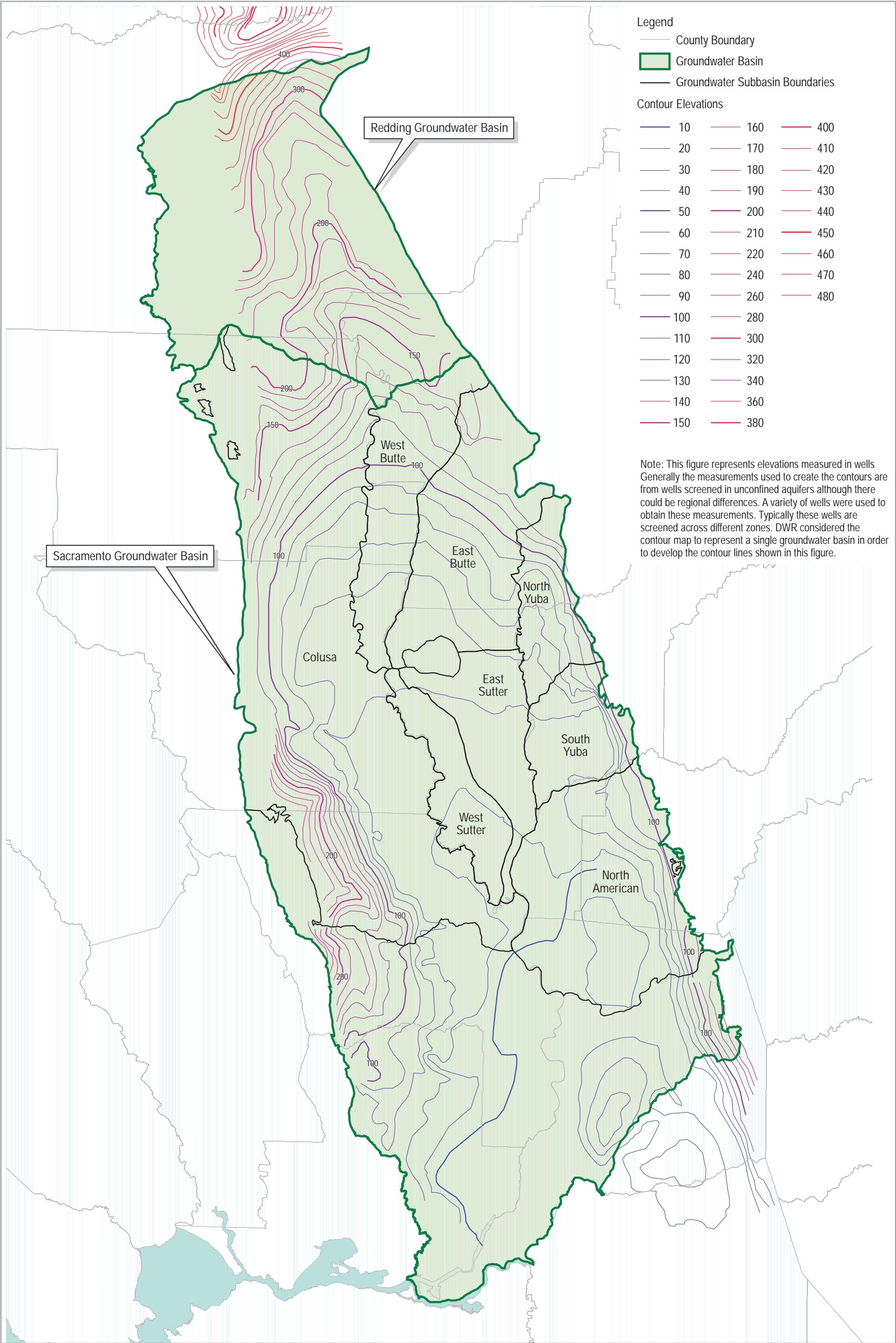
### Page 9-10

Table 9-1 has been modified as follows to change the effects determination on the giant garter snake.

Table 9-1 Direct and Indirect Effects Analysis of Special-Status Species Within the Action Area							
			Effects Analysis				
			Species				Critical Habitat/EFH
Common Name	Scientific Name	Status	No Effect	May Affect, Not Likely to Adversely Affect	May Affect	Beneficial Effect	May Adversely Modify
Central Valley Fall/Late-Fall Run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	C, CSC		X			
Sacramento River Winter Run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	E, CE		X			
Central Valley Spring-Run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	T, CT		X			
Central Valley Steelhead	<i>Oncorhynchus mykiss</i>	T		X			

**Table 9-1**  
**Direct and Indirect Effects Analysis of Special-Status Species Within the Action Area**

			Effects Analysis				
			Species				Critical Habitat/EFH
Common Name	Scientific Name	Status	No Effect	May Affect, Not Likely to Adversely Affect	May Affect	Beneficial Effect	May Adversely Modify
Delta Smelt	<i>Hypomesus transpacificus</i>	T, CT		X			
Sacramento Splittail	<i>Pogonichthys macrolepidotus</i>	T, CT		X			
Aleutian Canada Goose	<i>Branta canadensis leucopareia</i>	Delisted		X			
Black Tern	<i>Chlidonias niger</i>	CSC		X			
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	CS		X			
Great Blue Heron	<i>Ardea herodias</i>	CS		X			
Great Egret	<i>Casmerodius albus</i>	CS		X			
Greater Sandhill Crane	<i>Grus canadensis tabida</i>	CT/FP		X			
Long-billed Curlew	<i>Numenius americanus</i>	CSC		X			
Snowy Egret	<i>Egretta thula</i>	CS		X			
Tricolored Blackbird	<i>Agelaius tricolor</i>	CSC		X			
White-faced Ibis	<i>Plegadis chihi</i>	CSC		X			
Giant Garter Snake	<i>Thamnophis gigas</i>	T, CT		X	X		
Western Pond Turtle	<i>Clemmys marmorata</i>	CSC		X			



No Scale

Figure 6-7  
Sacramento Valley Spring 1997 Groundwater Level Elevations  
Contours Provided by: DWR North District

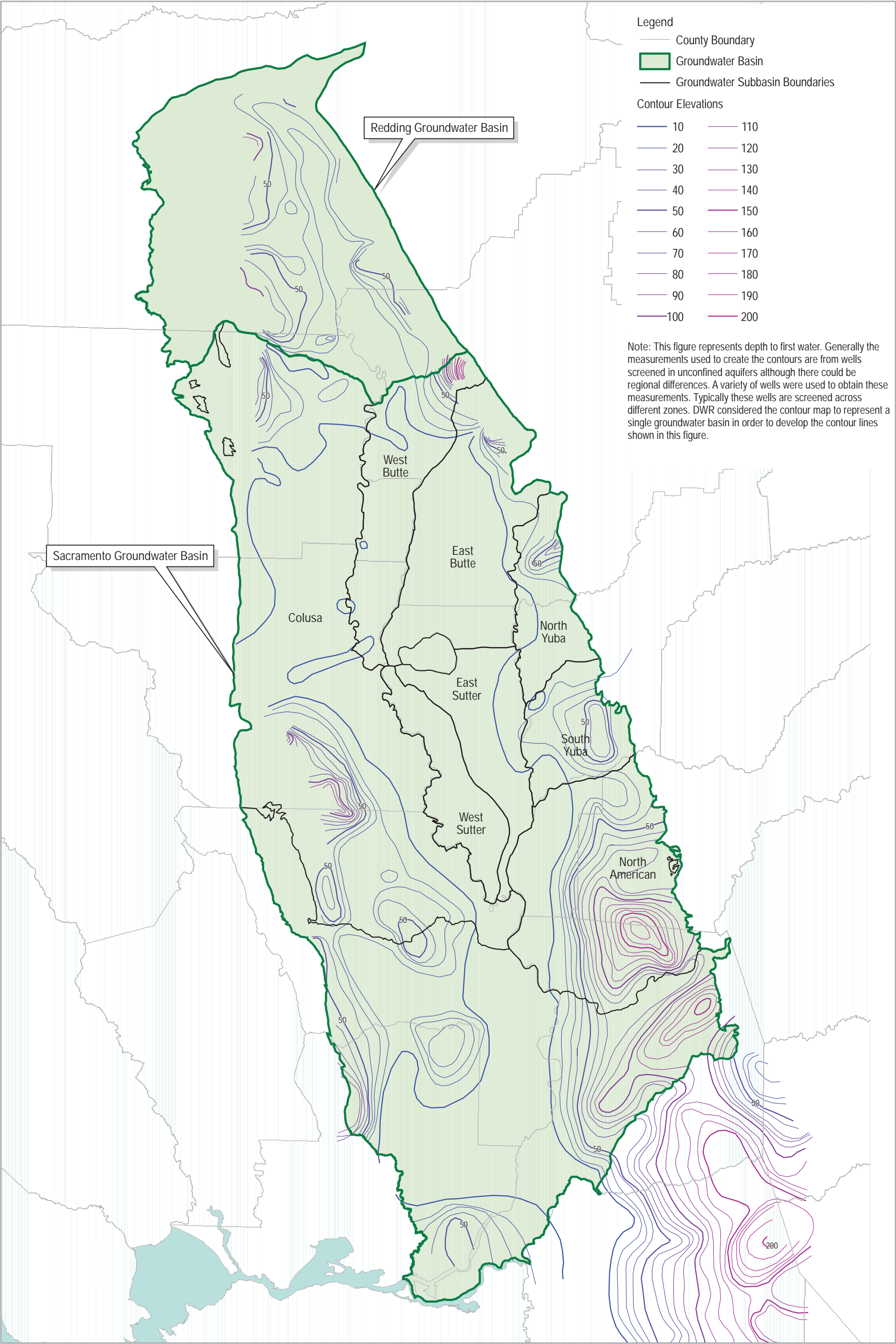


Figure 6-8  
Sacramento Valley Spring 1997 Depth to Groundwater Contour Lines  
Contours Provided by: DWR North and Central Districts