STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

DECISION 1650

In the Matter of Water Right Applications 30358A and 30358B

Woodland-Davis Clean Water Agency

Applicant

California Sportfishing Protection Alliance
City of Sacramento
Department of Fish and Game
Department of Water Resources
Natomas Central Mutual Water Company
Pelger Mutual Water Company
Reclamation District 108
Reclamation District 1004
Reclamation District 2035
Reclamation District 2068
State Water Contractors
Sutter Mutual Water Company
United States Department of the Interior
Westlands Water District

Protestants[1]

SOURCE: Sacramento River tributary to Suisun Bay

COUNTY: Yolo

DECISION CONDITIONALLY APPROVING WATER RIGHT APPLICATIONS 30358A AND 30358B, COMBINING THEM INTO APPLICATION 30358, AND AUTHORIZING ISSUANCE OF A SINGLE PERMIT

BY THE BOARD:

WHEREAS

1. Application 30358 was filed with the State Water Resources Control Board (State Water Board or Board) on April 19, 1994 by the Yolo County Flood Control and Water Conservation District (District). On March 1, 2002, the application was split and re-assigned. Application 30358A was assigned to City of Davis (Davis) and University of California, Davis (UCD) and Application 30358B was assigned to the City of Woodland (Woodland). Davis and Woodland filed their notices of assignment on December 14, 2010. (WDCWA-13 & WDCWA-14.) UCD filed its notice of assignment on December 22, 2010. (WDCWA-300.) Both Application 30358A and Application 30358B

[1] On November 17, 2010, South Delta Water Agency (SDWA), submitted a timely Notice of Intent to Appear (NOI) at the hearing. However, at the hearing on January 18, 2011, SDWA withdrew its request to participate and presented a policy statement instead.

were assigned to the Woodland-Davis Clean Water Agency (WDCWA). At the hearing on January 19, 2011, WDCWA requested Applications 30358A and 30358B be re-combined into one Application 30358.

2. The applicant requests to divert water from the Sacramento River at the following point of diversion:

By California Coordinate System of 1983, Zone 2	40-acre subdivision of public land survey	Projected Section	Township	Range	Base and Meridian
North 2,008,200 feet and East 6,667,300 feet	**NE¼ of NW¼**	**34**	**10N**	**3E**	**MD**

3. The intended uses are municipal, irrigation, fisheries and aquaculture research. Under Application 30358A, WDCWA seeks an appropriative right to divert 53.3 cubic feet per second (cfs) to be diverted from January 1 to December 31 of each year, with a maximum annual diversion of 30,000 acre-feet per year (afy). Under Application 30358B, WDCWA seeks an appropriative right to divert 26.8 cfs to be diverted from January 1 to December 31 of each year with a maximum annual diversion of 15,000 afy. The total amount of water appropriated under both permits is not to exceed 80.1 cfs as an average 30-day diversion rate and not to exceed 100 cfs as an instantaneous diversion rate. WDCWA requests that the maximum total amount diverted under both Applications 30358A and 30358B be limited to 45,000 afy.

4. Combining the requested rates and amounts into a single application does not expand the requested water right or hinder WDCWA's operation of the project.

5. WDCWA requests that the purpose and place of use be as described below and shown on the map filed by the applicant and dated November 11, 2010:

Purpose of Use	Place of use	Projected Sections	Township	Range	Base and Meridian	Acres
Municipal	**City of Davis and University of California, Davis, and City of Woodland.**		**8N** **9N** **10N**	**1E, 2E, 3E** **2E, 3E** **2E, 3E**	**MD**	
Irrigation	**City of Davis and University of California, Davis, and City of Woodland.**		**8N** **9N** **10N**	**1E, 2E, 3E** **2E, 3E** **2E, 3E**	**MD**	**168,600**
Fisheries and Aquaculture Research	**University of California, Davis**	**16, 21**	**8N**	**2E**	**MD**	

Protests

6. The original Application 30358 was noticed on October 14, 1994. The following protests were filed: (a) Vincent De Dominico, (b) California Sportfishing Protection Alliance (CSPA), (c) Department of Fish and Game (CDFG), (d) Department of Water Resources

(DWR), (e) Westlands Water District (Westlands), (f) State Water Contractors (Contractors), (g) Reclamation District 2035 (RD 2035), (h) City of Sacramento (City), (i) United States Department of the Interior (Interior), (j) Reclamation District 2068 (RD 2068), (k) Reclamation District 1004 (RD 1004) and a joint protest filed by (l) Reclamation District 108, Pelger Mutual Water Company, Sutter Mutual Water Company, and Natomas Central Mutual Water Company (Joint Water Suppliers).

7. Vincent De Dominico protested based on environmental considerations. However, the State Water Board did not accept the protest due to Mr. Dominico's failure to provide specific facts to support allegations of adverse environmental impacts. The protests filed by Interior and Contractors were dismissed, with the understanding that standard permit term 91 be included in any permits issued on the 1994 Application 30358. The protests filed by DWR and Westlands were also resolved with the understanding that standard permit terms 80, 90 and 91[2] would be added to any permit issued to the applicant.

8. The protests filed by the City, RD 2035, RD 2068, RD 1004, and the Joint Water Suppliers are based on both claimed prior rights and agreements in existing contracts. These protests have been resolved through inclusion of specific permit terms that recognize prior rights.

9. The protest filed by CDFG was dismissed with the understanding that permit terms cited in Appendix A of the protest dismissal agreement would be included in any permits issued on Applications 30358A and 30358B. Among the terms is the combined 100 cfs instantaneous diversion rate limitation.

10. After public notice, the State Water Board held an evidentiary hearing on January 18 and 19, 2011. The hearing provided an opportunity for WDCWA and CSPA (the only remaining protestant), to present evidence and arguments in support of their positions.

11. Based on the evidence presented at the hearing, the State Water Board finds and concludes as follows:

Water Availability

12. When considering whether to approve an application to appropriate water, the State Water Board must determine whether unappropriated water is available to supply the project described in an application. (Wat. Code, §1375, subd. (d).) This requirement is intended to avoid over-committing the water supply. Therefore, the evaluation is by necessity conservative. This evaluation includes consideration of other diversions authorized under existing permits and licenses to determine whether, and on what conditions, to approve new appropriations. The State Water Board also takes into account, whenever it is in the public interest, the amounts of water needed to remain in the source for protection of beneficial uses. Beneficial uses include, but are not limited to, instream uses, recreation and the preservation of fish and wildlife habitat. (Wat. Code, § 1243.)

13. Unappropriated water includes water that has not been previously appropriated or diverted for riparian use. (Wat. Code, §§ 1201, 1202.) According to the State Water Board's

[2] Term 80 reserves jurisdiction to change the season of diversion to conform to later findings of the Board concerning availability of water and protection of beneficial uses in the Sacramento-San Joaquin Delta and San Francisco Bay. Term 90 subjects permits to prior rights and in any year of water scarcity, the season of diversion authorized under the permit may be reduced or completely eliminated by order of the Board. Term 91 will be discussed in more detail later in this Decision.

regulations, a permit can be issued only for unappropriated water. Unappropriated water does not include water being used pursuant to an existing right, whether the right is owned by the applicant or by another person. (Cal. Code Regs., tit. 23, § 695.)

14. WDCWA performed a water availability analysis using the CalSim II model, which showed water is available when Term 91 is not in effect. Term 91 requires inbasin diverters to curtail diversions when the State Water Project (SWP) and Central Valley Project (CVP) are releasing stored water to maintain Sacramento-San Joaquin Delta (Delta) water quality objectives or other inbasin entitlements. Inbasin entitlements are defined as all rights to divert water from streams tributary to the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the State Water Board for maintenance of water quality, fish and wildlife. Export diversions and CVP and SWP carriage water are specifically excluded from the definition of inbasin entitlements. Term 91 provides a real-time mechanism for determining when water is available for appropriation for use within the Sacramento-San Joaquin Delta watershed. (State Water Board Decision 1594 (1983) at p. 24.)

15. The CalSim II analysis was included in the October 2007 Davis-Woodland Water Supply Project Environmental Impact Report (Water Supply EIR). (SWRCB-2.) CalSim II is an application of the Water Resources Integrated Modeling System software that was jointly developed by the United States Bureau of Reclamation (USBR) and DWR for performing planning studies related to the CVP and SWP operations. Because the CVP and SWP are California's largest water projects, their operations influence, and at times control, flow in the Sacramento and San Joaquin river basins and the Delta. (WDCWA-100, p. 3.) In the Water Supply EIR, WDCWA performed a project-specific CalSim II analysis to provide information on Delta flows, river flows, water deliveries, and reservoir carryover storage. WDCWA then used these data to assess how diversions associated with its project would affect deliveries to other water users, Delta flow conditions, and in-stream aquatic and fisheries resources. (SWRCB-2, Water Supply EIR, p. 3.2-31.) In the model, upstream water use is approximated using best available estimates of diversions and depletions using land use and irrigation factors to depict actual water use as accurately as possible. All of the scenarios were modeled over the 82-year period of hydrological record from 1922 through 2003. (WDCWA-100, p. 5.)

16. CSPA's witness, Bill Jennings, cautioned the Board about making decisions based on the CalSim II model because of its inadequacies, its complexity, and the complexity of the Delta system. Mr. Jennings also cautioned the use of CalSim II in absolute mode.[3] (CSPA-BJ#2, pp. 11-12.) CSPA contends that the Delta and its tributaries are over-appropriated.[4] WDCWA admitted that the CalSim II model is not perfect and has limitations. For instance, CalSim II uses monthly time steps and, therefore, does not estimate daily variations that may occur in the rivers under actual flow and climate conditions. (SWRCB-2, Water Supply EIR, p. 3.2-31.) WDCWA's witness, Walter Bourez presented testimony regarding the various limitations of the model and how those were handled in the applicant's analysis. The analysis was done in comparative mode, rather than absolute mode. Mr. Bourez testified that in the comparative analysis, model biases tend to cancel out. As such, the measured differences in comparative analysis are generally considered more accurate than the absolute values of the individual studies. Despite its limitations, WDCWA concluded that the CalSim II model is the best available tool for determining when water will be available for appropriation for its project. (WDCWA-100, pp. 3-6.) During the hearing, Board Member Doduc asked Mr. Bourez how confident he was in the model and in the results. Mr. Bourez stated that although the model does not capture all of the nuances and daily operations of the system, it does a good job of depicting the way the system works and he has a high level of confidence in the model. (January 19, 2011 R.T., pp.71-73.)

17. Prior to the hearing, WDCWA performed an updated analysis in support of the Water Supply EIR in response to changes that have occurred to the CVP and SWP system operating criteria and reduction in demand for the project. (WDCWA-100, p. 5.) According to the updated modeling, although the total diversion amount requested in the Applications, 45,000 afy, would not be available for diversion in most years, the full amount would be available in some wet years. (WDCWA-100; WDCWA-102; WDCWA-103.) WDCWA's witness, Mr. Bourez concluded that the effects of WDCWA diversions under its proposed water-right applications that were found in the updated modeling are very similar to the effects found in the modeling done for the Water Supply EIR. Therefore, the updated modeling did not change the conclusions in the EIR. (WDCWA-100, p. 8.)

Face Value of Water Rights versus Actual Water Use

18. CSPA disputed WDCWA's water availability analysis. CSPA argued at the hearing and in written testimony that the Delta system is fully appropriated, and is in fact over appropriated based on the face value of water rights issued for diverters in the Delta watershed. CSPA argued that although face value water right licenses and permits may exceed actual water use, the State Water Board simply does not know how much water is actually being diverted by water right holders.

19. CSPA's primary witness, Chris Shutes, references the findings contained in State Water

[3] CalSim II can be used in either a comparative or an absolute mode. In the absolute mode, results of a single model run, such as the amount of delivery or reservoir levels, are considered directly. The comparative mode consists of comparing two model runs, one that contains a proposed project alternative and one that does not. Model results are generally believed to be more reliable in a comparative study than an absolute study. This is because all of the assumptions are the same for both the with-project and without-project model runs, except the action itself, and the focus of the analysis is the differences in the results. (WDCWA 100, p. 4; Water Supply EIR, Vol. 2, p. 3-20)

[4] CSPA, however, did not submit any expert testimony regarding how to model water availability in the Delta or its tributaries.

Board Draft Decision 1630 and the State Water Board's August 3, 2010 Delta Flow Criteria Report[5] to support CSPA's contention that the Delta river system is over-appropriated. Mr. Shutes also references a September 26, 2008 letter to Delta Vision to support CSPA's position that the Bay-Delta watershed is over-appropriated and the actual water use is unknown. (CSPA-CS#2., pp. 9-10.) Bill Jennings, witness for CSPA, also testified that the watershed is over-appropriated. (CSPA-BJ#2, pp. 6-11.)

20. WDCWA asserted that the face value of water rights is not an accurate indication of actual water use because water rights include both consumptive and non-consumptive uses and water rights may contain maximum diversion limits that are far less than the face value of the water right. (WDCWA-100, pp. 10-11.) WDCWA's witness, Mr. Bourez, concludes that the best available tool for determining when water will be available for appropriation is the CalSim II modeling. Based on CalSim II modeling, water is available for appropriation and Term 91 will prohibit diversions under the permit when there is no unappropriated water available. (WDCWA-100, p. 13.)

21. The face value of a permit or license is the amount that could be diverted if diversions occurred at the maximum amount authorized under the permit or license during the entire period when the permit or license authorizes diversion, without regard to bypass conditions or other constraints that have the practical effect of limiting diversions without expressly imposing a maximum amount of diversion. (Cal. Code Regs., tit. 23, § 1066, subd. (b).) Numerous factors result in the face value of permits vastly exceeding the amount that is available for appropriation. These include, but are not limited to, multiple permits and licenses for repeated diversion and re-diversion of the same water before it is delivered to its ultimate destination, return flows from conveyance losses or after use (including non-consumptive uses), and permit and license conditions such as bypass requirements and Term 91 that limit diversions but do not reduce face value. Face value also includes large amounts authorized to be diverted to storage, even though the circumstances when there is both sufficient unappropriated water available to divert the full amount authorized and the permitted or licensed project has the storage capacity to capture it all may occur rarely, perhaps only once when the reservoir is first filled. The authorization to divert the face value amount is a benefit to the water right holder, as it provides both flexibility and the ability to divert in times of abundant supply for use in times of shortage. The face value of permits and licenses, however, is not a good measure of amounts likely to be used or the availability of unappropriated water.[6]

22. Use of the total face value of permits and licenses in the Delta watershed to determine the availability of unappropriated water for Application 30358 would be inconsistent with watershed of origin principles. A substantial portion of the face value of permits and licenses in the Delta watershed is attributable to permits and licenses held by USBR and DWR for Delta exports by the CVP and SWP. An appropriation for use within the watershed of origin has a right prior to any rights for export by the CVP or SWP. (Wat. Code, § 11460.)

[5] Water Code section 85086 required the State Water Board to develop new flow criteria to protect public trust resources for the Delta ecosystem and to submit its flow criteria determinations to the Delta Stewardship Council within 30 days of their development. The State Water Board conducted a public informational proceeding, held on March 22-24, 2010, and considered the information submitted in connection with that proceeding in developing the flow criteria contained in the Delta Flow Criteria Report.

[6] CSPA also argues that the State Water Board does not know the extent of diversions by those claiming riparian or pre-1914 water rights or the amount of consumptive water rights in permits that have not been exercised, such as DWR and USBR's pending petitions for extension of time to develop their water rights. Pre-1914 and riparian water rights are a factor in water availability and new statutory requirements enacted by the Legislature in 2009 will assist the Board in determining more accurate values for these types of diversions.

Public Trust Resources and Delta Flow Criteria Report

23. CSPA's primary concern is that the constraints used in WDCWA's modeling do not ensure there will be adequate flow to protect public trust resources. On August 3, 2010, the State Water Board issued a report entitled Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem (Report). (CSPA-CS#2, pp. 1-2.) CSPA's witness, Chris Shutes, testified that the Report concludes that Delta outflow is deficient by an average of about 5 million afy to protect public trust resources. (CSPA-CS#2, p. 2.) Mr. Jennings testified that there has been a decline in water quality in the Delta and Sacramento River, which are impaired by a broad suite of pollutants. Water diversions from the Delta and Sacramento River result in decreased flow, which increases both the concentration and residence time of pollutants, exacerbating the effects of toxic pollutants on public trust resources. (CSPA-BJ#2, pp. 3-6.) CSPA asserts that while the causes of fishery declines in the Delta are numerous and include contaminants and invasive species, there are other major factors contributing to the decline. These are major reductions in Delta inflow and outflow that have resulted in loss and degradation of habitat, massive changes in the historic hydrograph, and the effects of export operations. (CSPA-BJ#2, p. 3.)

24. In response to the Report, WDCWA presented evidence to estimate how frequently water would be available for diversion under its proposed water right permit if the State Water Board were to adopt the Delta flow criteria contained in the Report. (WDCWA-100, p. 8.) WDCWA asserts that even if the State Water Board were to adopt more stringent flow criteria as regulatory requirements, water would still be available for diversion during December through March (a 4-month period) of many water years. (WDCWA-100, p. 9.) On rebuttal, CSPA presented a table, Exhibit CSPA-CS#19, which, according to Mr. Shutes shows that the average annual diversion under WDCWA's permits would be only 2,356 acre-feet (af) of water if the Delta flow criteria were adopted. While it is clear that it is not possible for WDCWA to physically divert the full 45,000 af in a 4-month period of time because of the 80.1 cfs average diversion rate limitation, the evidence shows there would be some amount of water available for diversion if the Delta flow criteria were adopted. The quantity of water that WDCWA actually diverts may, however, be further limited if monthly demand is less than the quantity of water that is available for diversion.

25. Although the legislatively-mandated Report is informative as to Delta water needs, the report was only an informational report. In the Report, the Board clearly states that none of the determinations in the Report have regulatory or adjudicatory effect and the Report is for informational purposes only. The Report does not account for different water year types, future regulatory actions the Board may take, nor make recommendations as to how the Board should balance various public interest factors in managing flow in the Delta watershed. If the State Water Board develops new Delta flow criteria with regulatory effect, it must ensure the reasonable protection of beneficial uses, which may entail balancing of competing beneficial uses of water, including municipal and industrial uses, agricultural uses, and other environmental and instream uses.

26. CSPA asserts that because there may be less water available for diversion in the future, it is not in the public interest to approve the applications and they should be denied. (January 19, 2011 R.T., pp. 19-22.) If the Board establishes more stringent water quality objectives for the Delta in a future proceeding, and amends the permits held by USBR and DWR to require implementation of those objectives, as the Board has with previous updates to the water quality objectives for the Delta, the effect likely will be to reduce the amount of water that can be diverted under water rights subject to Term 91. If the CVP

and SWP are required to release stored water more often, Term 91 curtailments will be imposed more often, and the diversions that may be made under permits subject to Term 91 will be reduced accordingly. Term 91 provides a real-time mechanism for determining when water is available for appropriation consistent with the water quality objectives incorporated into the permits for the CVP and SWP. Therefore conditioning a permit based on Term 91 serves to limit diversions consistent with water quality objectives, without having to update the permit each time water quality objectives are updated. WDCWA acknowledged that any permit the Board issues would include Term 91, which will prohibit diversion at certain times. (WDCWA-100, p. 13.) WDCWA further acknowledged that any new Delta regulatory standards that may be adopted by the Board in the future could reduce the water available for diversion. (WDCWA-100, p. 2.)

27. Although new objectives could reduce the average annual amount of water available for appropriation, both parties agree that some water would be available for appropriation even if the flow criteria outlined in the Report were incorporated as new regulatory requirements.

Alternate Water Supply

28. In order to avoid creating a permanent demand for water deliveries based on a water supply that may be reduced as Term 91 reduces the period over which diversions may be made, WDCWA must demonstrate an alternate source of water supply for use when Term 91 is in effect. The Deputy Director for Water Rights will evaluate the acceptability of the alternate source and no water may be diverted by WDCWA until the alternate source is approved. The evaluation will include but not be limited to, the dependability of the alternate source, the need to avoid injury to other legal users of water, and mitigation measures necessary to reduce impacts to public trust resources.

Water Quality Improvements and Groundwater Substitution Impacts

29. The project may contribute to water quality improvements in the water discharged to the Delta watershed (Sacramento River, San Joaquin River, and Yolo Bypass). Existing groundwater wells which the City of Davis, Woodland and UCD rely on for their water supply are high in boron, selenium and dissolved solids. These constituents largely pass through the wastewater treatment systems and are discharged to the Delta. Replacing a portion of the groundwater with surface water will result in a reduction in concentrations of these constituents to the Tule Canal, Willow Slough Bypass, and Conaway Ranch Toe Drain downstream of the wastewater treatment plants and tributary to the Delta. The proposed project would result in an annual reduction of approximately 12,200 tons of salt, the equivalent of a 54 percent reduction of salt load in the treated effluent. (SWRCB-2, Water Supply EIR, p. 3.2-35.)

30. As measured by Electrical Conductivity (EC) levels, the proposed project would reduce EC in the treated effluent by 75 percent for the City of Davis, 63 percent for the City of Woodland, and 19 percent for UCD. (SWRCB-2, Water Supply EIR, p. 3.2-43.) In addition, reduced concentrations of boron and selenium in the source water will result in a reduction in these and other constituents in the treated effluent.

31. The Water Supply EIR (SWRCB-2) states that WDCWA will not purchase surface water that results from agricultural lands being taken out of production. WDCWA will only enter into water transfer agreements with willing sellers who would use a substitute water supply, such as local groundwater, or implement water conservation measures that would make water available for transfer without adversely affecting existing agricultural uses. Therefore, any transfers of water from senior water right holders to WDCWA to serve as the required alternate water supply may result in increased pumping of groundwater to substitute for surface water in order to support continued agricultural production. According to the Water Supply EIR, the future water sellers are all located in Sacramento, Sutter, Yolo, Colusa, Yuba, Tehama, or Shasta Counties, but all within two major groundwater basins, the Sacramento Valley Groundwater Basin and the Redding Groundwater Basin. (SWRCB-2, Water Supply EIR, p. 3.3-1.)

32. Groundwater in the Redding Groundwater Basin is characterized as magnesium-calcium bicarbonate and calcium-magnesium bicarbonate or magnesium-sodium bicarbonate and sodium-magnesium bicarbonate type waters. Localized areas with high boron, iron, manganese, and nitrate concentrations occur in the subbasin. The groundwater in the Sacramento Valley Groundwater Basin is considered a single aquifer system composed of 18 groundwater subbasins. (SWRCB-2, Water Supply EIR, p. 3.3-1.) The Cities of Woodland and Davis, UC Davis, and one of the potential sellers, Conaway Preservation Group, are all located in one of the subbasins, the Yolo Groundwater Subbasin. This subbasin is characterized by a sodium magnesium, calcium magnesium, or magnesium bicarbonate chemistry. (SWRCB-2, Water Supply EIR, p. 3.3-3.) The subbasin also contains high concentrations of boron, selenium, and other inorganic compounds. (SWRCB-2, Water Supply EIR, p. 3.3-3.)

33. The Water Supply EIR (SWRCB-2) determined that the replacement well locations must be chosen so as to not have impacts on surface water flows of the Sacramento River or other waterways in the Delta watershed. A study that identified the approximate location of each production well to be used to replace transferred surface water supplies was based on criteria defined by DWR. (SWRCB-2, Water Supply EIR, p. 3.3-33.) These criteria were used to select well locations that would have no impacts on surface water features that have hydraulic connections to groundwater aquifers.

34. To be consistent with the DWR criteria, Mitigation Measures 3.3-3 were adopted in the Final EIR. (SWRCB-2, Water Supply EIR, p. ES-13.) These measures assure that the replacement wells pump water from groundwater aquifers so as not to deplete the surface water flows. However, the replacement of groundwater for surface water also contributes to the concern about increased lower quality agricultural return flows associated with the increased use of groundwater for irrigation. Depending on the crops grown, the irrigation systems used, and the tail water drainage in place, the agricultural return flows may return higher concentrations of constituents such as salts, boron, selenium and other organic compounds to the Delta watershed. At some point, the improved treated effluent discharged to the Delta watershed from the treatment plants may not compensate for the poorer water quality discharged to the same watershed from irrigation return flows.

Although the magnitude of this problem will not be addressed in this Decision, it will be a factor the Deputy Director for Water Rights considers when evaluating potential alternate water supplies. These topics were not a part of this Water Rights proceeding, since the scope was not intended to evaluate long-term transfers. However, the State Water Board will be required to do a CEQA evaluation at the time when a Petition for a long-term transfer of water is submitted.

35. The CalSim II model was also used to calculate the maximum monthly upstream movement of the X-2[7] location with the proposed Project. The movement was calculated to be approximately 1.1 km (3,609 ft). (SWRCB, vol .2, App. B. p. 5-32.) The Water Supply EIR concluded that the upstream movement of 1.1 km that would occur from other foreseeable projects would constitute a significant change in X-2 position. Because no mitigation measures are available to avoid this impact, this would therefore result in a cumulatively significant and unavoidable impact to water quality within the Delta. (SWRCB 2, p.6-25.)

Changes in Sacramento River Flow to the Delta

36. James Yost, an expert witness for WDCWA, testified, "60 or 70 percent of the surface water diverted for use by the two cities will be returned as return flow." He went on to state, "and it may even be higher than that, because both cities are embarking on a program to install the capability to pump ground water for landscape irrigation in their parks and other places in the city, and they wouldn't use the surface water." (January 18, 2011 R.T., p. 77-78.) Based on this information, if the operation of the Wastewater Treatment facilities for WDCWA remains the same, there could be a net increase in flow of water returned to the Delta over existing treatment flows.

37. The Yolo Groundwater subbasin is recharged by the Sacramento River, its tributaries, agricultural return flows, local precipitation, and contributions from adjacent basins. WDCWA presented evidence showing that a reduction in groundwater pumping would reduce the depletion of local groundwater supplies, reduce the occurrence of land subsidence, and may contribute to an increase in flows to the Delta watershed. Mr. Yost also testified that the ground water basin underlying the east Yolo County area has significant releases to the Sacramento River. He testified that when the two cities quit pumping groundwater, the groundwater basin will build up and releases [to the Delta] will increase. (January 18, 2011 R.T., p. 77.)

Watershed of Origin Statute

38. WDCWA intends to divert water under Application 30358 for inbasin use. The watershed of origin statute requires that elements of the CVP and SWP not deprive the watershed or the area where water originates (or immediately adjacent areas that can be conveniently supplied with water) of the prior right to water that could be reasonably required to supply the present and future beneficial needs of the watershed area, any of its inhabitants, or property owners. (Wat. Code §§ 11460-11463; see also, *El Dorado Irrigation Dist. v. State Water Resources Control Bd.* (2006) 142 Cal.App.4th 937, 947 (*El Dorado*); *United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 138.) Section 11460 applies to the operation of the SWP by the DWR and the operation of the CVP by USBR. (*United States v. State Water Resources Control Bd.,* at pp. 138-139; see also *State Water Resources Control Board Cases,* 136 Cal.App.4th 674, 754.) This does not mean

[7] The location of 2 parts per thousand (ppt) salinity within the Delta. Its position varies and is measured in kilometers upstream of the Golden Gate Bridge.

that a permit holder in the watershed of origin is entitled to use water previously diverted to storage by the CVP or SWP. (*El Dorado Irr. Dist. v. State Water Resources Control Bd.* (2006) 142 Cal.App.4th 937, 962.) It does mean, however, that at times when natural and abandoned flows are insufficient for all diversions, diversions for export by the CVP and SWP, including diversions to storage for export later in the year, must be curtailed before any diversions entitled to watershed of origin are curtailed. The State Water Board, therefore, may grant a permit for an inbasin diversion, even if granting those inbasin permits may reduce the water supply available to the SWP and CVP for export.

39. The watershed of origin statute also provides a basis for WDCWA to obtain a water supply at times when it cannot divert under Application 30358. When Term 91 is in effect and WDCWA cannot divert under its permit, the watershed of origin statute (Wat. Code, § 11460 et seq.) provides a means to obtain an alternative water supply through a contract with USBR or DWR. The statute reserves a priority for the beneficial use of water within its area of origin that can be asserted by someone who has or seeks a contract with USBR or DWR for the use of that water. (*State Water Resources Control Bd. Cases* (2006) 136 Cal.App.4th 674, 758.)

Conclusions

40. While water rights may exist for diversions in excess of what might occur in any one year, diversions will not occur up to this level in all circumstances. Diversions of water must follow the water right priority system, including the priorities for watershed of origin rights. Furthermore, water is only available for diversion after the flow dependant objectives included in the Bay-Delta Plan are satisfied. The Bay-Delta Plan includes flow dependant objectives for the protection of various beneficial uses including fish and wildlife, municipal and industrial, and agricultural uses that vary based on water year type and time of year. The State Water Board retains continuing authority over permits and can, as necessary, modify water right terms and conditions to limit diversions under certain conditions. In addition, the State Water Board may modify the flow dependant objectives included in the Bay-Delta Plan to ensure the protection of beneficial uses.

41. Having considered the foregoing, the State Water Board finds and concludes that there is unappropriated water available for appropriation under Applications 30358A and 30358B, combined by this decision into Application 30358. During certain flow periods, up to 45,000 afy of water is available for appropriation by direct diversion for beneficial use. The permit issued pursuant to this decision will be subject to all prior rights to the use of water and Term 91. When Term 91 is in effect, WDCWA will not be authorized to divert water and must rely on an alternative water supply approved by the Deputy Director for Water Rights. Term 91 provides a real-time mechanism for limiting diversion under a permit to periods when water is available for appropriation under the permit holder's priority. The amount of water WDCWA seeks to appropriate will not always be available for diversion and may vary from month to month and year to year. WDCWA has demonstrated, however, that water will be available for appropriation. WDCWA must obtain a long-term water supply covering those periods when water is not available for diversion pursuant to this permit. WDCWA shall submit documentation subject to review and approval by the Deputy Director for Water Rights that an alternate water supply has been secured for the development period under this permit. The alternate water supply must be equivalent to the diversion quantities scheduled for use under this permit. Before issuing a license that confirms the right to appropriate 45,000 afy, the State Water Board will determine whether such an amount has been applied to beneficial use by WDCWA. (Wat. Code, §1610.) If WDCWA does not capture and put the full 45,000 afy to beneficial use, the State Water

Board will, when the project is licensed, reduce the right to appropriation to the maximum amount of water put to beneficial use in any one year. (Wat. Code, §1610.5.)

42. Approval of Application 30358, subject to the conditions included in this Decision, is in the public interest because it will: 1) provide a reliable water supply to meet existing and future needs; 2) improve water quality for drinking water purposes, and 3) improve the quality of treated wastewater effluent discharged by WDCWA.

Environmental and Public Trust Impacts

43. The State Water Board reviewed the following CEQA documents as part of its consideration of Application 30358: 1) City of Davis Sphere of Influence (Local Agency Formation Commission (LAFCO) no. S-207) Mitigated Negative Declaration (MND); 2) General Plan Final Environmental Impact Report (SCH # 95053061), February 1996 (General Plan EIR), and 3) The Davis-Woodland Water Supply Project Draft Environmental Impact Report (SCH # 2006042175), Volume 2: Water Right Diversion Modeling Technical Appendix, March 2007 (Water Supply EIR).

44. The LAFCO Mitigated Negative Declaration determined the project will have less than significant effects on the environment within the City of Davis Sphere of Influence.

45. The LAFCO General Plan EIR determined the development of areas within the Sphere of Influence of the City of Woodland will cause significant environmental impacts, including the conversion of prime agricultural land, loss of habitat and increased noise level. The State Water Board, as a responsible agency under the California Environmental Quality Act (CEQA), makes no determination on impacts outside its purview. The significant impacts identified in the LAFCO General Plan EIR do not include water resource impacts, such as impacts on water quality, water supply, or instream beneficial uses, within the State Water Board's purview as a responsible agency. The lead agency (LAFCO) under CEQA, found that benefits associated with amending the Sphere of Influence and City of Woodland General Plan will outweigh the negative impacts of such a change, and issued a Statement of Overriding Considerations.

46. The City of Davis, as the lead agency under CEQA completed and certified the Water Supply EIR in October 2007 for the water supply project. The City was required to adopt findings on the feasibility of reducing or avoiding significant environmental impacts, (Cal. Code Regs., tit. 14, § 15091), to adopt a statement of overriding considerations identifying the benefits of project approval that outweigh the project's significant unavoidable effects on the environment (Cal. Code Regs., tit. 14, § 15093), and adopt the Mitigation Monitoring and Reporting Program (Cal Code Regs., tit. 14, § 15097.) The City determined that the significant and unavoidable impacts associated with the project where mitigation was infeasible are impacts to: (i) land use and agriculture, (ii) air quality, (iii) noise, and (iv) aesthetic resources. The State Water Board, as responsible agency under CEQA, makes no determination on significant and unavoidable impacts that are outside the State Water Board's purview as a responsible agency.

47. The Water Supply EIR also identifies the following significant and unavoidable impacts that are within the purview of the State Water Board as a CEQA responsible agency: (i) the project would provide additional water supply resulting in the need to construct a new wastewater treatment plant in the future; and (ii) the cumulative contribution to the loss of fish species. The EIR states that the project, in combination with other future projects, would cause only minimal impacts to overall aquatic habitat and quality. It concludes there would not be any substantial reduction in fish populations or the quality or

quantity of aquatic habitat in the Sacramento River-Delta system for any fish species as a result of the proposed project. Therefore, the EIR concludes that the proposed project is not likely to adversely affect special-status fish or their habitats. The impacts to fisheries resulting from project-related changes to Sacramento River and Delta hydrology would therefore not be significant. However, several future projects listed in Table 6-3 of the EIR have the potential to impact special-status fish species. It is unknown at this time the extent to which other future planned or under construction projects would result in cumulatively considerable impacts. The Sacramento River in the vicinity of the project contains sensitive habitats and species whose loss would be considered a significant impact and the project will facilitate future growth and development. Therefore, the EIR concludes that the impacts of the project, in combination with other projects, may cause cumulatively considerable adverse effects on sensitive fish species and water quality of the Sacramento River or Delta. The Davis City Council adopted a Statement of Overriding Considerations for these impacts.

48. The State Water Board, as responsible agency, will issue a Notice of Determination within five days of issuance of this decision.

49. The State Water Board has an independent obligation to consider the effect of the proposed projects on public trust resources and to protect those resources where feasible. (*National Audobon Society v. Superior Court* (1983) 33 Cal.3d 419.) In order to comply with our public trust duty, the permits will be conditioned based on the mitigation measures in the Water Supply EIR and any other measures the Board deems necessary to protect public trust resources.

50. There is no evidence that approval of the application, with the inclusion of the mitigation measures, will have any adverse impacts on public trust resources.

51. The Water Supply EIR identifies significant, mitigable impacts to biological resources such as candidate, sensitive or special-status plant and animal species, riparian habitats, vernal pools or wetlands. In accordance with Cal. Code Regs., tit. 14, § 15091, subd. (a)(1), the State Water Board makes independent findings regarding those impacts within its purview as a responsible agency. The State Water Board finds these impacts can be avoided or reduced to a less than significant effect through incorporation of the mitigation and monitoring program in paragraphs 71-83 of the Decision.

52. With the Proposed Project, WDCWA would divert up to 46.1 thousand acre-feet/year (TAF/yr) of surface water by the year 2040. These surface water supplies would be supplemented with about 7.5 TAF/ yr from local groundwater sources and 2.0 TAF/ yr of water from the existing Solano Project being available for use at UCD to meet WDCWA's anticipated 55.6 TAF/yr water demand.

    The State Water Board has reviewed the project alternatives described in the Water Supply EIR and makes the following findings:

a. No Project Alternative
If this alternative is implemented, WDCWA will not acquire any new surface water supply from the Sacramento River, and would continue to rely solely on groundwater. Reliable groundwater water supply is suspected to be insufficient to meet future demands, contains high concentrations of salts and other minerals, and is vulnerable to historical and current land use practices.

b. Water Supply Alternative 1 – 2030 Plan Horizon Supply at 45.8 million gallons/day (MGD)
Under this alternative, WDCWA would divert up to 40.4 TAF/yr of surface water from the Sacramento River, while continuing to rely on groundwater to meet peak demands. If this alternative is implemented, development taking place after 2030 would require water supplies developed with another project not considered in this alternative.

c. Water Supply Alternative 2 – Existing General Plan Horizon Supply with 39.8 MGD Diversion
Under this alternative, WDCWA would divert 35.1 TAF/yr of surface water and 3.9 TAF/yr of groundwater. This alternative has the same limitations as Alternative 1; additional water supplies needed to meet future demand beyond the existing General Plan would need to be acquired under another project.

d. Water Supply Alternative 3 – 2040 Planning Horizon Supply with Aggressive Conservation and 47.8 MGD Diversion
The water supply under this alternative would include 5.9 TAF/yr of groundwater, a maximum surface water diversion of 42.2 TAF/yr, and a 10% reduction in water use by the Cities of Davis, Woodland and the UCD campus through aggressive water conservation. This alternative assumes the implementation of conservation measures beyond what is currently being implemented by WDCWA. It is unknown if those conservation measures can be successfully implemented.

e. Water Supply Alternative 4 – 2040 Planning Horizon Supply with 106 MGD Diversion
Under this alternative, all groundwater pumping would cease and WDCWA would rely on new water right permits and water transfer from senior water right holders. Alternative 4 would provide water to supply WDWCA's anticipated 2040 demand. However, similar to Alternative 1 and 2, water supplies to meet additional demand would not be provided under this alternative and will need to be part of a separate project.

f. Water Supply Alternative 5 – 2040 Planning Horizon Supply at 18.8 MGD Diversion
If this alternative is implemented, groundwater would supply 33.2TAF/yr and surface water diversion would be 20.5 TAF/yr. Under this alternative, the bulk of the water supply will come from groundwater. Therefore, this alternative has similar limitations as the No Project Alternative.

53. Under the No Project Alternative, WDCWA will rely solely on groundwater. Similarly, under Alternative 5, WDCWA will rely on groundwater to supply a large portion of its needs. Neither of those alternatives will allow WDCWA to meet the goal of reducing EC and improving the quality of the wastewater effluent. Under Water Supply Alternatives 1, 2, and 4, WDCWA will need to acquire additional water supplies to meet demands beyond the existing General Plan, the year 2030 or unknown additional demands. Water Supply Alternative 3 relies on unproven, aggressive conservation measures.

54. Under the proposed Project, WDCWA will meet its goal of reducing salt concentrations in the WWTP effluent until the year 2040. Therefore, the State Water Board finds the proposed project is the environmentally superior alternative.

55. The State Water Board finds the water will be diverted and used without unreasonable effect upon fish, wildlife, or other instream beneficial uses.

56. In accordance with Cal. Code Regs., tit. 14, § 15091, subd. (a)(3), the State Water Board must make independent findings regarding those impacts within its purview as a responsible agency. If it determines it is infeasible to adopt alternatives or mitigation measures that mitigate those impacts to a less than significant level, it must adopt a Statement of Overriding Considerations pursuant to section 15093.

57. Several future projects listed in Table 6-3 of the EIR have the potential to impact special-status fish species. It is unknown at this time the extent to which other future planned or under-construction projects would result in cumulatively considerable impacts. The Sacramento River in the vicinity of the project contains sensitive habitats and species whose loss would be considered a significant impact and the project will facilitate future growth and development. Therefore, the State Water Board concludes that the impacts of the project, in combination with other projects, may cause cumulatively considerable adverse effects on sensitive fish species and water quality of the Sacramento River or Delta.

Statement of Overriding Considerations

58. Conditional approval of WDCWA's Water Right Application 30358 will benefit public health by: 1) providing a reliable water supply to meet existing and future needs; 2) improving water quality for drinking water; and 3) improving the quality of treated wastewater effluent discharged to the Sacramento River. As a result of the Project, a currently unscreened diversion on the Sacramento River will be screened thereby providing additional protection to the resident fish species. The State Water Board finds these specific benefits provide the justification to override the cumulatively significant unavoidable effects of Project implementation to degrade water quality and fisheries of the Sacramento River or Delta.

THEREFORE, IT IS HEREBY ORDERED THAT THE APPLICATIONS ARE APPROVED AND COMBINED IN ORDER TO ISSUE A SINGLE PERMIT SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

59. The source and point of diversion are as described in paragraph 2 above.

60. The rate and amount authorized for diversion under Application 30358 is the total requested under both Applications 30358A and 30358B. The combined amount is as described below:

    The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed a 30-day average diversion rate of 80.1 cubic feet per second and an instantaneous diversion rate of 100 cubic feet per second, to be diverted from January 1 to December 31 of each year. The maximum amount diverted under this permit shall not exceed 45,000 afy.

61. The place of use and purposes of use are as described in paragraph 5 above.

62. The permit issued under this application will include the following standard terms:

a. Standard Term 6: The amount authorized for appropriation may be reduced in the license if investigation warrants.

b. Standard Term 10: Progress reports shall be submitted promptly by Permittee when requested by the State Water Board until a license is issued.

c. Standard Term 11: Permittee shall allow representatives of the State Water Board and other parties, as may be authorized from time to time by said State Water Board, reasonable access to project works to determine compliance with the terms of this permit.

d. Standard Term 12: Pursuant to California Water Code sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the State Water Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of Permittee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the State Water Board also may be exercised by imposing further limitations on the diversion and use of water by the Permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

e. Standard Term 13: The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Board if, after notice to the Permittee and an opportunity for hearing, the State Water Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified

pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the State Water Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

f. Standard Term 14: This permit does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050-2097) or the federal Endangered Species Act (16 U.S.C.A. §§ 1531-1544). If a "take" will result from any act authorized under this water right, the Permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.

g. Standard Term 15: Permittee shall maintain records of the amount of water diverted and used to enable State Water Board to determine the amount of water that has been applied to beneficial use pursuant to Water Code section 1605.

h. Standard Term 22: This permit shall not be construed as conferring upon the Permittee right of access to the point of diversion.

i. Standard Term 29A: Permittee shall consult with the Division of Water Rights and, within one year from the date of this permit, shall submit to the State Water Resources Control Board its Urban Water Management Plan as prepared and adopted in conformance with section 10610, et seq. of the California Water Code, supplemented by any additional information that may be required by the Board.

   All cost-effective measures identified in the Urban Water Management Plan and any supplements thereto shall be implemented in accordance with the schedule for implementation found therein.

j. Standard Term 30: If it is determined after permit issuance that the as-built conditions of the project are not correctly represented by the map(s) prepared to accompany the application, Permittee shall, at his expense have the subject map(s) updated or replaced with equivalent as-built map(s). Said revision(s) or new map(s) shall be prepared by a civil engineer or land surveyor registered of licensed in the State of California and shall meet the requirements prescribed in section 715 and sections 717 through 723 of the California Code of Regulations, Title 23. Said revision(s) or map(s) shall be furnished upon request of the Chief, Division of Water Rights.

k. Standard Term 63: No work shall commence and no water shall be diverted, stored or used under this permit until a copy of a stream or lake alteration agreement between the State Department of Fish and Game and the Permittee is filed with the Division of Water Rights. Compliance with the terms and conditions of the agreement is the responsibility of the Permittee. If a stream or lake agreement is not necessary for this permitted project, the Permittee shall provide the Division of Water Rights a copy of a waiver signed by the State Department of Fish and Game.

l. Standard Term 80: The State Water Board reserves jurisdiction over this permit to change the season of diversion to conform to later findings of the State Water Board concerning availability of water and the protection of beneficial uses of water in the Sacramento-San Joaquin Delta and San Francisco Bay. Any action to change the authorized season of diversion will be taken only after notice to interested parties and opportunity for hearing.

m. Standard Term 90: This permit is subject to prior rights. Permittee is put on notice that, during some years, water will not be available for diversion during portions or all of the season authorized herein. The annual variations in demands and hydrologic conditions in the Sacramento - San Joaquin Delta are such that, in any year of water scarcity, the season of diversion authorized herein may be reduced or completely eliminated by order of the State Water Board, made after notice to interested parties and opportunity for hearing.

n. Standard Term 91: No diversion is authorized by this permit when satisfaction of inbasin entitlements requires release of supplemental Project water by the Central Valley Project or the State Water Project.

   i. Inbasin entitlements are defined as all rights to divert water from streams tributary to the Sacramento-San Joaquin Delta or the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the State Water Board for maintenance of water quality and fish and wildlife. Export diversions and Project carriage water are specifically excluded from the definition of inbasin entitlements.

   ii. Supplemental Project water is defined as that water imported to the basin by the projects plus water released from Project storage which is in excess of export diversions, Project carriage water, and Project inbasin deliveries.

   The State Water Board shall notify Permittee of curtailment of diversion under this term after it finds that supplemental Project water has been released or will be released. The Board will advise Permittee of the probability of imminent curtailment of diversion as far in advance as practicable based on anticipated requirements for supplemental Project water provided by the Project operators

o. Standard Term 203: The Permittee shall obtain all necessary state and local agency permits required by other agencies prior to construction and diversion of water. Copies of such permits and approvals shall be forwarded to the Chief, Division of Water Rights.

p. Standard Term 215: Should any buried archeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archeological indicators include: obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The Chief of the Division of Water Rights shall be notified of the discovery and a professional archeologist shall be retained by the Permittee to evaluate the find and recommend appropriate mitigation measures.

Proposed mitigation measures shall be submitted to the Chief of the Division of Water Rights for approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Chief of the Division of Water Rights.

63. Construction work and completed application of the water to the authorized use shall be prosecuted with reasonable diligence and completed by December 31, 2040.

64. Permittee shall install and maintain devices satisfactory to the State Water Board to measure the instantaneous rate of diversion, the amounts of water diverted each day, and the cumulative quantity of water diverted under this permit. Permittee shall make daily readings of these measuring devices and record these readings. Records of all such measurements shall be maintained by the Permittee, and made available to interested parties upon reasonable request. Permittee also shall, subject to any applicable Homeland Security restrictions, post such records on a publicly accessible website within 48 hours after the measurements are made. Copies of the records shall be submitted to the State Water Board with the annual "Progress Report by Permittee" and Permittee shall submit copies of these records to the CDFG each year when these records are submitted to the State Water Board.

    Permittee shall allow the CDFG, or a designated representative, reasonable access to measuring devices for the purpose of verifying measurement readings.

    Although water may be diverted by both Permittee and Reclamation District 2035 ("RD 2035") at the same intake facility on the Sacramento River, the water pumped by Permittee and the water pumped by RD 2035 must be pumped through separate pumps and pipes, with separate meters, and may not be commingled after pumping.

65. The right to divert water under this permit is junior in priority to the following prior rights:

    a. City of Sacramento under any valid pre-1914 appropriative right and appropriation issued pursuant to Permits 992, 11358, 11359, 11360 and 11361 (Applications 1743, 12140, 12321, 12622, and 16060);

    b. Conaway Preservation Group, LLC under any valid riparian rights and Licenses 904, 905, and 5487 (Applications 1199, 1588 and 12073);

    c. Reclamation District No. 2068 to divert water under Licenses 6103 and 9339 (Applications 2318 and 19229), and Permit 19205 (Application 24961);

    d. Reclamation District No. 1004 under any valid riparian rights and License 3165 (Applications 27), and Permit 16771 (Application 23201);

    e. Reclamation District No. 108 under any valid riparian rights, Licenses 3065, 3066, 3067 and 7060 (Applications 576, 763, 1589 and 11899;

    f. Pelger Mutual Water Company under Licenses 613A and 8547 (Applications 1765A and 12470);

g. Natomas Central Mutual Water Company under any valid riparian rights, Licenses 1050, 2814, 3109, 3110, 9794, and 9989 (Applications 534,1056, 1203, 1413, 15572 and 22309), Permit 19400 (Application 25727); and

h. Sutter Mutual Water Company, under any valid riparian rights and Licenses 547, 552, 657, 882, 1110, 2240, 2817, 2818, 2819, 2820-a, 2821, 2822, 2823, 4562, 5432, 8220 and 8547 (Applications 1769,1758, 1772, 3195, 1763, 7886, 581, 878, 879, 880, 9760, 1160, 10658, 11953, 14584, 16677, and 12470).

66. Prior to issuance of a permit, WDCWA shall submit a project map that meets the requirements of California Code of Regulations, Title 23, Chapter 2, Article 7.

67. No water shall be diverted under this permit until Permitee obtains a long-term water supply covering those periods when water is not available for diversion pursuant to this permit. Permittee shall submit documentation subject to review and approval by the Deputy Director for Water Rights that an alternate water supply has been secured for the development period under this permit. The alternate water supply must be equivalent to the diversion quantities scheduled for use under this permit.

68. To minimize potential impacts on drainage and floodplains, Permittee shall:

a. Prior to construction, obtain a 401 Certification issued by the State Water Board or the Regional Water Quality Control Board and provide a copy of the 401 Certification to the Division of Water Rights (Division). Permittee shall also consult with the CDFG regarding the proposed upland sites where spoil material from trenching will be stockpiled. After making this consultation, Permittee shall provide the CDFG with a map of these proposed sites and Permittee's proposed conditions for using these sites.

b. Test any trench and tunnel spoils that are stockpiled at any upland site before replacement back into any excavated area or transportation to offsite disposal. Spoils containing high volumes of water shall be detained and allowed to settle at an upland site to reduce turbidity before the spoils are tested. If any such spoils are found to be contaminated by lubrication or hydraulic fluids, then such spoils will be collected and disposed of at a permitted waste disposal facility.

69. To minimize potential impacts on agriculture, Permittee shall:

a. Install the water conveyance pipeline and transmission pipelines at a depth (to the top of the pipe) ranging from four to seven feet below the ground surface. Installation at this depth should be sufficient to avoid conflict with expected agricultural production activities. Final depths shall be established in consultation with an agricultural specialist and landowners to ensure no conflict with future agricultural practices.

b. Establish permanent Prime Farmland agricultural conservation easement at a ratio of 2:1 for the acreage of Prime Farmland that would be permanently displaced with Project development.

70. Permittee shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP), acceptable to the Central Valley Regional Water Quality Control Board, for all Project construction activities, including:

a. Conduct all instream construction activities during the low-flow period of May 30 through October 15.

b. Place sediment curtains around the construction or maintenance zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.

c. Install silt fencing, including appropriate setbacks, where feasible, in all areas where construction occurs within 100 feet of known or potential steelhead habitat. Silt fencing will be installed adjacent to all aquatic habitat.

d. Isolate fresh concrete from wetted channels for a period of 30 days after it is poured. If a 30-day curing period is not feasible, a concrete sealant approved for use in fisheries habitat may be applied to the surfaces of the concrete structure. If a sealant is used, the manufacturer's guidelines for drying times will be followed before reestablishing surface flows within the work area.

e. Locate spoil sites (concrete wash areas) so as to prevent drainage into the Sacramento River. If a spoil site drains towards the Sacramento River, then lined catch basins will be constructed to intercept sediment before it reaches the channel and removal of spoils will be conducted daily during routine maintenance of work sites. Spoil sites will be graded to reduce the potential for erosion.

f. Not leave disturbed surfaces without erosion control measures (consistent with the SWPPP) in place during the wet season from October 15 through April 30. Erosion protection shall be provided on all cut and graded slopes and vegetative cover shall be established on each construction site as soon as possible after disturbance of the site.

71. The permit shall include the following mitigation measures based on the Mitigation Monitoring Plan from the Water Supply EIR and on the protest-dismissal agreement executed by WDCWA and CDFG. All certifications or reports necessary for approval by the Deputy Director for Water Rights shall be submitted together in one report prior to construction activities. The report shall also include the status of those measures that require approval by other agencies.

72. No water shall be diverted under this permit except through a fish screen on the intake to the diversion structure, satisfactory to meet the physical and operational specifications of the CDFG, United States Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS), as specified at the time the last permit for construction is issued, to protect species of fish listed as endangered or threatened species under the California Endangered Species Act (Fish and Game Code sections 2050 to 2098) or the federal Endangered Species Act (16 U.S.C. sections 1531 to 1544). Construction, operation, and maintenance costs of the required facility are the responsibility of the Permittee.

73. To minimize potential impacts on biological resources, Permittee shall:

a. Prior to construction, evaluate impacts to trees within the City of Davis city limits and submit the evaluation to the City and Deputy Director for Water Rights for review. If deemed necessary by the City, Permittee shall apply for a permit and abide by any permit requirements for tree pruning or removal. In addition, sensitive habitats and wildlife shall be identified and protected for projects within the City of Davis, under the HAB 1.1 policy.

b. Conform project design, construction, and operation plans with, to the greatest extent possible, biological conservation goals fundamental to the ongoing Yolo County NCCP/HCP development process.

c. In consultation with CDFG, prepare and implement a Revegetation Program Plan that provides for the establishment and ongoing maintenance of native riparian species in all disturbed bank-side construction areas.

d. Conduct site preparation and installation of the sheet pile cofferdam during the summer and fall. A pre-construction Giant Garter snake (GGS) survey shall be conducted at the intake site prior to any cofferdam staging activity. The GGS survey shall be conducted by a qualified biologist acceptable to the Deputy Director for Water Rights in accordance with USFWS survey protocols, and findings shall be reported to CDFG, USFWS and the Division. As appropriate, follow-up inspections for presence of GGS individuals shall be conducted within 24 hours of initiating activity.

e. Offset the permanent loss of 0.1 acres of channel margin habitat or shallow water habitat because of installation of the diversion/intake facility, by purchasing off-site mitigation habitat in a ratio agreeable to CDFG, the Deputy Director for Water Rights and other agencies consulted. Permittee will work in consultation with CDFG, USFWS and NMFS to characterize functionally equivalent habitat for channel margin loss, and to identify the appropriate ratio of in-kind riparian corridor habitat suitable for use by wildlife species known to reside within two river miles of the intake construction site.

f. During installation of a cofferdam and dewatering, ensure that a qualified fisheries biologist acceptable to the Deputy Director for Water Rights will design and conduct a fish rescue and relocation effort to collect fish from the area within the cofferdam involving the capture and return of those fish to suitable habitat within the Sacramento River. To ensure compliance, the fisheries biologist will observe the initial dewatering activities within the cofferdam. The fish rescue plan will be provided for review and comment to NMFS, USFWS, CDFG and the Division prior to implementation. The success of this dewatering measure will be the effective capture and removal of fish from the area to be dewatered with a minimum of capture and handling mortality for those fish returned to the Sacramento River.

g. Install sheet piles and beams during construction of the cofferdam for the intake structure using a vibrating method. Prior to pile driving by any technique other than the vibrating method, Permittee will provide to CDFG, and the Deputy Director for Water Rights, a scientifically supported analysis to demonstrate that effects of the method will be limited to thresholds below that which could create sound pressure injury to juvenile salmonids in the vicinity.

74. In order to prevent impacts to special status plant species (Alkali milk-vetch, brittlescale, San Joaquin spearscale (saltbrush), palmate-bracted bird's beak, Heckard's peppergrass, Ferris milk-vetch, heartscale, rose mallow, Sanford's arrowhead, and Brazilian watermeal), Permittee shall:

a. Perform a pre-construction survey for rare plants at the selected diversion/intake site and conveyance pipeline route. The survey shall be conducted by a qualified botanist acceptable to the Deputy Director for Water Rights during the appropriate

season for identification, according to California Native Plant Society Botanical Survey Guidelines, included in Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR. Data shall be compiled and reported to CDFG and the Deputy Director for Water Rights before initiating any construction.

b. Identify populations of palmate-bracted bird's beak that would be directly affected by project construction. Temporary preservation fencing shall be installed to protect individuals, and fencing shall provide a minimum 25-foot distance exclusion area. Indirect effects due to changes in hydrology or other ecological requirements for this species shall be evaluated and modifications to the project design/construction shall be incorporated to minimize indirect effects to palmate-bracted bird's beak.

c. Avoid specimens as feasible, or identify and protect with orange fencing, individual Ferris's milk-vetch, alkali milk-vetch, heartscale, brittlescale, San Joaquin saltbush, Heckard's pepper-grass, rose-mallow, Sanford's arrowhead, Brazilian watermeal, or other special-status species without state or federal status that are detected within the proposed project area during the pre-construction survey, and notify CDFG. Where these sensitive plants cannot be avoided, additional mitigation measures shall be implemented by Permittee in consultation with CDFG, prior to construction. These measures may include, but are not limited to the following:

i. Minimizing impacts by restricting removal of plants to a few individuals of a relatively large population;

ii. Preparing a plan to relocate plants to suitable habitat outside the proposed Project area to a CDFG-approved site;

iii. Restoring or enhancing occupied habitat at an off-site location with appropriate ecological conditions to support the affected sensitive species.

iv. Locating the pipelines entirely underground and returning the ground surface to pre-project grade and contours.

v. Locating Pipeline alignments according to paragraph 6 of the CDFG Protest Dismissal Agreement, dated October 29, 2009.

vi. Consulting with CDFG on constraints and opportunities for viable off-site habitat enhancement/creation for the species concerned and implement a plan for restoration and enhancement. The plan shall include a five-year monitoring and maintenance program to evaluate and support the establishment of the sensitive species, and shall include contingencies for additional recruitment, planting and monitoring, as necessary, if survivorship falls below 75%.

vii. Preserving occupied habitat for the species on-site or at another regional location.

75. To prevent impacts to vernal pool and seasonal wetland species (Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, and western spadefoot), Permittee shall:

a. Prior to project construction, survey the selected diversion/intake pipeline corridor area and assess the potential to support vernal pool and seasonal wetlands. All

vernal pools and wetlands within 250 feet of the selected diversion/intake pipeline corridor shall be included in the assessment.

b. Undertake one of the following two actions for all vernal pool and seasonal wetland habitats identified during the wetland delineation:

   i. Survey for presence or absence of vernal pool crustaceans according to USFWS survey protocol (in the February 28, 1996 Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California, (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR), where those pools found to contain vernal pool crustaceans shall be mitigated by (c), (d), and (e) below. All other pools shall be mitigated at a 1:1 compensation ratio, <u>or</u>

   ii. Assume that the vernal pool is occupied by vernal pool crustaceans and measures (c), (d), and (e) shall be implemented for all pools.

c. Avoid completely all identified vernal pool and seasonal wetland habitats. The USFWS considers disturbance within 250 feet of all vernal pool wetlands to be an impact. Therefore, all wetlands shall be avoided by 250 feet and protected within that buffer. Protective measures may consist of temporary fencing such as silt fencing and plastic construction fencing. Also, Best Management Practices (BMPs) and Stormwater Pollution Prevention Plan methods shall be implemented during construction to avoid indirect water quality impacts to wetlands. These pools shall be considered “avoided” and no further mitigation is necessary.

d. If impacts to vernal pool and seasonal wetlands cannot be avoided but can be protected from direct fill or ground disturbance, the wetlands shall be identified and protected using temporary fencing, which shall take the form of silt fencing and temporary plastic construction fencing placed no closer than 25 feet from the edge of the pool. The distance between the pool and protective fencing shall be maximized wherever possible. These pools will be considered as “indirectly affected” by project activities and shall be mitigated in accordance with the February 28, 1996 Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR). Some pools may be considered avoided if it can be shown that the proposed project activity would not adversely impact their surface and subsurface hydrology. This shall be considered on a case-by-case basis by a qualified biologist and hydrologist acceptable to the Deputy Director for Water Rights.

e. Calculate the area of impacts for pools that will be directly impacted by project activities. For the purpose of this calculation, any portion of a pool that is directly impacted by project activities would result in the entire pool being identified as being permanently impacted. Impacted pools shall then be mitigated in accordance with the February 28, 1996 Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (see Appendix C2 of the 2007 Water Supply Draft EIR).

f. Conduct a pre-construction survey of the selected diversion/intake pipeline corridor area to assess the potential to support vernal pool and seasonal wetlands which may support California tiger salamander (CTS) and western spadefoot. The survey shall include the entire project footprint and all areas within 1.24 miles of proposed project activities (where site access allows) for the presence of CTS using the protocol provided in the October 2003 Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR). Should CTS be detected in the area, all ground squirrel burrows and vernal pools shall be mapped within 1.24 miles of the project, and all vernal pool areas shall be calculated within this area.

g. Identify vernal pools and burrows that can be protected from project activities and protect these sites from disturbance using temporary fencing. Temporary fencing shall take the form of silt fencing and temporary plastic construction fencing placed no closer than 25 feet from the edge of the habitat. The distance between the habitat and protective fencing shall be maximized wherever possible. Protective fencing around vernal pools identified as potential habitat for special-status amphibians shall be constructed in a way that allows CTS and western spadefoot to access these wetlands.

h. Quantify impacts to vernal pools and occupied CTS burrows, impacted vernal pools and burrow habitat and mitigate and compensate in accordance with (c) above. Burrows that cannot be avoided shall be excavated by a biologist approved by USFWS and the Deputy Director for Water Rights prior to construction using hand tools. Excavated CTS shall be relocated off the project site to a USFWS-approved site.

76. To prevent impacts to Valley elderberry longhorn beetle, Permittee shall:

a. Survey the selected diversion/intake pipeline corridor area prior to construction for the presence of elderberry shrubs. The survey shall be conducted according to USFWS's July 9, 1999 Conservation Guidelines for Valley Elderberry Longhorn Beetle (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR). The survey may be conducted concurrently with the rare plant surveys.

b. Avoid identified elderberry shrubs by a minimum of 100 feet during construction of the diversion/intake pipeline corridor. If complete avoidance is not feasible, USFWS shall be consulted regarding impacts to valley elderberry longhorn beetle. Compensation for disturbance within 100 feet of shrubs will be implemented in a manner approved by USFWS, CDFG, and the Deputy Director for Water Rights, and may include transplanting elderberry shrubs into a conservation area for valley elderberry longhorn beetle. The conservation area must be at least 1,800 square feet and should be planted with five additional elderberry plants plus five native associated plants for every one transplanted/impacted elderberry shrub. Refer to USFWS's July 9, 1999 Conservation Guidelines for Valley Elderberry Longhorn Beetle (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR), for details.

77. To prevent impacts to giant garter snake and western pond turtle, Permittee shall:

a. Conduct a pre-construction survey of the selected diversion/intake and pipeline siting option for giant garter snake habitat suitability within one year of anticipated construction. The survey area shall include up to 200 feet of upland habitat surrounding potential aquatic habitat for giant garter snake according to the USFWS November 13, 1997 programmatic biological opinion for giant garter snake. Habitat assessments shall follow CDFG guidelines Appendix D: Protocols for Pre-Project Surveys to Determine Presence or Absence for the Giant Garter Snake and to Evaluate Habitats, as cited in the USFWS Draft Recovery Plan for the Giant Garter Snake (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR).

b. If suitable giant garter snake habitat is present, implement the following mitigation measures in accordance with the USFWS programmatic biological opinion for giant garter snake which pertain to Level 3 impacts.

i. Construction activity within giant garter snake habitat shall occur between May 1 and October 1, which is the active period for the snake. Between October 2 and April 30, the USFWS Sacramento Fish and Wildlife Office and CDFG, North Central Region, shall be consulted to determine if additional measures are necessary to minimize and avoid take. Such measures might include, but are not limited to, requiring a biological monitor on site during construction within giant garter snake habitat.

ii. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

iii. Construction personnel shall participate in a Service-approved worker environmental awareness program. Under this program, workers shall be informed about the presence of giant garter snakes and habitat associated with the species and that unlawful take of the animal or destruction of its habitat is a violation of the Act. Prior to construction activities, a qualified biologist approved by the USFWS and the Deputy Director for Water Rights shall instruct all construction personnel about giant garter snake as directed in the USFWS programmatic biological opinion for giant garter snake. Proof of this instruction shall be submitted to the USFWS, Sacramento Fish and Wildlife Office, CDFG, North Central Region and the Deputy Director for Water Rights.

iv. Pre-construction surveys for the giant garter snake shall be conducted by a biologist approved by USFWS and the Deputy Director for Water Rights within 24 hours prior to ground disturbance. Giant garter snake encounters and field reports shall be addressed per the USFWS programmatic biological opinion for giant garter snake.

v. Clearing of wetland vegetation will be confined to the minimal area necessary to excavate toe of bank for riprap or fill placement. Excavation of channel for removal of accumulated sediments will be accomplished by using equipment located on and operated from top of bank, with the least interference practical for emergent vegetation.

vi. Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance.

vii. Preserved giant garter snake habitat shall be designated as Environmentally Sensitive Areas and shall be flagged by a qualified biologist approved by CDFG, USFWS and the Deputy Director for Water Rights and shall be avoided by all construction personnel.

viii. After completion of construction activities, any temporary fill and construction debris shall be removed and, wherever feasible, disturbed areas shall be restored to pre-project conditions. Restoration work may include replanting emergent vegetation as directed in the USFWS programmatic biological opinion for giant garter snake.

ix. Impacts to giant garter snake habitat shall be mitigated in accordance with USFWS mitigation compensation ratios, based on described levels of impact in the programmatic biological opinion. More than two season duration and temporary or permanent losses of habitat shall be compensated at 3:1 or the ratios described in Table 1 on page 7 of the USFWS November 13, 1997 programmatic biological opinion for giant garter snake (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR) and shall meet the criteria listed in the USFWS programmatic biological opinion for giant garter snake.

x. All wetland and upland acres created and provided for the giant garter snake shall be protected in perpetuity by a Service-approved conservation easement or similarly protective covenants in the deed and comply with provisions in the USFWS programmatic biological opinion for giant garter snake. Documentation of such land preservation shall be provided to CDFG and the Deputy Director for Water Rights.

xi. The Reporting Requirements shall be fulfilled in compliance with the USFWS programmatic biological opinion for giant garter snake and the reports shall be submitted to the USFWS, CDFG and the Deputy Director for Water Rights.

xii. Replacement of affected giant garter snake habitat shall be made at a 3:1 ratio.

xiii. All replacement habitats must include both upland and aquatic habitat components. Upland and aquatic habitat components must be included in the replacement habitat at a ratio of 2:1 upland acres to aquatic acres.

xiv. If restoration of habitat is a component of the replacement habitat, one year of monitoring restored habitat with a photo documentation report due one year from implementation of the restoration with pre- and post-project area photos.

xv. Five years of monitoring replacement habitat with photo documentation report due each year to CDFG, USFWS and the Division.

78. To prevent impacts to Swainson's Hawk, Permittee shall:

a. Conduct a pre-construction breeding-season survey (between March 1 and September 15) in the year when construction is scheduled to commence. The survey will be conducted by a qualified biologist, acceptable to CDFG and the

Deputy Director for Water Rights, and according to the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley, prepared by the Swainson's Hawk Technical Advisory Committee, dated May 31, 2000, (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR). The survey area shall include all lands with a one quarter-mile radius around any Project construction activities scheduled to occur during that breeding season. If any nesting Swainson's Hawks are detected, Permittee shall establish a buffer zone of one-quarter mile around the nest site, within which there will be no construction unless one of the following has occurred:

i. Based on ongoing monitoring of the nest site by a qualified biologist, and subsequent consultation with the CDFG, it is determined by the CDFG that work can occur within the buffer zone, along with the conditions under which such work may be carried out. Depending on conditions specific to each nest, it may be possible to allow construction activities within the buffer zone without impacting breeding behavior. In these cases, the nest will be monitored by a qualified biologist acceptable to CDFG. The monitor will have all stop authority. If, in the professional opinion of the monitor, project activities are negatively affecting the nesting or breeding behavior of the birds, then the monitor shall stop all construction activity within the designated buffer zone, and construction activities within this designated buffer zone shall not resume until either the monitor has determined that the young have fledged and the nest is empty or as otherwise approved by CDFG; <u>or</u>,

ii. Monitoring has demonstrated, and CDFG has concurred, that adults are no longer utilizing the nest area and/or birds of the year have fully fledged.

b. Mitigate for permanent loss of Swainson's Hawk foraging habitat associated with the construction of the Water Treatment Plant facility. Compensation shall follow guidance in the May 2, 2002 Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into between CDFG and the Yolo County HCP/NCCP Joint Powers Agency (Habitat JPA), with the mitigation fee increase described in the January 26, 2004 staff report regarding this agreement. This agreement requires that:

i. Urban development. Permittee shall pay an acreage-based mitigation fee into the Wildlife Mitigation Trust Account established by the Habitat JPA in an amount, as determined by the Habitat JPA Board, sufficient to fund the acquisition, enhancement and long-term management of one (1) acre of Swainson's Hawk foraging habitat for every one (1) acre of foraging habitat that is lost to urban development.

ii. A calculated fee of $5,800.00 per acre is sufficient to fund the acquisition and preservation as of January 2004. This fee amount may be adjusted to reflect updated costs for acquisition of habitat.

iii. With written approval of and subject to conditions determined by CDFG, an urban development Permittee may transfer fee simple title or a conservation easement over Swainson's Hawk foraging habitat, along with appropriate enhancement and management funds, in lieu of paying the acreage-based mitigation fee.

79. To prevent impacts to western yellow-billed cuckoo, Cooper's hawk, white-tailed kite, yellow warbler, loggerhead shrike, northern harrier and short-eared owl, Permittee shall:

    a. Implement measures 78a. and 78b. above for Swainson's Hawk, and apply them to western yellow-billed cuckoo. Apply these measures, but modify survey area to include 500 feet around the construction activities, and modify buffer areas to include 500 feet around any Cooper's hawk, white-tailed kite, yellow warbler or loggerhead shrike nest.

    b. Implement measure 78a. and 78b. above for Swainson's Hawk and apply them to northern harrier and short-eared owl, but modify survey area to include 500 feet around the construction activities; and modify buffer areas to include 500 feet around a nest.

80. To prevent impacts to Burrowing Owl, Permittee shall:

    a. Survey the entire route of the chosen siting diversion/intake pipeline corridor and Water Treatment Plant (WTP) footprint for burrowing owls according to the October 17, 1995 CDFG Staff Report on Burrowing Owl Mitigation (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR), which includes survey guidelines for burrowing owl. The surveys must be conducted prior to project construction and shall be conducted by a qualified biologist acceptable to the Deputy Director for Water Rights. Data shall be compiled and reported to CDFG before initiating any construction activities. The guidelines include the following:

        i. Conduct a winter survey (to be conducted between December 1 and January 31) and a survey during the breeding season (to be conducted April 15 to July 15).

        ii. Conduct the survey beginning one hour before sunrise and two hours after, OR two hours before sunset and one hour after.

        iii. The survey area shall include suitable habitat within a 500-foot radius around the Project construction zone.

    b. If occupied burrows are identified, implement the measures included in the October 17, 1995 CDFG Staff Report on Burrowing Owl Mitigation (see Appendix C2 of the Davis-Woodland Water Supply Project Draft EIR). These include but are not limited to the following measures:

        i. Owls shall not be disturbed from February 1 through August 31. Establish an avoidance buffer of 160 feet (September 1 through January 31) or 250 feet (February 1 through August 31) and monitor the nest burrow during construction activity. Any indication of impacts to the breeding pair as a result of construction shall be reported to CDFG whereby CDFG may have the authority to halt construction until the young have fledged from the nest.

        ii. If impacts to owls cannot be avoided, then CDFG shall be consulted on minimization measures such as using passive relocation techniques during the non-breeding season (September 1 through January 31).

iii. A minimum of 6.5 acres of foraging habitat must be preserved for every occupied burrow potentially impacted (within 160 feet or 250 feet of the construction activity, depending on the season). Foraging habitat shall be preserved according to CDFG guidelines.

81. To prevent impacts to tricolored blackbird, white-faced ibis, western snowy plover, and bank swallow, Permittee shall implement measure 78a. and 78b. above for Swainson's hawk and apply them to the above-listed species, but modify survey area to include 500 feet around the construction activities; and modify buffer areas to include 500 feet around nesting colonies/locations.

82. To prevent impacts to riparian habitat or other sensitive natural communities, Permittee shall:

a. Prior to construction, conduct an assessment within the project area to provide the basis of a vegetation mitigation plan. A vegetation mitigation plan will be developed in consultation with CDFG and the Deputy Director for Water Rights. The plan shall contain species expected to be found in the vicinity of project sites. Details about the species and their past occurrence shall be included in the plan. Permittee shall comply with all terms and conditions of the plan, including additional mitigation provisions to be implemented. Permittee will follow performance standards in developing the plan. The requirements will consist of one or more of the following provisions:

i. Establish an oak tree conservation easement in coordination with Yolo County to protect and preserve trees commensurate with the removal of large oaks as a result of project implementation.

ii. Replace and maintain trees, for seven years, at a rate of 1 tree per 1-inch of tree diameter removed as measured at diameter breast height. Because this measure would only fulfill one-half of the required mitigation for the project, one or more of the other provisions would need to be implemented to fulfill the remaining mitigation requirements.

iii. Contribute funds to a suitable oak woodland conservation fund, as established in accordance with § 1363 of the Fish and Game Code

iv. Consult with Yolo County and CDFG to determine and agree to implement other suitable measures consistent with the Yolo County Oak Woodland Conservation and Enhancement Plant 2007 and § 21083.4(a) of the California Public Resources Code.

b. For any drainage that would be crossed using trenchless construction techniques, the bore pits will be excavated at least 50 feet outside the edge of riparian vegetation to minimize impacts to waterways and adjacent areas.

c. All new project-related groundwater wells within water sellers' service areas shall be sited in areas that are not within 0.25 mile of wetlands and other sensitive biological resources that could be affected by groundwater drawdown.

83. To prevent impacts to federally protected wetlands, Permittee shall:

a. Prior to construction, conduct and submit for approval a formal wetland delineation report for the proposed Project area for verification through the Army Corp of Engineers (ACOE). Permittee shall obtain a Section 404 (Clean Water Act) permit for impacts to jurisdictional wetlands from the ACOE and a Section 401 water quality certification from the RWQCB or State Water Board and shall comply with all conditions of the permit and certification. In association with either the permit or certification, compensatory mitigation for impacts to jurisdictional wetlands may be required. ACOE mitigation guidelines emphasize on-site mitigation preference, but in the potential case that on-site mitigation is not available, Permittees shall either purchase wetland mitigation credits from an ACOE - approved mitigation bank that services the area containing the proposed project or prepare a plan to implement mitigation at an off-site location.

b. For open trench construction crossing minor wetland ditches (less than 15 feet in width), the following measures shall be implemented:

i. Implement compliance measures, described in Section 3.7, Geology, Soils, and Seismicity for Impact 3.7-1, to reduce indirect impacts to wetlands and other waters during open trench construction;

ii. Conduct trenching and construction activities across drainages during low-flow or dry periods as feasible;

iii. If working in active channels, install cofferdam upstream and downstream of stream crossing to separate construction area from flowing waterway;

iv. Place sediment curtains upstream and downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone;

v. Locate spoil sites such that they do not drain directly into the drainages and/or seasonal wetlands;

vi. Store equipment and materials away from the drainages and wetland areas. No debris will be deposited within 250 feet of the drainages and wetland areas.

vii. Prepare and submit to CDFG and the Deputy Director for Water Rights for approval, a revegetation implementation plan to restore vegetation in all temporarily disturbed wetlands and other waters using native species seed mixes and container plant material that are appropriate for existing hydrological conditions. All disturbed drainages will be restored to pre-construction conditions.

84. In addition to reporting required prior to construction activities, Permittee shall prepare and submit to the Deputy Director for Water Rights annual reports that include the status of compliance with the mitigations and monitoring required by paragraphs 71-83 above. Annual reports shall be submitted by October 1 of each year.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a decision duly and regularly adopted at a meeting of the State Water Resources Control Board held on March 1, 2011.

AYE:	Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Dwight P. Russell
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend

Jeanine Townsend
Clerk to the Board