D R A F T

November 4, 2008

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

DECISION XXXX

In the Matter of Application 31174

Orange County Water District,
Applicant

California Sportfishing Protection Alliance
City of Redlands
City of Riverside
City of San Bernardino Municipal Water Department
California Department of Fish and Game
East Valley Water District
Santa Ana River Mainstem Local Sponsors
United States Forest Service
Protestants

Center for Biological Diversity
Southern California Edison
City of Chino
Interested Parties

SOURCE: Santa Ana River

COUNTIES: Orange and Riverside

DECISION PARTIALLY APPROVING APPLICATION 31174

BY THE BOARD:

INTRODUCTION

This decision of the State Water Resources Control Board (State Water Board or Board) partially approves water right Application 31174 of the Orange County Water District (OCWD) needed to appropriate water from the Santa Ana River to storage in various basins within OCWD's boundaries in Orange and Riverside counties.

The State Water Board finds as follows:

1.0 BACKGROUND

1.1 Although the Santa Ana River is Fully Appropriated, the State Water Board has Expressly Authorized that the Orange County Water District may File an Application to Appropriate Water

In Order WR 98-8 the State Water Board declared the Santa Ana River (River) to be fully appropriated from January 1 through December 31 of each year. That order prohibits the filing of any application for the appropriation of water from the River. Subsequently, five petitions were filed asking the State Water Board to amend the prohibition in WR 98-8. One such petition was filed by OCWD. Upon receipt of evidence supporting the revision of prohibition for the Santa Ana River, the State Water Board adopted Order WRO-2002-0006, providing for the acceptance of OCWD's Application 31174 to appropriate water from the Santa Ana River**.**

1.2 Project Description

As filed on November 5, 1992 and amended on August 24, 1998 and May 8, 2007 by OCWD, Application 31174 (SWRCB-1, OCWD 7-1, 7-2, 7-3)[1] seeks to divert 505,000 acre-feet per annum (afa) of water from the Santa Ana River at two points of diversion, one near River Road and one at Prado Dam, and six points of diversion and rediversion below Prado Dam along the Santa Ana River to various storage and groundwater recharge facilities in the cities of Anaheim and Orange.[2] OCWD requests to divert a maximum of 119,400 afa[3] to surface storage at Prado Reservoir,[4] Gypsum Canyon Reservoir, Aliso Canyon Reservoir and various recharge facilities, and divert up to 505,000 afa to underground storage for subsequent extraction and beneficial use. The surface storage facilities allow OCWD to maximize its groundwater recharge capacity by capturing the water during high flow events and then slowly releasing it later in the year at a rate that matches the maximum recharge capacity of the downstream

[1] Exhibits introduced at hearing will be referred to in this decision by party name and exhibit number, e.g., SWRCB-1 refers to State Water Board Exhibit 1, and OCWD 7-1 refers to Orange County Water District Exhibit 7-1.

[2] The application was publicly noticed on January 11, 2002.

[3] OCWD applied to store 146,800 afa, but later reduced the surface storage amount to 119,400 afa. (May 2, 2007 R.T., pp.152-153; OCWD 1-23, FPEIR, Response to Comments, p. 41 & Table 2.)

[4] Prado Dam was constructed by the ACOE in 1941. (OCWD 1-23, p. 2-9; OCWD 1-1, p. 11; May 2, 2007 R.T., p.64.)

recharge facilities. (May 2, 2007 Reporter's Transcript [R.T.], pp. 152-153; OCWD 1-1, p. 14.) OCWD proposes to operate the project so that the total annual amount of water appropriated from the Santa Ana River, as a combination of surface storage and diversion to underground storage, does not exceed 505,000 acre-feet (af) in any one year. The requested maximum combined rate of direct diversion from the Santa Ana River is 800 cubic feet per second (cfs).[5] The project, however, does not utilize direct diversion, only diversion to underground storage or surface storage. Therefore, this decision does not grant direct diversion. The applicant proposes to collect the water to storage and divert year-round for the purpose of municipal, irrigation, recreational, and industrial uses. (May 2, 2007 R.T., p. 152.) The stated purpose of use, as filed in Application 31174, is municipal, recreational, industrial and fish and wildlife preservation and/or enhancement.

2.0 HEARING ISSUES

On February 1, 2007, the State Water Board issued a Notice of Hearing.[6] The Notice specified six issues:[7]

1. Is there water available for appropriation by each of the applicants? If so, when is water available and under what circumstances?

2. Will approval of any of the applications or the petition result in any significant adverse impacts to water quality, the environment or public trust resources? If so, what adverse impact or impacts would result from the project or projects? Can these impacts be avoided or mitigated to a level of non-significance? If so, how? What conditions, if any, should the State Water Board adopt to avoid or mitigate any potential adverse impacts on fish, wildlife, or other public trust resources that would otherwise occur as a result of approval of the applications and petition?

[5] OCWD's existing diversion capacity is 1,670 cfs, which does not include the on stream diversions at PODs 1 (Prado Wetlands above Prado Dam) and 8 (Prado Dam). (OCWD 1-1, pp. 16-17.)

[6] The Notice was revised on March 1, 2007, with modifications to the date of the pre-hearing conference, the name of the Hearing Officer, and the correction of some typographical errors in the original Hearing Notice.

[7] The hearing concerned four water right applications and a wastewater change petition. The fifth water right application (Application 31371) was withdrawn by the applicant, San Bernardino Valley Water Conservation District ~~San Bernardino County Municipal Water District~~, prior to the hearing. This decision addresses only Application 31174 by OCWD.

3. Is each of the proposed projects in the public interest? If so, what conditions, if any, should the State Water Board adopt in any permits that may be issued on the pending applications, or in any order that may be issued on the wastewater change petition, to best serve the public interest?

4. Will any of the proposed appropriations by the applicants and/or the proposed change in treated wastewater discharge by the petitioner cause injury to the prior rights of other legal users of water?

5. What should be the relative priority of right assigned to any permits that may be issued on the pending applications?

6. What effect, if any, will the projects have on groundwater and/or movement of any contaminated groundwater plumes? Can the effects be mitigated? If so, how?

3.0 ALL PROTESTS WERE RESOLVED PRIOR TO THE HEARING

Eight protests were filed against Application 31174. Protests by City of San Bernardino Municipal Water Department, East Valley Water District, City of Riverside, and California Department of Fish and Game (DFG) were resolved by stipulated agreements prior to the hearing. By letter dated September 27, 2006, the United States Forest Service (USFS) withdrew its protest against Application 31174. USFS found OCWD's application to be consistent with the April 17, 1969, judgment in *Orange County Water District v. City of Chino*, *et al.* (Super. Ct. Orange County, 1969, No. 117628), in which water users below Prado Dam are entitled, as against water users above Prado Dam, to receive an average annual supply of 42,000 acre feet of Base Flow at Prado, together with the right to all Storm Flow reaching Prado Reservoir. ~~OCWD is only entitled to the right to stormwater flows from the watershed that reach Prado Dam~~. Also, USFS withdrew its protest due to the absence of OCWD's potential use of water stored in a conservation pool behind Seven Oaks Dam. Santa Ana River Mainstem Local Sponsors (Local Sponsors) dismissed its protest following the execution of the Operations Agreement between OCWD and the Orange County Flood Control District. (Local Sponsors-1-2; Local Sponsors Closing Brief, p. 2.) California Sportfishing Protection Alliance (CSPA) did not

appear at the pre-hearing conference or at the hearing. The State Water Board subsequently dismissed CSPA's protest for failure to respond. City of Redlands withdrew its protest by letter dated April 18, 2007. Accordingly, the State Water Board finds that all protests to Application 31174 were withdrawn or conditionally resolved prior to the hearing.

4.0 COORDINATION OF PERMITS TO APPROPRIATE WATER WITH EXISTING JUDGMENTS AND AGREEMENTS FOR THE USE OF SANTA ANA RIVER WATER

On May 2, 2007 the State Water Board commenced a hearing to consider four applications to appropriate water from the Santa Ana River. The applicants are:

- Chino Basin Watermaster (Application 31369)
- San Bernardino Valley Municipal Water District and Western Municipal Water District of Riverside County (Applications 31165 and 31370)
- Orange County Water District (Application 31174)
- City of Riverside (Application 31372)

Rights to the use of the water in the Santa Ana River, including the potential rights of the applicants in this proceeding, are the subject of several judgments, settlement agreements, and memoranda. Among these is the April 17, 1969, judgment in *Orange County Water District v. City of Chino et al.* (Super. Ct. Orange County, 1969, No. 117628). Among other matters, the judgment divides the River into various stream reaches and provides that upper watershed parties are obligated to ensure that certain average minimum flows reach the lower watershed. (Applicants' Joint. Ex. 1-1.) In addition, the judgment provides that so long as certain average minimum flows reach the lower basin, the upper basin water users have the right to divert, pump, extract, conserve and use all surface and ground water originating in the upper basin without interference from lower basin claimants. (Applicants' Joint Ex. 2-2.)

Likewise pertinent is *Western Municipal Water District of Riverside County et al. v. East San Bernardino County Water District* (Super. Ct. Riverside County, 1969, No. 78426). This judgment was also entered on April 17, 1969. This judgment allocates the water in the upper stream reach for the San Bernardino Basin, Colton Basin and Riverside Basin areas, excepting the Chino Basin, consistent with the Orange County judgment. The relative priority of Watermaster to divert water from the Chino Basin is derived from the rights recognized in the

Inland Empire Utilities Agency under the Orange County judgment and the November 16, 1999, *Memorandum of Understanding to Affirm and Preserve Existing Rights in the Santa Ana River Watershed.* (¶ 13 and ¶ 3(a), Stipulation of Applicants, dated April 5, 2007.)

Normally, under California appropriative water law, the application filed first in time has a higher priority than an application filed at a later date. (Wat. Code, §§ 1450, 1455, 1610; *Pasadena v. Alhambra* (1949) 33 Cal. 2d 908, 929 [207 P.2d 17].) However, taken together, these judgments, settlement agreements, and memoranda may alter the relative priority of the permits that may be issued for the applications pending on the Santa Ana River.

Additionally, exceptions to the rule of "first in time, first in right" can be based on Article X, section 2 of the California Constitution, area of origin protections, and other public policies. (See, e.g., Wat. Code, §§ 10500 et seq., 11460; see also Archibald, Governor's Commission to Review California Water Rights, *Allocating Use of Surface Water: The Priority System and its Alternatives* (Appropriative Rights Staff Memorandum No. 2, July 1977) pp. 5-6.) The State Water Board is also required to subject permit approvals to such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest the water sought to be appropriated. (Wat. Code, § 1253.) The numerous judgments, settlement agreements and memoranda for the Santa Ana River aimed at managing the diversion and use of water in the River among many competing claims present a situation that may justify modifying the usual priority of competing applications for the appropriation of water.

However, on April 5, 2007 the applicants presented a signed stipulation to the hearing officer to resolve key hearing issues 4 and 5. On April 10, 2007, no party having objected to the stipulation, the hearing officer accepted it as the basis for resolving these key hearing issues concerning the priorities of the application relative to other legal users of water and among the pending applications. (RT, Vol.1, 2:21-24; see also 4.0 Hearing Issues, p. 5, *ante*.)[8]

[8] The significance of the City of Redlands, et al., reported right to divert up to 88 cubic feet per second (cfs) in the stipulation is unclear unless the stipulation was to resolve issues other than those presented to the State Water Board in this proceeding. (Stipulation of Applicants dated April 5, 2007, ¶ 15) The State Water Board does not expressly or implicitly recognize the validity of the 88 cfs diversion if it was initiated after 1914 and is not in compliance with the Water Code section 1200, et seq.

5.0 NON-APPLICANT PARTIES STIPULATED OUT OF THE PROCEEDING.

In a water right proceeding, the parties include the applicant, persons who filed unresolved protests, and any other persons who are designated as parties in accordance with the procedures set forth in the notice of hearing. (Cal. Code Regs., tit. 23, § 648.1, subd. (b).) Persons presenting non-evidentiary policy statements are not parties. (*Id*., § 648.1, subd. (d).) The parties in this matter include OCWD, USFS, Local Sponsors, Southern California Edison, East Valley Water District, the City of Chino and the Center for Biological Diversity (Center).[9]

6.0 WATER IS AVAILABLE FOR APPROPRIATION TO GROUNDWATER RECHARGE UNDER APPLICATION 31174.

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 the application. (Water Code, §1375, subd. (d).) Unappropriated water includes water that has not been either previously appropriated or diverted for riparian use. (Wat. Code, §§1201, 1202.)

[9] The State Water Board's hearing procedures do not require the filing of a protest as a prerequisite to participating in a hearing. Nonetheless, during the pre-hearing conference on April 6, 2007, the participants requested an opportunity to brief the issue as to what extent the Center should be allowed to participate as a party. According to the Center's Notice of Intent to Appear, the Center intended to present a case-in-chief on the impacts of the applications on public trust resources. Certain applicants objected to the Center's presentation of evidence on the grounds that the Center had not protested their applications. The hearing participants were given the opportunity to brief the issue of whether the Center could participate in the hearing. San Bernardino Valley Municipal Water District and Western Municipal Water District of Riverside County (Muni/Western), OCWD, and the Center submitted timely briefs. In its brief, Muni/Western contended the allowance of a late appearance at a hearing by a person who did not file a protest results in unfair surprise to the hearing participants. OCWD joined with Muni/Western's request to limit the Center's participation to its protest against the wastewater change petition submitted by the City of Riverside.

In his April 20, 2007 reply, and citing the California Administrative Procedure Act and State Water Board's regulations and hearing procedures, the Hearing Officer stated that it is within the State Water Board's discretion to allow an interested party who has not submitted a protest to participate in an adjudicative proceeding as a party. He further noted that the Center has an extensive history of advocacy and legal involvement in the Santa Ana River watershed, and its public trust and environmental interests in this proceeding are unique and not represented by other parties. The Hearing Officer concluded that the Center, having complied with the procedural requirements for participating in the hearing, would be allowed to participate fully.

In determining the amount of water available for appropriation, the State Water Board shall take into account, whenever it is in the public interest, the amounts of water required for recreation and the preservation and enhancement of fish and wildlife resources. The Department of Fish and Game shall recommend the amounts of water, if any, required for the preservation and enhancement of fish and wildlife resources and shall report its findings to the Board. (Wat. Code, §1243.)

OCWD contends that unappropriated water is available to supply the project described in Application 31174. Although OCWD seeks to divert 505,000 afa under Application 31174, it recognizes that due to annual variability in river flows the water will not be available every year. (OCWD 3-1, p. 3; OCWD 1-23, Vol. 1, p. D-1, fn 2.) In fact, according to the record, the wet-year annual flow in the Santa Ana River below Prado Dam has exceeded 505,000 afa only three times in the 70-year period from Water Year (WY) 1934-35 through WY 2004-05, and all three of those events occurred within the last 30 years. (OCWD 4-1, p. 14; OCWD 3-1, p. 14; Riverside 3-16, Plate 5; Applicants' Joint Exhibit 1-3.) The largest of the three events was also the most recent and occurred in WY 2004-05. (OCWD 3-1, p. 19.)

6.1 Existing Conditions

OCWD currently diverts water from the Santa Ana River to recharge the Orange County groundwater basin, which provides approximately 50 percent of Orange County's water supply. (OCWD 3-1, p. 4.) In Mr. Craig Miller's (Assistant General Manager for OCWD) written testimony, he states that OCWD's existing facilities include shallow (generally 25 feet deep or less) and deep recharge basins, as well as portions of the Santa Ana River channel bottom and the Santiago Creek channel bottom.[10] (OCWD 1-1, p. 17.) OCWD does not own all facilities. (*Ibid*.) For instance, under an agreement with the County of Orange (County), OCWD recharges in Miller Basin, Raymond Basin, and Placentia Basin, which are flood control facilities owned by the County. (OCWD 1-18; OCWD 1-1, p. 12.) Mr. Miller testified that in order to replenish the groundwater basin, OCWD currently operates 26 recharge facilities. (OCWD 1-1,

[10] Permit 19325 (Application A027261), which the State Water Board issued to OCWD on September 25, 1984, allows OCWD to divert water from Santiago Creek and Alameda Storm Channel to the Santiago Basin. (OCWD 1-23, Figure 2-9; OCWD 1-23, p. 2-22; OCWD 1-4.) The water right permit ~~authorized~~ granted under Application 31174 ~~this decision~~ allows OCWD to divert water originating from the Santa Ana River to the Santiago Basin and ~~The permit granted by this decision~~ does not authorize OCWD to divert water from Santiago Creek or from any other source. ~~other than the Santa Ana River.~~ (OCWD 1-23, Final Program Environmental Impact Report (FPEIR), Vol. I, p. 48.)

p.13.) OCWD operates approximately 1,100 acres of recharge facilities, which include not only offstream facilities but also the river bottom. The two sources of recharge water at these facilities are Santa Ana River flows and imported water purchased from Metropolitan Water District. (OCWD 1-1; May 2, 2007 R.T., p.149; OCWD 1-17.)

OCWD presented testimony that, under existing conditions, OCWD's project has a recharge capacity of 250,000 afa, with a surface storage capacity of 25,750 af. This surface storage capacity equates to a summer storage elevation of 505 feet above mean sea level (amsl) at Prado Dam. (May 2, 2007 R.T., pp. 149, 152; OCWD 1-1, pp. 12, 17; 25; OCWD 1-23, Vol. 1, pp. 2-14, 2-17, 2-25, 2-26.)[11]

Mr. Miller testified that under current conditions OCWD's diversion and recharge capacity is typically limited to 500 cfs, except for short periods of time; the rate of base flow[12] in the Santa Ana River is 200 to 250 cfs; and small storms do not generate enough storm flow to exceed OCWD's diversion and recharge capacities. (OCWD 1-1, p. 15.) Currently OCWD diverts all base flow released from Prado Dam. (OCWD 4-1, p. 15.)

Mr. Miller testified that OCWD has a cooperative agreement with the United States Army Corps of Engineers (ACOE) to jointly utilize its facilities at Prado Dam. (May 2, 2007 R.T., p. 148; OCWD 1-15.) While Prado Dam is primarily a flood control facility, the ACOE operates the dam for water conservation storage when it is not being utilized for flood control. Once the peak flow has passed the facility, the ACOE then, in coordination with OCWD staff, releases the water at a rate slow enough that OCWD can capture it in its recharge facilities. During the spring, when

[11] Roy Herndon, Chief Hydrogeologist of OCWD, testified that over the last 15 years on average OCWD has diverted and recharged approximately 200,000 afa from the Santa Ana River. During that same time period, OCWD diverted and recharged a maximum of 271,000 af in any one year. (May 3, 2007 R.T., p. 19) OCWD states in its final EIR that it currently has the capacity to divert up to 250,000 afa at a rate of 645 cfs from the Santa Ana River. (OCWD 1-23, Vol 1, p. 2-17, Table 2-3.) The existing maximum recharge capacity is approximately 287,000 afa. (OCWD 1-23, Vol. 1, p. ES-7; FEIR p. 50, response to comment 9-8.)

[12] Each year, the Watermaster divides Santa Ana River flows reaching Prado Dam into three categories: base flow, storm flow, and non-tributary flow. Base flow in the River is created almost entirely by discharges of treated municipal wastewater upstream of Prado Basin, but may include urban runoff or other upstream contribution to the River during dry weather periods. Storm flow results from runoff after storm events. Non-tributary flow includes water that originated outside the Santa Ana River watershed, as well as other water that the Watermaster has determined should be excluded from base flow and storm flow. Non-tributary flow is comprised primarily of water originating outside of the Santa Ana River watershed that is purchased by OCWD for groundwater recharge. (OCWD 3-1, p. 5.)

there is less of a flood threat, the ACOE will increase the size of the conservation pool up to the 505 feet amsl elevation and allow OCWD to hold up to 25,750 af of water behind the dam.[13] The water will then be released slowly, as during the flood season, so that OCWD can capture the flow in its recharge facilities. (May 2, 2007 R.T., pp. 148-149; OCWD 3-8; OCWD 1-1, p. 12; OCWD 1-23, Vol. 1, p. 2-25.)

According to the 2006 Memorandum of Agreement between the ACOE and OCWD, from October 1 through February 28 or 29 the ACOE will maintain a buffer pool at Prado Dam at an elevation not to exceed 498 feet National Geodetic Vertical Datum (NGVD).[14] (OCWD 1-15.) An elevation of 498 feet equates to a storage volume of 13,500 af. (OCWD 1-23, p. 2-25.)

From March 1 through August 31 the ACOE will maintain the buffer pool at an elevation not to exceed 505 feet NGVD. Provided that sufficient inflows to Prado Dam are available, between March 1 and March 10, the seasonally expanded buffer pool may be gradually increased from 498 to 505 feet NGVD at an incremental rate. (OCWD 1-15.) An elevation of 505 feet equates to a storage volume of 25,800 af. (OCWD 1-23, FPEIR, p. 42.)

From September 1 through September 30, the ACOE may empty Prado Dam for maintenance purposes. In the event of rare summer flood runoff, the ACOE may operate the reservoir for water conservation up to the maximum allowable water conservation of 505 feet NGVD. (OCWD 1-15.)

6.2 Near-Term and Long-Term Facilities

To capture the releases from Prado Dam, OCWD has implemented and/or planned near-term and long-term facility projects. OCWD states in its Environmental Impact Report (EIR) that the near-term projects would increase OCWD's recharge capacity to approximately 347,000 afa, which would provide an additional 97,000 afa of recharge capacity over existing conditions and would provide an additional 10,000 afa in surface storage. In addition, the long-term projects would provide up to 158,000 afa of additional recharge capacity and 83,600 afa in surface

[13] In his written testimony, Mr. Miller stated that the amount of water OCWD stored behind the dam during the spring was up to 25,760 af, and in his oral testimony he stated that the amount was 26,000 af. In the FPEIR, OCWD states that the amount stored behind Prado Dam at an elevation of 505 feet amsl is 25,800 af. The State Water Board assumes the differences are due to rounding and will use the number in the OCWD-certified EIR.

[14] In its testimony and exhibits, OCWD uses the terms NGVD, mean sea level and sea level interchangeably.

storage. (OCWD 1-23, Vol. 1, pp. ES-7, 1-5; Final Program Environmental Impact Report (FPEIR) Response to Comments, p. 42, Table 2.) OCWD has already implemented some of the near-term projects. (May 2, 2007, R.T., pp.149-150.)

At the hearing, OCWD updated this information and stated that the near-term projects would add an additional 112,000 afa of water to its recharge capacity, rather than 97,000 afa, and the long-term projects would add another 143,000 afa of additional capacity, rather than 158,000 afa. (May 2, 2007, R.T., p. 152; OCWD 7-1, OCWD 7-2.) This change in recharge capacity is due to moving Mira Loma Recharge Basin from a near-term project to a long-term project and moving the Deep Basin Cleaning Device for the Burris and Bond Pits from a long-term project to near-term project.

6.3 OCWD's Water Availability Analysis

OCWD analyzed the peak amount of water available for its application using flow data collected by the Santa Ana River Watermaster and found that more than 505,000 af of water in a single year has been recorded in the lower Santa Ana River in the recent past. (OCWD 3-1, pp. 2-3; OCWD 1-23, Vol. 1, p. D-1.) Mr. Roy Herndon, on behalf of OCWD, testified that the Santa Ana River flows that arrive at Prado Dam have increased historically and concludes flows will continue to increase in the future. (May 3, 2007 R.T., pp.19-20.) OCWD used actual flow data from: (1) the 1991 through 2006 Santa Ana River Watermaster Annual Reports (OCWD 3-3.), including United States Geological Survey (USGS) river flow gage data (OCWD 3-4.); (2) hydrologic analyses prepared for the 2004 Muni/Western draft environmental impact report; (3) Santa Ana River flow estimates prepared by ACOE (OCWD 1-27.); and (4) Santa Ana River flow estimates prepared by Santa Ana Watershed Project Authority (SAWPA) (OCWD 3-5) in its water availability analysis. (OCWD 3-1, p. 4.)

OCWD supported its conclusion that water is available for its application using results from two models: one conducted by the ACOE, which operates Prado Dam, and the other by SAWPA, an integrated water resource agency. (May 3, 2007 R.T., pp. 19-20.) ACOE and SAWPA project that flows in the Santa Ana River will continue to increase in the future. (OCWD 3-1, p.5.)

In its analysis, OCWD adjusted the ACOE's projections of flows reaching Prado Basin to account for future cumulative conditions in the watershed, including future diversions associated with pending water right applications and planned recycled water and conservation programs, which resulted in lower, more conservative flow estimates than ACOE's original projections.[15] Despite the reductions in flow, OCWD concludes that 505,000 afa downstream of Prado Dam is reasonably foreseeable in future wet years. (May 3, 2007 R.T., p. 20; OCWD 3-1 pp. 2-3; OCWD 1-23, Vol. 1, pp. D-1, D-5.)

6.4 ACOE Flow Estimate for 2052

In his written testimony, Mr. Herndon stated that the ACOE used its model to estimate future flow at Prado Dam through year 2052. (OCWD 3-1, p. 3.) In its 2004 Feasibility Study, the ACOE predicted future annual flow variability at Prado Dam and at OCWD's operations area about nine miles below Prado Dam at Imperial Highway in the city of Anaheim. Mr. Herndon testified that the ACOE used a 39-year period of flow records (1950-1988) to arrive at Prado in its flood control model, taking into account upstream urbanization, which would increase wastewater discharge and impervious cover in the upper watershed. (May 3, 2007 R.T., p. 21; OCWD 3-1, pp. 7-8; OCWD 1-23, Vol.1, pp. D-5, D-6.) The ACOE's model results projected as much as 868,000 af arriving at OCWD's recharge facilities in two different wet years during that 39-year period. (May 3, 2007 R.T., pp. 21-22; OCWD 3-1, pp. 7-8; OCWD 1-23, Vol. 1, pp. D-5, D-6.) This estimate includes a net contribution of 21,000 afa from the nine miles of the Santa Ana River between Prado Dam and Imperial Highway.[16] (OCWD 3-1, p. 8.)

Mr. Herndon testified that OCWD used the ACOE's analysis as a starting point for its own analysis. In his written testimony, Mr. Herndon stated that while the ACOE already accounts for existing upstream diversions and water recycling efforts during the period of record, as reflected

[15] According to OCWD, during peak flow periods, the River flow rates exceed the diversion capacity of existing and proposed facilities upstream of Prado Dam. Therefore, it is likely that in most years, substantial volumes of storm flow would bypass upstream diversion points and ultimately reach Prado Dam in quantities greater than predicted in OCWD's analysis. In addition, OCWD did not account for the possibility for some of the increased recycled water returning to the River, which would also increase the amount of water reaching Prado Dam, thus making the OCWD analysis more conservative. (OCWD 3-1, pp. 3-4.)

[16] The ACOE that estimates by year 2052, the flow at Prado Dam will be approximately 847,000 af in a wet year and 374,436 in an average year. (OCWD 3-1, p. 3; OCWD 1-23, Vol. 1, p. D-7.)

in the gage flow,[17] OCWD took a more conservative approach, assuming that future upstream diversion and recycling projects could decrease the ACOE's estimate. (OCWD 3-1, p. 3; May 3, 2007 R.T., p. 20.) According to Mr. Herndon, OCWD started with the ACOE's projected flow of 868,000 af in 2052, a wet year, subtracted the net effect of all pending upstream diversions[18] (OCWD 1-23, Vol. 1, pp. D-9, D-10), and then subtracted over 64,000 af of future proposed upstream recycling. (OCWD 3-1, pp.3, 11; May 3, 2007 R.T., p. 25.) OCWD then added back some effect of Arundo removal,[19] as well as the Muni/Western's High Groundwater Mitigation Project, which may be necessary in future wet years, and arrived at a total of about 655,000 af in a future wet year.[20] (May 3, 2007 R.T., pp. 24-25; OCWD 3-1, Table 6.)

6.5 SAWPA Estimate for 2025

SAWPA estimated future Santa Ana River flows at Prado Dam for the years 2010 and 2025. The estimates include base flow and storm flow for dry, average, and wet years. (OCWD 1-27, OCWD 3-1, p. 8; OCWD 1-23, Vol. 1, p. D-6.) Mr. Herndon testified that SAWPA estimated a future wet year flow at Prado Dam of 562,000 af by the year 2025.[21] (May 3, 2007 R.T., p. 22.) This estimate includes recycled water diversions but does not account for pending upstream diversions. (OCWD 1-23, Vol. 1, p. D-16.) The primary difference between SAWPA's projections and those of ACOE is that SAWPA used historical wet year flows as opposed to projecting future flows, as did ACOE, which account for projected upstream urbanization.

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[17] It should be noted that gage flow only accounts for actual diversions and does nor record face value diversion amounts authorized under water right permits and licenses.

[18] Pending diversions totaling 181,562 afa used in OCWD's analysis are the sum of Chino Basin Watermaster's diversions, City of Riverside's diversions, and the net loss of 31,000 afa attributable to Muni/Western's diversions. In its EIR, OCWD considered the City of Riverside's water right application to divert water from the Santa Ana River in its analysis. (OCWD 1-23, Vol. 1, p. D-14.) The City of Riverside also submitted a wastewater change petition for the equivalent amount of water. That wastewater change petition was approved by the State Water Board in Order 2008-0024.

[19] OCWD estimates that by 2025, an additional 36,000 afa will be available in the Santa Ana River as a result of removing *Arundo donax (Arundo)*, a perennial reed. (OCWD 1-23, Vol. 1, p. ES-6.) SAWPA states in its 2004 *Santa Ana River Projected Flow Impacts Report*, however, that the effect of Arundo removal in 2025 will only amount to 8,300 afa at Prado Dam in a wet year. SAWPA estimates the effect of High Groundwater Mitigation Project at Prado Dam in 2025 to be 24,500 afa in a wet year. (OCWD 1-23, App. K-2, pp. 13-16.) SAWPA projects the combined total of wet year base flow and storm flow to be 562,300 afa by 2025. (OCWD 1-23, App. K-2, p. 16.)

[20] In its EIR, OCWD estimated that the future wet year flow volume arriving at its facilities on the Santa Ana River would be at least 654,698 afa, and at least 262,000 afa would continue to flow to the ocean. Using ACOE's wet year projections for 2052, OCWD estimated that the average flow at OCWD's diversions points would be 382,306 afa. (OCWD 1-23, Vol. 1, p. D-14.)

[21] According to OCWD's EIR, SAWPA estimates that by 2025 up to 265,400 afa will reach Prado Dam in a wet year. (OCWD 1-23, Vol. 1, p. D-7, Table 3.)

(May 3, 2007 R.T., p. 22.) The SAWPA estimates include wastewater discharges to the River. Unlike the ACOE projections, however, SAWPA subtracted reclaimed water volumes from its estimated future base flow. In addition, unlike the ACOE's estimates, SAWPA's estimates account for additional flow contributions from the High Groundwater Mitigation Project and the program for *Arundo donax* (Arundo) removal. (OCWD 1-23, Vol. 1, pp. D-6, D-7.) SAWPA also projected for the year 2025 rather than 2052. SAWPA projected peak flows over 505,000 af arriving at Prado. (May 3, 2007 R.T., p. 22.) OCWD, however, did not subtract the pending water right applications as it did with the ACOE projected flows. Subtracting 181,561 af from 562,000 af would result in a projected 2025 flow estimate of 380,438 af reaching Prado Dam.

6.6 Other Water Rights

Leslie Moulton, Director of Water Practice for Environmental Associates (ESA), and Chris Rogers, a senior biologist for ESA, provided written testimony that OCWD is the only water applicant on the Santa Ana River below Prado Dam. (OCWD 4-1, p. 19.) OCWD holds two existing licenses, License 6378 (Application 8899) and License 6403 (Application 8900), to divert water from Mill Creek, Chino Creek, and the Santa Ana River. The maximum rate of diversion under each license is 6.1 cfs. The purposes of use are irrigation and domestic, and the season of diversion is June 1 to December 1 of each year. OCWD previously claimed pre-1914 water rights, but did not present evidence supporting that claim at the hearing. In its Final Program Environmental Impact Report (FPEIR), OCWD states that its Application 31174 is inclusive of the water claimed under pre-1914 water rights. (OCWD 1-23, FPEIR, Response to Comments, p. 48.) Based on OCWD's estimates of water availability, the State Water Board finds that water is available for OCWD'S existing licenses as well as the permit granted by this decision.

7.0 IMPACTS ON PUBLIC TRUST RESOURCES

OCWD also presented evidence that the 505,000 afa diversion of water will not adversely affect biological resources and habitat in the project area, including habitat for the Santa Ana sucker (*Catostomus santaanae*) (sucker), which is federally listed, and the Least Bell's Vireo (*Vireo bellii pusillus*) (LBV), which is state and federally listed.

7.1 Background

7.1.1 Historical River modification

OCWD operates its project in a portion of the Santa Ana River that has been heavily modified for flood control by the ACOE and various flood control districts. (OCWD 2-1, p.15.) Large floods led to the realization that Prado Dam would be insufficient to protect Orange County, which had become highly urbanized. Therefore, in 1988 the Santa Ana River Mainstem Project was created by the United States Congress. It included the raising of Prado Dam, the construction of Seven Oaks Dam at the base of the San Bernardino Mountains, and reconstruction of the entire Santa Ana River channel for increased capacity from Weir Canyon to the Pacific Ocean. (OCWD 2-1, pp.12-13.)

7.1.2 Current condition of the lower Santa Ana River

Under this project, OCWD's operations would remain similar to existing conditions along the Santa Ana River channel between Imperial Highway and State Route 22 (SR-22). Virtually all base flow released through Prado Dam during non-storm periods would be diverted for groundwater recharge, as is currently the case. Downstream of the SR-22 overpass, peak storm flows would continue to reach the ocean. (OCWD 1-23, Vol. 1, p. ES-2.)

From just downstream of Prado Dam to the Weir Canyon Avenue crossing in Yorba Linda is a relatively natural stretch of river with riparian habitat (ACOE designated Reach 9). (OCWD 1-24; May 2, 2007 R.T., p. 85.) The flows OCWD requests will water the habitat in Reach 9 before they get to OCWD's diversion points. Ileen Anderson, biologist testifying for the Center, agreed those flows will benefit riparian species along this stretch of the River. (May 3, 2007 R.T., p.258.)

From Weir Canyon Avenue crossing to the Pacific Ocean, the Santa Ana River has been modified significantly for flood control purposes. A series of drop structures has been created in the River bottom, and the sides have been constructed of concrete and/or riprap. Approximately ten miles downstream of Prado Dam, OCWD utilizes a six-mile stretch for groundwater recharge. (OCWD 1-1, p. 4.) Downstream of OCWD's operations the riverbed

becomes part of the Riverview Golf Course. (*Ibid*.) Downstream of the golf course, the Santa Ana River is fully concrete lined for approximately eight miles. The final one and one-half miles of River consist of a soft sandy bottom leading to the Pacific Ocean. (OCWD 1-24, p. 5.)

7.2 Project's Impacts on Biological Resources

Leslie Moulton and Chris Rogers examined the potential changes in Santa Ana River hydrology and biological resources in the EIR prepared for Application 031174.

Ms. Moulton testified that OCWD's proposed increase in diversions could reduce the amount of storm flow that would otherwise reach the ocean. The EIR found this would be less than significant because there are no biological resources or other beneficial uses downstream of OCWD's diversions affected by the reduction in storm flows, as the downstream channel is concrete lined. (OCWD 4-1, p 14.) Storm flows bypassing OCWD's facilities depend on a number of factors such as the rate and volume of water reaching Prado Dam, storage capacity of Prado Dam, tributary flow below the dam, and operational procedures enacted by the ACOE. (OCWD 4-1, p.15.)

Ms. Moulton further testified that all base flow is currently diverted downstream of viable habitat areas, therefore the continued diversion of increasing base flows would result in no impacts. (OCWD 4-1, p. 15.) Since base flow is expected to increase with urbanization, the future diversion of base flow as it increases would maintain existing 2002 (when the Notice of Preparation for the EIR was published) baseline conditions. (*Ibid*.)

Also, the historical records indicate the Santa Ana River has been dry in the summer downstream of 17th Street in Santa Ana since the USGS began recording storm flows there in 1923, ten years prior to the formation of OCWD. (OCWD 4-1, p.15.)

River flow would continue to be regulated at Prado Dam in accordance with the ACOE-approved water control manual. (OCWD 4-1, p.15.) Carl Nelson, consulting civil engineer and former director of Orange County Flood Control District, testified that written agreements between the ACOE and OCWD have established the coordination of gated releases from Prado Dam so as to correlate with management of spreading ground infiltration

capacity. (OCWD 2-1, p.12.) Water releases from Prado Dam are adjusted to match OCWD's groundwater recharge capacity when possible to minimize flow passing OCWD's operations area. (OCWD 4-1, p.17.) In addition, future projects would allow OCWD to store greater volumes of water behind Prado Dam for release during summer months, resulting in benefits to ACOE-designated Reaches 8 and 9 of the River. (OCWD 4-1, p.17.)

Suckers have been found below Prado Dam. Ms. Moulton testified studies show no viable, reproducing population downstream of Imperial Highway. Ten flood control drop structures between Imperial Highway and SR-22 impede the movement of fish in or out of the lower Santa Ana River. Storm flows can wash fish into OCWD's recharge area. However, OCWD participates in the Santa Ana Sucker Conservation Plan, which was established to allow multiple agencies to take a limited number of fish. OCWD's operations are permitted under the Conservation Program and it must relocate any individual fish that are washed below the Imperial Inflatable Dam. (OCWD 4-1, p. 21.) On cross-examination, Ileen Anderson agreed that, as a result of the flood control changes to the River, none of the area where OCWD diverts, or downstream to the ocean, is good sucker habitat. (May 3, 2007 R.T., p. 257.)

Also, Ms. Moulton testified that the ACOE and Orange County Flood Control District periodically dredge the soft bottom of the Santa Ana River below Adams Avenue to maintain the flood control channel. This prevents the establishment of permanent instream riparian vegetation that could provide wildlife habitat. (OCWD 4-1, p.22.)

7.3 Recreation and the Preservation and Enhancement of Fish and Wildlife Resources

As stated above, Water Code section 1243 requires the State Water Board to take into account, whenever it is in the public interest, the amounts of water required for recreation and the preservation and enhancement of fish and wildlife resources. Water Code section 1243 also states that DFG shall recommend the amounts of water, if any, required for the preservation and enhancement of fish and wildlife resources and shall report its findings to the Board. Regarding this hearing, DFG signed the *Agreement Between the OCWD and the Department of Fish and Game (Department) to Dismiss Department's Protest regarding Water Application No. 31174 to Appropriate 506,800 Acre-feet of Water from the Santa Ana River*, dated September 26, 2006 (agreement). The agreement states that OCWD and DFG will request that the State Water Board include the actions listed in (1) through (6) of that agreement among the conditions of any

permit issued pursuant to Application 31174. Actions (1) through (6) relate to the assessment, re-introduction, monitoring, experimental habitat restoration of the Santa Ana sucker. DFG did not recommend that any bypass flows be included in any permit issued to OCWD. In an April 26, 2007 letter to the State Water Board, DFG stated that it had resolved its protests against multiple applications on the Santa Ana River, including Application 31174, and no longer intended to appear at the hearing regarding those applications.

In summary, Ms. Moulton testified the amounts of storm flows that reach the lower Santa Ana River are completely regulated through Prado Basin according to the ACOE's operating manual. Therefore there is no significant change in hydrology in the lower Santa Ana River as a result of OCWD's requested diversion. (May 3, 2007 R.T., pp. 173-174.) No mitigation is required. Also, since the area has been channelized from the mouth of the Santa Ana Canyon to the ocean, it has very minimal biological resources. (May 2, 2007 R.T., p. 68.)

Having considered the foregoing recitals, the State Water Board finds that partially approving Application 31174 will not cause any significant adverse impacts to public trust resources.

8.0 PUBLIC INTEREST

Pursuant to Water Code section 1253, the State Water Board is to allow the appropriation for beneficial purposes of unappropriated water under such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest the water sought to be appropriated.

Craig Miller testified that OCWD's purpose, as mandated by the California Legislature in 1933, is the protection of the Orange County groundwater basin. OCWD manages the basin to meet the water needs of over two million people. (OCWD 1-1; May 2, 2007 R.T., p. 45.)

Stewardship and conservation in the Prado Basin are enabled by the revenues OCWD generates from basin management. (OCWD Closing brief, p. 7.) For example, OCWD has constructed a wetland within the Prado Basin to increase the water quality of the Santa Ana River water. Water is diverted from the mainstem of the river, passes through the wetlands, and is returned to the riverbed upstream of Prado Dam. (OCWD 1-24, p.11.) Prado Basin contains the single largest stand of forested riparian habitat remaining in the southern California region.

Riparian woodland provides habitat for a large number of wildlife species, most notably an extensive avian population. OCWD has undertaken numerous habitat restoration and species recovery projects. The area supports Least Bell's Vireos, Southern Willow Flycatchers (*Empidonax traillii extimus*), and the Yellow Billed Cuckoos (*Coccyzus americanus*). (OCWD 6-5.) Ileen Anderson agreed that migratory birds, songbirds and riparian habitat have benefited from OCWD's management behind Prado Dam. (May 3, 2007, R.T., pp. 259-260.)

Leslie Moulton further testified that OCWD's project will help achieve the groundwater recharge beneficial use designation (GWR) in Reach 2 of the Santa Ana River and reduce overall demand for imported water in the Santa Ana River watershed. (OCWD 4-1, p.17.)

Adam Keats, attorney for the Center**,** stated that Application 31174 describes a primary source of increased flows as being wastewater from increased urbanization. Therefore a reduction in imports would harm OCWD's project. (May 8, 2007 R.T., p. 34-35.) In response, Craig Miller explained that there is not necessarily a one-to-one correlation between increasing production from the Santa Ana River and decreasing draw on imported water from the Colorado River or the Sacramento San Joaquin-Bay Delta because OCWD responds to both drought and growth. As Orange County experiences dry periods, OCWD will sometimes maximize production from the basin, replenishing it in wet years. (OCWD Closing Brief, p. 8.)

In addition, on September 30, 2004, the State Water Board approved the most recent set of amendments to the Santa Ana Region Basin Plan. The amendments include a program to encourage the use of recycled water in the Santa Ana Watershed. (Chino Basin Watermaster Closing Brief.) OCWD stated in its EIR that the Santa Ana Regional Water Quality Control Board's Water Quality Control Plan for the Santa Ana River Basin acknowledges that virtually all base flow below Prado Dam is diverted for groundwater recharge by OCWD. (OCWD 1-23, Vol. 1, pp. 4.2-11 to 4.2-13.) OCWD also stated in its EIR that the increased diversions proposed by OCWD will not affect designated beneficial uses in the river channel. (OCWD 1-23, FPEIR, Response to Comments, pp. 43-44.)

For the foregoing reasons, the State Water Board finds the proposed project to be in the public interest.

9.0 IMPACT ON LEGAL USERS OF WATER

By the Stipulation of Applicants dated April 5, 2007 (April 5 Stipulation or Stipulation), the Santa Ana River applicants entered into an agreement to resolve key issues 4 and 5. The Stipulation identifies the various judgments and agreements on the Santa Ana River (April 5 Stipulation paragraphs 2, 3(a), 4, 5, and 6), and defines five areas of relative priorities among the Santa Ana River water users and applicants, Bear Valley Mutual Water Company, Lugonia Water Company, North Fork Water Company, Redlands Water Company, East Valley Water District and the City of Redlands. As discussed at the pre-hearing conference on April 5, 2007, objections to the Stipulation were due by April 12, 2007. Absent any objection to the Stipulation, the Hearing Officer stated that key issues 4 and 5 would be eliminated as issues on which the parties should present evidence.

The hearing in this matter was properly noticed, and all legal users had the opportunity to file protests and join the hearing as parties. No party objected to the April 5 Stipulation, and no party presented evidence at the hearing concerning key issues 4 and 5. (May 2, 2007 R.T. p. 2.) Based on the evidence in the record of the availability of unappropriated water, as summarized in Section 6 of this order, and the absence of any evidence of harm to others who divert or use water from the Santa Ana River, the State Water Board finds that the partial approval of Application 31174 will not cause injury to prior right holders or other legal users of water.

10.0 CONTAMINATED GROUNDWATER PLUMES

Under Application 31174 OCWD proposes to store water in the Orange County Groundwater Basin (Basin). (SWRCB-1; OCWD 3-1, p. 2.)

The Basin underlies the lower Santa Ana River watershed and is bounded on the north by Puente Hills and Chino Hills, on the east by the Santa Ana Mountains, on the south by the San Joaquin Hills, and on the southwest by the Pacific Ocean. (SWRCB-12 Supplemental Information; OCWD 3-8, p. 2-1 and Fig. 2-1; May 3, 2007 R.T., p. 84.) The Basin covers an area of approximately 350 square miles and has a total groundwater storage capacity estimated

between 38 million and 66 million af. (SWRCB-12, Supplemental Information; OCWD 3-8, p. 2-11.)

The aquifers comprising the Basin extend over 2,000 feet deep and form a complex series of interconnected sands and gravels. (SWRCB-12 Supplemental Information; OCWD 3-8, p. 2-1.) The proportion of fine aquifer material generally increases toward the coast, dividing the Basin into forebay and pressure areas (the forebay lies inland of the pressure area). (SWRCB-12 Supplemental Information; OCWD 3-8, pp. 2-5 and Fig. 2-1; May 3, 2007 R.T., p. 84.)

There are three recognized aquifer systems within the Basin: upper, middle, and lower. (SWRCB-12 Supplemental Information; OCWD 3-8, p. 2-2.) The upper aquifer system has an average thickness of 800 feet and is composed of sand and gravel with some silt and clay beds. (SWRCB-12, Supplemental Information.) Production from the upper aquifer system is typically about five percent of total Basin production. (OCWD 3-8, p. 2-2.) The middle aquifer system has an average thickness of 1,600 feet and is composed of sand, gravel, and minor amounts of clay. (SWRCB-12, Supplemental Information.) The middle aquifer system provides 90 to 95 percent of the groundwater for the Basin. (*Ibid*; OCWD 3-8, p. 2-2; May 3, 2007 R.T., p. 85.) The lower aquifer system is composed of sand and conglomerate 350 to 500 feet thick. (SWRCB-12, Supplemental Information.) Groundwater in the lower aquifer system has been found to contain colored water or is too deep to economically construct production wells; hence, few wells currently produce groundwater from the deep water aquifer system. ~~it is currently not used for groundwater production.~~ (*Ibid*; OCWD 3-8, p. 2-2.)

To replenish the groundwater basin, OCWD operates 26 recharge facilities, the majority of which are located in and generally adjacent to the Santa Ana River in the cities of Anaheim and Orange, approximately ten miles below Prado Dam. (OCWD 1-1, pp. 4 and 13; OCWD 1-4.)

Industrial contaminants such as volatile organic compounds (VOCs) have been found in elevated concentrations in the upper aquifer in some areas of the groundwater basin. (OCWD 3-1, p. 15.) These VOC plumes occur in the cities of Anaheim and Fullerton, approximately one to four miles west and northwest of the Santa Ana River and OCWD's primary recharge facilities, and are generally found within the upper 200 feet of the aquifer. (OCWD 3-1, p.16 and Fig. 8; May 3, 2007 R.T., p. 84.) The VOC plumes follow the groundwater gradient and

generally move in a westerly direction, away from OCWD's recharge areas. (OCWD 3-1, Fig 8; May 3, 2007 R.T. p. 85.) In addition, a VOC plume was discovered in groundwater beneath the former El Toro Marine base. (OCWD 3-8, pp. 3-13.)

In order to evaluate the movement of the VOC plumes, OCWD calculated the groundwater gradient of the upper aquifer and simulated different scenarios using a numerical groundwater model. (OCWD 3-1, pp. 16-17, May 3, 2007 R.T., p. 86.) The model scenario selected for review was that with the greatest projected increases in recharge and pumping, which was most likely to exhibit the greatest change in gradient within the plume area. (OCWD 3-1, p.17, May 3, 2007 R.T., p. 86.) The scenario included approximately 450,000 afa of pumping and 377,000 afa of recharge (about a 50% increase above current pumping and recharge rates). (OCWD 3-1, p. 17; May 3, 2007 R.T., p. 86.) The results of the modeling of this scenario indicate that the groundwater within the upper aquifer in the vicinity of the VOC plumes would continue to flow in the westerly direction. The hydraulic gradient and rate of movement of the plumes under increased pumping and recharge conditions were essentially the same as under current conditions. (OCWD 3-1, p. 17; May 3, 2007 R.T., pp. 86-87.)

To help mitigate existing contamination in the upper aquifer, OCWD has initiated a groundwater cleanup project that will extract, treat, and re-inject over three million gallons per day of VOC-contaminated groundwater from within the plumes in Anaheim and Fullerton. (OCWD 3-1, p. 16.) The contaminated groundwater will be drawn out of the ground through a series of extraction wells and piped to a central treatment facility where the water will be treated back to drinking water quality and then recharged back into the aquifer. (May 3, 2007 R.T., p. 85.)

Nearly all groundwater pumping in the Orange County groundwater basin occurs in the middle aquifer, and not from the upper aquifer where the VOC contamination is located. (OCWD 3-1, p. 17; May 3, 2007 R.T., pp. 84-85.) Because of the large investment in the VOC remediation project, OCWD did not develop recharge projects that would have reduced the effectiveness of the remediation projects by detrimentally moving the VOC plumes. (OCWD 3-1, p. 16.)

The extent of the plume has been defined and a groundwater clean up plan~~, which includes the Irvine Desalter,~~ addresses the long term clean up of the polluted groundwater. (OCWD 3-8, pp. 3-13, 3-14; OCWD 1-1, p. 21.)

In order to evaluate impacts from increased recharge from expansion of the existing project—Santiago Creek—and future projects, an environmental analysis was conducted as part of the EIR. The EIR looked at whether increased recharge from these projects could affect existing contamination in surface soils potentially transporting contamination to the groundwater. (OCWD 1-23, §§ 4.2, 5.2.)

Following are mitigation measures for impacts associated with increased recharge from expansion of the Santiago Creek project identified in the EIR:

- Prior to implementing the project, OCWD will conduct a Phase I site assessment for hazardous waste and soil contamination and will comply with recommendations to avoid transporting contamination.
- If there is potential for contaminated soils to be transported by the project, OCWD will redesign the project to avoid this area or remediate the contamination.
- OCWD will notify the owners of active production wells within 500 feet of the lower reach of Santiago Creek of its intent to increase recharge of groundwater. In coordination with these well owners, OCWD will implement a groundwater monitoring plan that will provide early detection of changes to groundwater chemistry. If the monitoring plan identifies adverse effects to water chemistry, the recharge operation causing the effect will cease.
- If adverse effects to groundwater quality caused by the recharge project are identified during groundwater monitoring, recharge operations will cease until the condition is resolved.

(OCWD 1-23, Vol. 1, pp. 4.2-26, 4.2-27.)

OCWD modeled the effects of future recharge at its existing facilities and future facilities associated with the Santa Ana River diversions and compared these to the current groundwater conditions in the vicinity of known VOC plumes in the Anaheim and Fullerton areas. The comparison indicates that future projected recharge and pumping will not significantly affect the movement of shallow VOC plumes in those areas. (OCWD 3-1, p. 18; May 3, 2007 R.T., p. 87.)

Mitigation measures presented in the EIR will help prevent impacts to groundwater resulting from increased recharge from expansion of existing projects and future projects. (OCWD 1-23, Vol. I, pp. 4.2-26, 4.2-27, 5-3, 5-7, 5-9.)

11.0 APPROVAL OF THE EXISTING AND NEAR-TERM PORTIONS OF APPLICATION 31174 WILL NOT HAVE A SIGNIFICANT ADVERSE IMPACT ON THE ENVIRONMENT UNDER THE CALIFORNIA ENVIRONMENTAL PROTECTION ACT (CEQA)

OCWD is CEQA lead agency for the proposed project. As the lead agency, OCWD prepared the EIR analyzing the project. (OCWD 1-23.) The EIR relied, in part, on numerous previously prepared environmental documents covering pre-existing portions of the project. On July 19, 2006, OCWD certified the final EIR and approved the proposed project.

For the purpose of considering whether to approve the proposed project, the State Water Board is a responsible agency under CEQA. (Pub. Res. Code § 21069.) When approving a project, a responsible agency must either: (1) adopt conditions to avoid or mitigate significant adverse environmental project effects within the scope of its responsibility; (2) find that another agency has the responsibility and jurisdiction and that such agency can or should avoid or mitigate the adverse effect; or (3) adopt a statement of overriding consideration. (Pub. Res. Code, §§ 21002.1, 21081; Cal Code Regs., tit. 14, §§ 15091, 15093.)

The State Water Board is responsible for mitigating or avoiding only the significant environmental effects of those parts of the project that it decides to approve. (Cal. Code Regs., tit. 14, § 15096, subd. (g).) This includes the responsibility to address any significant adverse direct or indirect effects on water resources or public trust resources. In this order, the State Water Board has considered the environmental impacts identified in OCWD's EIR that are associated with approving the project, including the construction and operational impacts.

11.1 Existing Projects

To capture the releases from Prado Dam, OCWD has a series of existing, near-term, and long-term projects.[22] CEQA compliance is discussed for each grouping of projects. The projects are listed in the following tables, with their corresponding recharge capacities.

Some of the existing projects, as shown in Table 1, were constructed prior to 1972. (OCWD 4-1.) Environmental documentation was not completed when they were constructed because they predate passage of CEQA. (Pub. Res. Code § 21169; Cal. Code Regs., tit. 14, § 15261.) Additional portions were constructed after CEQA was enacted. CEQA review was completed for those projects. (OCWD 1-23, Vol. 1, p. 2-26.)

Table 1 – Existing Projects

	Amount to underground storage (afa)	Amount to surface storage (afa)[23]
Projects built prior to enactment of CEQA		
Anaheim System Deep Basin	91,800	-
Warner System Deep Basin	16,200	-

Existing projects for which CEQA has been completed		
Kraemer System Deep Basin	*Total combined with Anaheim System Deep Basin (above)*	
Burris/Santiago System Deep Basin	60,600	
Santa Ana River Groundwater Recharge	70,400	
Off River System Groundwater Recharge	11,000	
Prado Dam (conservation elevation 505 ft.)		25,800
Total storage, existing projects	**250,000 afa**	**25,800**

[22] The names of these projects have fluctuated in submissions leading up to and during the hearings. Specifically, there were minor variations between OCWD's application, the EIR, and the listing OCWD submitted at the end of the hearing, which is in the record as OCWD 7-1. Additionally, some parts of the project were shifted from near-term to long-term. In order to use the most up to date information, the tables below correlate to OCWD 7-1. The amounts of water requested for specific facilities correspond to the analysis in the Final EIR even though some of the names may vary slightly.

[23] Under Application 31174 OCWD applied to divert a total of 505,000 afa for existing, near-term, and long-term projects.

11.2 Near-Term Facilities with Complete Project-Level CEQA Analysis

OCWD has plans, following permitting, to appropriate an additional 112,000 afa through implementation in the near term of the projects listed below. The appropriations will be by means of the facilities listed in Table 2 (below). These diversions to underground storage, in conjunction with existing facilities in Table 1, account for 362,000 afa of recharge capacity. (May 3, 2007 R.T., p. 166; OCWD Closing Brief p. 5.)

OCWD has completed CEQA documentation for the near-term projects. (OCWD 1-23.) As a responsible agency under CEQA, the State Water Board assumes that the environmental documentation prepared by the lead agency is adequate for purposes of CEQA unless a legal proceeding determines that the environmental documentation is inadequate or a subsequent environmental document is required. (CEQA Guidelines, § 15231.) The State Water Board has reviewed the CEQA documents prepared by the lead agency.

Table 2 – Near-term Projects

	Amount to underground storage (afa)	Amount to surface storage (afa)
Deep Basin Cleaning Device		
Anaheim/Kraemer System	36,000	
Miller Basin	7,000	
Wier Pond #3	8,000	
Five Coves	8,000	
Burris and Bond Pits	25,000	
Prado Dam (flood elevation 498 ft.)		10,000
La Jolla Recharge Basin	9,000	
Santiago Creek Expanded Recharge	3,000	
Anaheim Lake Expanded Recharge	2,000	
Santiago Creek Replenishment Program	10,000	
River View Recharge Basin	4,000	
Total storage near-term projects	**112,000 afa**	**10,000 afa**
Total storage, existing and near-term projects	**362,000 afa**	**35,800 afa**

11.3 Long-term Projects

The long-term projects listed in Table 3 were studied in OCWD's EIR at a programmatic level. (OCWD 1-23, Vol. 1, p. 5-1 to 5-13.) Ms. Moulton stated in her testimony that chapter 5 of the EIR, providing program-level review of these future facilities, was based on the best information that OCWD had about the nature of these projects, their potential locations, and OCWD's knowledge of the types of impacts that could result. Ms. Moulton further stated that additional environmental review would be done by OCWD and the ACOE before proceeding with this set of future projects. (May 3, 2007 R.T., p. 172; May 2, 2007 R.T., p. 52; May 7, 2007 OCWD Memorandum.)

Table 3 – Long-term Projects

	Amount to underground storage (afa)	Amount to surface storage (afa)
Mira Loma Recharge Basin	10,000	
Prado Dam (conservation elevation 514 ft.)		23,600
Additional Recharge Basins	78,000	
Gypsum Canyon Reservoir		30,000
Aliso Canyon Reservoir		30,000
Subsurface Collection/ Recharge System	10,000	
Deep Basin Filtration Recharge	25,000	
Recharge Galleries	20,000	
Total storage long-term facilities	**143,000 afa**	**83,600 afa**
Total storage existing, near-term, and long-term facilities	**505,000 afa**	**119,400 afa**

As acknowledged by OCWD, project level environmental review has not been completed for the long-term projects. According to its EIR, OCWD might not implement all of the potential long-term projects. (OCWD 1-23, Vol. 1, p. 3-3.) OCWD states that if it does decide to pursue development of these facilities in the future, it will, at some later date, undertake more detailed environmental studies and conduct project-level CEQA review. (*Id*., at p. 3-11.) Mr. Miller testified that *some* of OCWD's long-term projects, such as offstream storage reservoirs, *may* be implemented over the next 50 years. (May 4, 2007 R.T., p. 33.) These long-term facilities are

necessary for OCWD to divert and store the entire 505,000 afa requested in its application. (May 2, 2007 RT, pp. 152-153; OCWD 1-23, Vol. 1, p. 1-8.)

The Board cannot issue a permit for appropriation of water where such appropriation is speculative, or where environmental review has not been completed. (See *Central Delta Water Agency v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 245, 271-272; Cal. Code Regs., tit. 14, § 15004, subd. (a); see also Wat. Code, § 1396; Cal. Code Regs., tit. 23, § 840.)

11.4 Points of Diversion

In this decision, the Board authorizes eight existing points of rediversion and/or diversion. No additional points of diversion in the Prado Basin are authorized under this decision, nor were any additional points of diversion requested by OCWD in its application. New points of diversion within Prado Basin will be necessary to implement the long-term projects. (OCWD 1-23, Vol. 1, p. ES-2.) As previously noted, the proposed future facilities will be necessary in order for OCWD to divert and store the total amount of water requested in its application.

The existing points of rediversion and/or diversion are in the same locations as shown on the map filed with OCWD's application. (SWRCB-1.) Over time, however, OCWD has changed the numbering system for these points of rediversion and/or diversion. The locations of these points of rediversion and/or diversion are described in the attached Table 4. The numbering system, coordinates, and section descriptions have been amended to correspond to the map submitted by OCWD at the hearing on May 8, 2007. (OCWD 7-3.) In addition, the coordinates for POD 7, which is a point of diversion and rediversion through the Santa Ana River bottom, have been corrected to more accurately describe the diversion as occurring along the river bottom between two points. This "On River Recharge Area" is shown on a map included in OCWD's *"Supplement to Orange County Water District Application to Appropriate Water by Permit, Submitted November 1992."* (SWRCB-1.)

Prior to the Division issuing a permit, OCWD must submit updated maps to the Division for the approval of the State Water Board Deputy Director for Water Rights that meet the requirements of California Code of Regulations, Title 23, Chapter 2, Article 7.

11.5 Additional Storage at Prado Dam

With regard to the raising of Prado Dam, Craig Miller testified that OCWD had already implemented an increased conservation pool with the ACOE to elevation 498 feet amsl. (May 2, 2007 RT, pp. 150-151.) Mr. Miller further testified that OCWD will attempt to work with the ACOE in the future to increase the conservation pool to elevation 514 feet amsl. (*Ibid*.) Ms. Moulton testified that a conservation pool increase to 514 feet amsl would require further environmental review and approval by the ACOE, including a detailed evaluation of impacts to sensitive biological habitats within Prado Basin. (OCWD 4-1, p. 22.) Again, California Code of Regulations, title 14, section 15004, subdivision (a) restricts the Board from issuing a permit for a project until environmental review has been completed.

11.6 The Long-Term Projects Portion of the Application cannot be Approved

OCWD requests that the State Board issue a permit for the full request of 505,000 afa, with the last 143,000 afa conditioned on project level review of construction impacts and proper consideration of and response to comments in the course of that review as separately required by CEQA. (OCWD 1-24, p.14.) However, the entire amount of water requested is speculative because OCWD has not committed to constructing all of these facilities, nor has it completed CEQA documentation. Also, OCWD will need additional Points of Diversion, not requested as part of Application 31174, to implement the long-term projects.

In her written testimony, Ms. Moulton states that existing OCWD facilities provide an existing recharge capacity of 250,000 afa and a storage capacity of 25,800 afa. (OCWD 4-1, p. 5.) She further testified that project-level CEQA and/or NEPA review has been completed corresponding to 362,000 afa of recharge capacity; which includes all pre-existing and near-term projects. (May 3, 2007 RT, p. 166.) As stated above, the long-term project impacts, to the degree they are known, have been studied at a programmatic level. OCWD has stated that further CEQA review will be necessary before the long-term projects can be commenced. The State Water Board cannot permit a project without a completed CEQA review. (See *Central Delta Water Agency v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 245, 271-272; Cal. Code Regs., tit. 14, §15004, subd. (a).)

11.7 Significant Impacts Identified in the EIR[24]

In this decision, the State Water Board has considered the environmental impacts identified in OCWD's EIR that are associated with approving the application, including construction and operational impacts. OCWD determined the project would have potentially significant hydrologic, biological, cultural, hazardous materials, noise, and traffic impacts, as well as cumulative impacts to air quality, aesthetics, and land use.

The final EIR identifies the following significant impacts from the project:

Impact HYDRO-2: Construction activities associated with Anaheim Lake Expanded Recharge could temporarily add sediment and pollutants to urban runoff and storm water runoff.

Impact HYDRO-3: Construction activities associated with Santiago Creek Expanded Recharge temporarily could add sediment and pollutants to urban runoff and storm water runoff.

Impact HYDRO-4: Increased recharge within Santiago Creek could transport contaminants from surface soils in the area into the groundwater. Nearby production wells could be affected.

Impact BIO-1: Implementation of the proposed project at Anaheim Lake could result in impacts to nesting cormorants, herons, egrets, raptors and other birds protected by the Migratory Bird Treaty Act.

Impact BIO-2: Implementation of the Santiago Creek Expanded Recharge project would occur within the creek bed subject to USACE, Regional Water Quality Control Board (RWQCB), and DFG jurisdiction.

Impact CULT-1: Implementation of the Anaheim Lake Expanded Recharge project could affect unknown, potentially significant prehistoric and historic resources.

Impact CULT-2: Implementation of the Santiago Creek Expanded Recharge project could affect unknown, potentially significant prehistoric and historic resources.

Impact HAZ-1: The Santiago Creek Expanded Recharge project could encounter soil during excavation that has been exposed to contamination.

Impact HAZ-2: Construction activities within Santiago Creek could result in spilling hazardous materials into the creek.

[24] As discussed in the previous section of this decision, CEQA analysis has not been completed for the long-term projects. Without a completed CEQA document, the Board can neither identify and address significant adverse environmental project effects within the scope of its responsibility, nor approve that portion of the project. As such, the impacts and mitigation discussed in this section exclude discussion of chapter 5 and portions of chapter 7 of the EIR, addressing the long-term projects that are not approved by this decision.

Impact NOISE-2: Implementation of the Santiago Creek Expanded Recharge project would temporarily increase noise in local areas.

Impact TR-2: Construction activities for the Santiago Creek Expanded Recharge project could impact traffic flow and parking in Hart Park.

Cumulative Impact C-2: Recharge facility construction activities could contribute temporarily to cumulatively significant environmental impacts to air quality.

Cumulative Impact C-3: Operations could add to cumulatively significant impacts to aesthetics, biological resources, and land use.

11.8 Measures Adopted to Avoid or Mitigate for Significant Impacts under the Board's Control

Acting as a responsible agency when approving applications to appropriate water, the State Water Board does not have responsibility or jurisdiction to regulate significant impacts NOISE-2, TR-2, C-2, or C-3 listed above. Depending upon particular circumstances, the Board may have responsibility over the other significant impacts.

To mitigate significant impacts HYDRO 2, 3, and 4, the Board will adopt and include as permit terms the corresponding hydrology and water resources mitigation requirements identified in the EIR, specifically Mitigation Measures M-HYDRO-1, M-HYDRO-2, M-HYDRO-3, M-HYDRO-4, M-HYDRO-5, and M-HYDRO-6 (see Table 5). (OCWD 1-23, Vol. 1, § 4.2.5.) The State Water Board will also include standard permit terms 100, ~~101~~, ~~200~~, and 208 to mitigate these impacts.

The EIR also identified potentially significant impacts BIO-1 and BIO-2, which impact various biological resources associated with the construction or expansion of OCWD's facilities. To the extent these potentially significant impacts are within the State Water Board's purview, such as impacts to aquatic and riparian species, the Board has responsibility for requiring changes that avoid or mitigate those impacts. Accordingly, the State Water Board will adopt and include as permit terms the mitigation measures applicable to impacts to biological resources identified in the EIR, specifically Mitigation Measures M-BIO-1, M-BIO-2, M-BIO-32, M-BIO-4, M-BIO-5, and M-BIO-6 (see Table 5). (OCWD 1-23, Vol. 1, § 4.3.4.) The Board will also include standard permit term 203 to mitigate these impacts.

The EIR also identified potentially significant cultural and hazardous materials impacts CULT-1, CULT-2, HAZ-1, and HAZ-2. To the extent these potentially significant impacts are within the State Water Board's purview, the Board has responsibility for avoiding or mitigating those impacts. Accordingly, the State Water Board will adopt and include in the permit mitigation measures M-CULT-1, M-CULT-2, M-CULT-3, M-HYDRO-3, M-HYDRO-4, M-HAZ-1, M-HAZ-2 (see Table 5), and standard permit terms 100, ~~101~~, 203 and 208 to mitigate these impacts.

12.0 CONCLUSION

Having reviewed and considered the CEQA documentation prepared by OCWD, the State Water Board finds that CEQA documentation for Application 31174 covers only 362,000 afa. The Board further finds that construction of the long-term projects is speculative at this time, and that the project as described does not include points of diversion that would be necessary to implement the long-term projects. The State Water Board finds that the 362,000 afa increment of base flow and storm water runoff to be diverted to underground storage pursuant to Application 31174 is available for appropriation, and that diversion and storage of that water will neither injure the holders of senior water rights nor harm public trust resources. A permit will issued for that amount.

The State Water Board will hold in abeyance for ten years the 143,000 afa portion of Application 31174 corresponding to the long-term projects to afford OCWD an opportunity to submit unequivocal plans for construction and to complete CEQA review at a project level.

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ORDER

IT IS HEREBY ORDERED THAT Application 31174 be partially approved and a permit issued subject to prior rights and subject to standard permit terms 10, 11, 12, 13, 14, 15, 29A, 30, 63, 100, 117, 203, 208, and the following additional terms and conditions.

1. The Permittee is authorized to divert and use water from the Santa Ana River within the Counties of Orange and Riverside.

2. Permittee is authorized to divert water from the points of diversion identified within Table 4 to Decision (insert number).

3. Permittee is authorized to use the water for industrial, recreational, municipal and fish and wildlife preservation and/or enhancement within the area overlying the Orange County Groundwater Basin as shown on the map dated July 18, 2001, signed and dated on June 1, 2008 and on file with the State Water Board.

4. The water appropriated shall be limited to the quantity that can be beneficially used and shall not exceed 362,000 acre-feet per annum to be collected to a combination of underground and surface storage ~~at a maximum rate of 800 cubic feet per second from the 8 points of diversion listed in Table 4 to Decision (insert number)~~ from January 1 to December 31 of each year. The maximum rate of diversion to underground and offstream storage shall not exceed 1,670 cubic feet per second.

5. ~~The total amount of water to underground storage and storage at Prado Dam shall not exceed 362,000~~ afa.

6. Construction work and the application of water to beneficial use shall be prosecuted with reasonable diligence and be completed by December 31, ~~2040~~ 2057.

7. Prior to implementing the project, OCWD will conduct a Phase I Site Assessment for hazardous waste and soil contamination for the portion of Santiago Creek between Hart

Park and the Santa Ana River. OCWD shall comply with recommendations in the Site Assessment to avoid transporting contamination.

If the Site Assessment identifies the potential for contaminated soils to be transported by the project, OCWD will redesign the project to avoid this area or remediate the contamination that no adjacent properties or the groundwater basin would be adversely affected.

8. OCWD will notify the owners of active production wells within 500 feet of the lower reach of Santiago Creek between Hart Park and the Santa Ana River of its intent to increase recharge of groundwater within Santiago Creek. In coordination with these well owners, OCWD will develop and implement a groundwater monitoring plan similar to the existing plan for the upper reach of the creek that will provide early detection of changes to groundwater chemistry resulting from the project. If the monitoring plan identifies adverse effects to water chemistry, the State Water Board Deputy Director for Water Rights will be notified. The results from periodic groundwater monitoring will be submitted to the Santa Ana Regional Water Quality Control Board.

9. The State Water Board adopts and incorporates by reference into this order the hydrology and water resources and reporting requirements identified in the Final EIR, specifically Mitigation Measures M-HYDRO-1, M-HYDRO-2, M-HYDRO-3, M-HYDRO-4, M-HYDRO-5, and M-HYDRO-6 (see Table 5). OCWD must implement the measures to mitigate significant impacts to water quality resources and conduct the required reporting and monitoring of those measures. The State Water Board reserves jurisdiction to require any reasonable amendments to these measures and requirements necessary to ensure that they will accomplish the stated goal.

10. The State Water Board adopts and incorporates by reference into this order the mitigation, monitoring, and reporting requirements applicable to biological resources identified in the Final PEIR, specifically Mitigation Measures M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-4, M-BIO-5, and M-BIO-6 (see Table 5). OCWD must implement the measures to mitigate significant impacts to biological resources and conduct the required reporting and monitoring of those measures. The State Water Board reserves jurisdiction to require any reasonable

amendments to these measures and requirements to ensure that they will accomplish the stated goal.

11. The State Water Board adopts and incorporates by reference into this order the mitigation, monitoring, and reporting requirements applicable to cultural resources and hazardous materials identified in the Final PEIR, specifically Mitigation Measures M-CULT-1, M-CULT-2, M-CULT-3, M-HAZ-1, and M-HAZ-2 (see Table 5). OCWD must implement the measures to mitigate significant impacts to cultural resources and hazardous materials, and must conduct the required reporting and monitoring of those measures. The State Water Board reserves jurisdiction to require any reasonable amendments to these measures and requirements to ensure that they will accomplish the stated goal.

12. ~~Permittee shall comply with the September 26, 2006 Settlement Agreement between OCWD and DFG as follows:~~

~~(a) assess sites for Santa Ana sucker (*Catostomus santaanae*) (sucker) re-introduction within the Santa Ana watershed, and specifically above River Road Bridge;~~

~~(b) submit reintroduction and monitoring plan for review and approval by DFG and the State Water Board Deputy Director for Water Rights (Deputy Director);~~

~~(c) implement sucker re-introduction and monitoring at DFG-approved site(s) within the Santa Ana River watershed; and~~

~~(d) submit experimental sucker habitat restoration and monitoring plan for review and approval by DFG and the Deputy Director. The monitoring plan shall include site-specific location information with mapped GIS points, photos and annual reports.~~

Permittee shall either

a. come into compliance, no later than December 31, 2011, with all terms of the September 26, 2006 settlement agreement between OCWD and DFG, as follows:

i. Assess sites for Santa Ana sucker (*Catostomus santaanae*) (sucker) re-introduction within the Santa Ana River watershed.

ii. Submit reintroduction and monitoring plan for DFG and State Water Board Deputy Director for Water Rights (Deputy Director) review and approval. The monitoring plan shall include site specific location information with mapped GIS points and photos and annual reports.

iii. Implement sucker re-introduction and monitoring at DFG approved sites within the Santa Ana River.

iv. Assess sites for experimental sucker habitat restoration above River Road Bridge in the Santa Ana River watershed.

v. Submit experimental sucker habitat restoration and monitoring plan for DFG and Deputy Director review and approval. The monitoring plan shall include site specific location information with mapped GIS points and photos and annual reports.

vi. Implement experimental sucker habitat restoration and monitoring at DFG approved sites within the Santa Ana River watershed; or

b. comply with all terms and dates set out in such subsequent settlement agreement between OCWD and DFG as supersedes the September 26, 2006 agreement.

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

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 December 2, 2008.

AYE:

NO:

ABSENT:

ABSTAIN:

DRAFT
Jeanine Townsend
Clerk to the Board

TABLE 4 TO DECISION (insert number)

Application 31174

Locations of Points of Diversion (POD) Points 2 – 8 are also points of rediversion

By California Coordinate System of 1983, Zone 6	40-acre subdivision of public land survey or projection thereof	Section (Projected)	Township	Range	Base and Meridian
POD #1: River Road North 2,281,879 ft. and East 6,152,300 ft.	**NW¼ of SE¼**	**10**	**03S**	**07W**	**SB**
POD #2: Imperial Inflatable Dam North 2,258,721 ft. and East 6,090,696 ft.	**NW¼ of NW¼**	**2**	**04S**	**09W**	**SB**
POD #3: Below Lakeview North 2,258,463 ft. and East 6,085,460 ft.	**SW¼ of NW¼**	**3**	**04S**	**09W**	**SB**
POD #4: Below Tustin Avenue North 2,255,551 ft. and East 6,077,538 ft.	**SW¼ of SE¼**	**5**	**04S**	**09W**	**SB**
POD #5: East of Glassell Street North 2,253,771 ft. and East 6,073,539 ft.	**NE¼ of NE¼**	**7**	**04S**	**09W**	**SB**
POD #6: Five Coves Inflatable Dam North 2,253,426 ft. and East 6,073,169 ft.	**NE¼ of NE¼**	**7**	**04S**	**09W**	**SB**
POD #7: Diversion through Santa Ana River Bottom **North 2,254,839 ft. and East 6,075,891 ft.**	**NW¼ of NE¼**	**2**	**04S**	**09W**	**SB**
thence various instream percolation areas downstream to **North 2,254,839 ft. and East 6,075,891 ft.**	**SW¼ of SW¼**	**18**	**04S**	**09W**	**SB**
POD #8: Prado Dam North 2,270,767 ft. and East 6,138,417 ft.	**SW¼ of SW¼**	**20**	**03S**	**07W**	**SB**

TABLE 5 TO DECISION (insert number)

Mitigation Measures

M-HYDRO-1	OCWD will prepare and implement a Storm Water Pollution Prevention Plan as required for coverage under the statewide National Pollutant Discharge Elimination System construction permit. At a minimum, specific measures should include the following: (1) stockpiles of loose material shall be covered to prevent wind and water erosion and runoff diverted away from exposed soil; (2) concrete wash water will be collected and disposed of in the sanitary sewer; and fuel storage shall be within secondary containment.
M-HYDRO-2	OCWD will prepare and implement a Storm Water Pollution Prevention Plan as required for coverage under the statewide National Pollutant Discharge Elimination System construction permit. At a minimum, specific measures should include the following: (1) stockpiles of loose material shall be covered to prevent wind and water erosion and runoff diverted away from exposed soil; (2) concrete wash water will be collected and disposed of in the sanitary sewer; (3) fuel storage shall be within secondary containment; (4) construction debris including broken concrete will be removed from the creek; (5) construction activities in the creek will not occur during the rainy season; (6) street sweepers will be employed during soil hauling activities to ensure soil is not tracked onto roadways; (7) soil haul trucks will be covered or two feet of freeboard will be maintained.
M-HYDRO-3	Prior to implementing the project, OCWD will conduct a Phase I Site Assessment for hazardous waste and soil contamination for the portion of the Santiago Creek between Hart Park and the Santa Ana River. OCWD will comply with recommendations contained in the Site Assessment to avoid transporting contamination.
M-HYDRO-4	If the Site Assessment identifies the potential for contaminated soils to be transported by the project, OCWD will either redesign the project to avoid this area or remediate the contamination prior to implementation of the project such that no adjacent properties or the groundwater basin would be adversely affected.
M-HYDRO-5	OCWD will notify the owners of active production wells within 500 feet of the lower reach of Santiago Creek between Hart Park and the Santa Ana River of OCWD's intent to recharge groundwater within Santiago Creek. In coordination with these well owners, OCWD will develop and implement a groundwater monitoring plan similar to the existing plan for the upper reach of the creek that will provide early detection of potential changes to groundwater chemistry resulting from the project. If the monitoring plan identifies adverse effects to water chemistry, the recharge operations causing the effect will cease. The results from periodic groundwater monitoring will be submitted to the RWQCB.

TABLE 5 TO DECISION (insert number) (continued)

Mitigation Measures

M-HYDRO-6	If adverse effects to groundwater quality caused by the recharge project are identified during groundwater monitoring, recharge operations will cease until the condition is resolved.
M-BIO-1	The identified nesting trees will be removed outside the March 1 – July 31 breeding period. OCWD shall conduct pre-construction surveys for nesting birds within 30 days prior to removing the trees. The results of the surveys shall be forwarded to the United States Fish and Wildlife Service and California Department of Fish and Game (DFG). If the birds are found to be nesting in the trees to be removed during the survey, the tree removal will be delayed until the nests are no longer in use.
M-BIO-2	OCWD shall construct artificial nesting platforms, to replace the number of active nests present during the breeding season before the trees on the island are removed. See Payne and Copes (1990) for successful platform design.
M-BIO-3	OCWD will consult with DFG prior to removing nesting trees to determine what additional measures, if any, will be required to offset project impacts to the cormorant rookery.
M-BIO-4	Prior to construction within Santiago Creek, OCWD shall obtain a permit from the ACOE pursuant to Section 404 of the Clean Water Act (CWA). The final permit shall be submitted to the Santa Ana RWQCB in application for certification pursuant to Section 401 of the CWA.
M-BIO-5	Prior to construction within Santiago Creek, OCWD shall obtain a Streambed Alteration Agreement from DFG pursuant to Section 1600 et seq. of the California Fish and Game Code.
M-BIO-6	Prior to construction within Santiago Creek, OCWD shall consult with DFG to determine any additional notifications or measures required to offset project impacts.
M-CULT-1	Pursuant to *CEQA Guidelines* 15064.5 (f), “provisions for historical or unique archaeological resources accidentally discovered during construction” will be instituted. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and OCWD shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of OCWD and the qualified archaeologist and/or paleontologist would meet to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

TABLE 5 TO DECISION (insert number) (continued)

Mitigation Measures

M-CULT-2	Prior to excavation, a qualified architectural historian shall conduct a survey of the Hart Park construction area. The historian shall determine the potential significance of the Hart Park parking area. The historian shall prepare a report to determine if the project would be in conformance with the Standards for Treatment of Historical Properties identified in Section 106 of the National Historic Preservation Act. The report will identify the significance of the parking area to be affected by the construction and recommend measures to minimize the potential impact. Measures may include minimizing the construction area to avoid construction impacts to side walls and access routes. The qualified architectural historian will provide oversight of construction activities as necessary to minimize impacts to historical resources.
M-CULT-3	Pursuant to *CEQA Guidelines* 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" will be curated. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and OCWD shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of OCWD and the qualified archaeologist and/or paleontologist would meet to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.
M-HAZ-1	No refueling of heavy equipment shall be conducted in the creek bed.
M-HAZ-2	Drip pans shall be placed under heavy equipment within the creek bed when not in operation.