ATTACHMENT L1

DECLARATION OF CURT AIKENS
SUPPORTING YUBA COUNTY WATER AGENCY’S
PETITION FOR RECONSIDERATION OF JULY 17, 2020
OF WATER QUALITY CERTIFICATION
FOR FEDERAL PERMIT OR LICENSE

I, Curt Aikens, declare as follows:

1. I was Yuba County Water Agency’s ("YCWA") general manager from 2001 until July 1, 2020. As YCWA’s general manager, I was responsible for all of YCWA’s operations, including all aspects of its application to the Federal Energy Regulatory Commission ("FERC") for a new license for the Yuba River Development Project ("YRDP"). Since July 1, 2020, I have been YCWA’s senior executive adviser. In this position, I have continued to be involved in all aspects of YCWA’s efforts to obtain a new license from FERC for the YRDP, including all activities related to the State Water Resources Control Board’s ("SWRCB") potential issuance of a water quality certification under the Clean Water Act.

2. I have personal knowledge of the facts stated in this declaration and, if called as a witness, would testify to those facts.

3. In 2018, YCWA submitted an application for a water quality certification to the SWRCB. On July 31, 2019, the SWRCB’s Executive Director Eileen Sobeck sent me a letter denying that application by YCWA without prejudice. A copy of that letter is attached as Attachment L2. After July 31, 2019, YCWA has not submitted an application for a water quality certification to the SWRCB.

4. On July 13, 2020, YCWA’s general manager Willie Whittlesey sent Ms. Sobeck a letter that confirmed that YCWA had no application for a water quality certification pending. A copy of that letter is attached as Attachment L3.

5. Before July 16, 2020, I had no notice that the SWRCB was considering the issuance of a water quality certification for a new FERC license for the YRDP. To the best of my knowledge, no one employed by, or affiliated with, YCWA had any such notice either. In a June 20, 2020 filing with FERC, the SWRCB submitted a draft water quality certification to FERC, but did not give YCWA any notice that the SWRCB was considering issuance of this draft certification.

6. On July 16, 2020, I participated in an electronic meeting with Ms. Sobeck, other SWRCB employees and other YCWA representatives. Ms. Sobeck stated during that
electronic meeting that the SWRCB would be issuing a final water quality certification for FERC’s relicensing of the YRDP the following day, July 17, 2020. This statement by Ms. Sobeck was the first time I had ever heard that the SWRCB might be issuing a final water quality certification for FERC’s relicensing of the YRDP. To the best of my knowledge, prior to this July 16, 2020 electronic meeting, no one associated with the SWRCB provided anyone associated with YCWA with any notice that the SWRCB would be issuing a final water quality certification, any notice of any draft water quality certification or any opportunity to comment on or respond to a draft water quality certification.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on August 11, 2020 at Marysville, California.

[Signature]
Curt Aikens
Mr. Curt Aikens  
General Manager  
Yuba Water Agency  
1220 F Street  
Marysville, CA 95901-4266

Yuba River Development Project  
Federal Energy Regulatory Commission Project No. 2246  
Nevada, Sierra, and Yuba Counties

SUBJECT: DENIAL WITHOUT PREJUDICE OF WATER QUALITY CERTIFICATION FOR YUBA RIVER DEVELOPMENT PROJECT

Dear Mr. Aikens:

On August 3, 2018, the State Water Resources Control Board (State Water Board) received a request from Yuba Water Agency (YWA) for water quality certification (certification), pursuant to section 401(a)(1) of the Federal Clean Water Act (33 USC § 1341 et seq.) for the relicensing of the Yuba River Development Project (Project), Federal Energy Regulatory Commission (FERC) Project No. 2246. Waterbodies associated with the Project include the Middle Yuba River, North Yuba River, and Yuba River.

In taking a certification action, the State Water Board must either: (1) issue an appropriately conditioned water quality certification; or (2) deny certification. (Cal. Code Regs., tit. 23, § 3859.) A certification may be issued if it is determined that there is reasonable assurance that an activity is protective of state and federal water quality standards and that the appropriate environmental documents have been adopted to support certification and meet the requirements of the California Environmental Quality Act (CEQA). However, when a proposed project's "compliance with water quality standards and other appropriate requirements is not yet necessarily determined, but the application suffers from some procedural inadequacy (e.g., failure to...meet CEQA requirements)," the State Water Board may deny certification without prejudice. (Cal. Code Regs., tit. 23, § 3837, subd. (b)(2).)
YWA is the CEQA lead agency for the Project and has not begun the CEQA process. The Project is interrelated with the Upper Drum Spaulding Project (FERC Project No. 2310), the Deer Creek Project (FERC Project No. 14530), the Lower Drum Project (FERC Project No. 14531), and the Yuba-Bear Hydroelectric Project (FERC Project No. 2266). FERC is applying a watershed approach (i.e., analyzing all projects jointly) to comply with requirements from the National Marine Fisheries Service under Section 7 of the Federal Endangered Species Act (ESA). ESA consultation has not been completed and is expected to inform the lead agency (YWA) as part of the CEQA process.

YWA is hereby notified that the August 3, 2018 request for certification for the Project is denied without prejudice, effective the date of this letter. The denial without prejudice carries with it no judgment on the technical merits of the Project. The State Water Board encourages YWA to submit a new formal request for certification.

If you have questions regarding this letter, please contact Jordan Smith, Project Manager in the Water Quality Certification Program of the Division of Water Rights, at (916) 323-3645 or at jordan.smith@waterboards.ca.gov. Written correspondence should be directed to: State Water Resources Control Board; Division of Water Rights – Water Quality Certification Program; Attn: Jordan Smith; P.O. Box 2000; Sacramento, CA 95812-2000.

Sincerely,

Eileen Sobeck
Executive Director

cc: Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Mr. Tomas Torres, Director
U.S. Environmental Protection Agency
Region 9, Water Division
75 Hawthorne Street
San Francisco, CA 94105

Mr. Patrick Pulupa
Executive Officer II
Central Valley Regional Water Quality Control Board
364 Knollcrest Drive, Suite #205
Redding, CA 96002

Interested Parties Mailing List
July 13, 2020

Ms. Eileen Sobeck
Executive Director
State Water Resources Control Board
1001 I Street
Sacramento, California 95814

VIA E-MAIL
Eileen.Sobeck@waterboards.ca.gov

Re: Draft Water Quality Certification for Yuba River Development Project
(FERC Project No. 2246) – Lack of Basis for Draft Certification

Dear Ms. Sobeck:

On June 22, 2020, the State Water Resources Control Board (SWRCB) submitted to the Federal Energy Regulatory Commission (FERC) a Request for Rehearing of May 21, 2020 Declaratory Order on Waiver of Water Quality Certification (171 FERC ¶ 61,139). Attachment X to the SWRCB’s Request for Rehearing was a draft Water Quality Certification (Draft Certification) for Federal Permit or License concerning Yuba County Water Agency’s (YCWA) Yuba River Development Project (YRDP).

It is unclear why, and on what basis, the SWRCB has prepared the Draft Certification and submitted it to FERC. In a July 31, 2019 letter to YCWA, you denied without prejudice YCWA’s prior application for a water quality certification under Clean Water Act section 401 for FERC’s relicensing of the YRDP. (A copy of that letter is attached for your ease of reference.) YCWA has not filed any new application for such a water quality certification. Your July 31, 2019 letter states that the SWRCB was denying YCWA’s prior application because, in the SWRCB’s opinion, that application suffered from “some procedural inadequacy” and cited section 3837, subdivision (b)(2), of the SWRCB’s regulations to support this statement.

It is unclear what has changed since July 31, 2019 that has caused the SWRCB to prepare, and submit to FERC, a draft water quality certification for a project that the SWRCB found insufficient for such a certification a year ago. If the SWRCB contends that there is an active YCWA application for certification, YCWA hereby withdraws and cancels that application.

Moreover, under the SWRCB’s regulations, there is no basis for the SWRCB to prepare even a draft water quality certification. Throughout those regulations, the SWRCB explicitly states that an application is a prerequisite for the SWRCB to issue a water quality certification. For example, those regulations state:

“The executive director, or his/her designee, is authorized to take all actions connected with applications for certification, including issuance and denial of certification.” (Cal. Code Regs., title 23, § 3838(a) (emphasis added).)

“An application for water quality certification shall be filed with the state board executive director . . . whenever a potential discharge from a proposed
activity: . . . (B) is involved or associated with one or more of the following: . . .
2. a hydroelectric facility, and the proposed activity requires a FERC license or amendment to a FERC license.” (Cal. Code Regs., title 23, § 3855(b)(1)
(emphasis added).)

“The state board or a regional board may hold a public hearing with respect
to any application for certification.” (Cal. Code Regs., title 23, § 3858(b)
(emphasis added).)

“After review of the application, all relevant data, and any recommendations
of a regional board, other state and federal agencies, and any interested
person, the state board, the executive director, when acting as the state
board’s designee . . . shall issue certification or deny certification for any
discharge resulting from a pertinent activity before the federal period for
certification expires.” (Cal. Code Regs., title 23, § 3859(a) (emphasis added).)

As a result of your July 31, 2019 letter denying YCWA’s prior application, YCWA
currently has no application for such a certification pending. The SWRCB’s own
regulations, therefore, are clear that the SWRCB currently has no authority to issue a
water quality certification for FERC’s relicensing of the YRDP. This point is further
supported by FERC’s order finding that the SWRCB waived its authority to issue such a
certification. Accordingly, there appears to be no reason for the SWRCB to have prepared
the Draft Certification. Moreover, YCWA has reviewed that Draft Certification and has
significant concerns about many of its terms.

Based on the reasons stated in this letter, YCWA respectfully requests that the
SWRCB withdraw the Draft Certification from consideration by FERC as well as from any
other regulatory process. Under the SWRCB’s regulations, there is no application by
YCWA pending that even theoretically could support the SWRCB’s consideration of the
Draft Certification.

If you have questions about this letter, or otherwise would like to discuss this
matter, please contact YCWA’s counsel Ryan Bezerra at Bartkiewicz, Kronick & Shanahan.
For your ease of reference, Mr. Bezerra’s telephone number is (916) 446-4254 and his e-mail
address is rsb@bkslawfirm.com.

Very truly yours,

Willie Whittlesey
General Manager

Enclosure
Ms. Eileen Sobeck  
July 13, 2020  
Page 3

Cc (via e-mail, w/encl.):
Yuba County Water Agency Board of Directors
Secretary Jared Blumenfeld, Cal/EPA
Chair E. Joaquin Esquivel, SWRCB
Vice Chair Dorene D’Adamo, SWRCB
Board Member Tam M. Doduc, SWRCB
Board Member Sean Maguire, SWRCB
Board Member Laurel Firestone
Deputy Secretary Kristin Peer, Cal/EPA
Michael Lauffer, SWRCB Chief Counsel
ORDER ON WAIVER OF WATER QUALITY CERTIFICATION

(issued May 21, 2020)

1. On August 22, 2019, as supplemented on September 4, 2019, Yuba County Water Agency d/b/a Yuba Water Agency (Yuba County), licensee for the Yuba River Development Project No. 2246 (Yuba River Project), filed a request for the Commission to determine that the California State Water Resources Control Board (California Board or Board) waived its authority under section 401(a)(1) of the Clean Water Act (CWA)\(^1\) to issue water quality certification for relicensing the Yuba River Project. This order makes such a determination.

I. Background

2. On May 16, 1963, the Commission issued Yuba County a 50-year license to construct, operate, and maintain what is now the Yuba River Project.\(^2\) The license expired on April 30, 2016. Yuba County continues to operate the project under an annual license.

3. On April 28, 2014, Yuba County filed an application for a new license for the project and on June 5, 2017, it amended its application. On June 26, 2017, the Commission issued a notice accepting the application and indicating that it was ready for environmental analysis.

4. Section 401(a)(1) of the CWA requires that an applicant for a federal license or permit to conduct activities that may result in a discharge into the navigable waters of the

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United States – like Yuba County’s operation of the Yuba River Project – must provide the licensing or permitting agency a water quality certification from the state in which the discharge originates or evidence of waiver thereof.\(^3\) If the state “fails or refuses to act on a request for certification, within a reasonable period of time (which shall not exceed one year) after receipt of such request,” then certification is waived.\(^4\)

5. Yuba County requested water quality certification for the project on August 24, 2017, and the California Board received the application the same day.\(^5\) In its September 21, 2017 letter to Yuba County acknowledging receipt, the Board confirmed that “[Yuba County’s] letter initiates a one-year deadline from the date it was received for the [Board] to act on the request for certification” and the “deadline for certification action is August 24, 2018.”\(^6\) The Board did not suggest that the application was incomplete.

6. Staff from the Board emailed Yuba County on July 25, 2018, stating that the action date for the Yuba River Project was August 24, 2018; inquiring about the filing of a California Environmental Quality Act (CEQA) document for the project, noting that without the CEQA document the California Board could not complete its environmental analysis; and directing Yuba County to “submit a withdraw/resubmit of the certification application as soon as possible.”\(^7\) On the same day, Yuba County replied “we plan to

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\(^3\) 33 U.S.C. § 1341(a)(1). Section 401(d) of the CWA provides that a certification and the conditions contained therein shall become a condition of any federal license that is issued. Id. § 1341(d). See City of Tacoma, Washington v. FERC, 460 F.3d 53 (D.C. Cir. 2006).


\(^5\) As required by section 5.23(b)(1)(ii) of the Commission’s Rules and Regulations, 18 C.F.R. § 5.23(b)(1)(ii) (2019), Yuba County filed a copy of the request with the Commission, including proof of the date of receipt of the request. Yuba County August 25, 2017 filing, attaching a date-stamped Copy of Request for Certification.

\(^6\) California Board September 21, 2017 Letter Confirming Receipt of Water Quality Certification Application at 1 (filed with the Commission on October 2, 2017).

\(^7\) July 25, 2018 Email from Mr. Philip Choy, California Board to Mr. Geoff Rabone, Yuba County, and Mr. Jim Lynch, Consultant to Yuba County. Yuba County August 22, 2019 Petition for Waiver Determination (Petition for Waiver) Appendix B at 7.
submit the withdrawal/resubmittal letter on August 20. Will that work for you?”8 Later on July 25, 2018, the Board told Yuba County that “management usually gets a little antsy when our action date gets below 3 weeks because a ‘deny without prejudice’ letter takes time to route to our Executive Director. If possible, please submit the letter by next Friday.”

7. On August 3, 2018, Yuba County withdrew and resubmitted its application for water quality certification.9 Yuba County’s application stated that the “[p]roject has not changed, so the June 2, 2017 Amended [Final License Application], which the State Water Board has on file, contains all information required for a complete application for water quality certification.” The Board acknowledged receipt of the application on August 22, 2018, stating that the August 3, 2018 letter “serves as a formal withdrawal and re-filing request for certification” and the “new deadline for certification is August 3, 2019.”10 The Board did not dispute Yuba’s statements that the project had not changed and that the application was complete.

8. On January 25, 2019, the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) issued an opinion in Hoopa Valley Tribe v. FERC,11 ruling that, where a state and an applicant agree to repeatedly withdraw and refile the same water quality certification request, the state has waived certification.

9. On July 31, 2019, the California Board issued an order purporting to deny without prejudice Yuba County’s request for water quality certification, stating that the CEQA process and consultation under the Endangered Species Act (ESA) had not been

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8 July 25, 2018 Email from Mr. Lynch, Consultant to Yuba County to Mr. Choy, California Board. Yuba County Petition for Waiver Appendix B at 7.

9 As required by section 5.23(b)(1) of the Commission’s Rules and Regulations, Yuba County filed a copy of the request with the Commission. Yuba County August 3, 2018 Copy of Request for Certification.

10 California Board August 22, 2018 Letter Confirming Receipt of Water Quality Certification Application at 1 (filed with the Commission on August 27, 2018).

11 913 F.3d 1099 (D.C. Cir. 2019) (Hoopa Valley) (rejecting a coordinated withdrawal-and-resubmission scheme between the applicant and the state certifying agency).
completed, and that “[the California Board] encourages [Yuba County] to submit a new formal request for certification.”\textsuperscript{12} Yuba County did not subsequently file a new request.

10. On August 22, 2019, Yuba County filed the present request with the Commission, asking us to determine that the California Board waived its certification authority for the relicensing of the Yuba River Project.

11. On March 3, 2020, the Commission issued public notice of the petition, establishing April 2, 2020, as the deadline for filing comments.\textsuperscript{13} The California Board, California Department of Fish and Wildlife (California Fish and Wildlife), and Foothills Water Network and its member organization (Foothills),\textsuperscript{14} each filed comments opposing Yuba County’s request.\textsuperscript{15}

12. Yuba County filed an answer to the responses.\textsuperscript{16} Rule 213(a) of the Commission’s Rules of Practice and Procedure prohibits answers to answers unless otherwise ordered by the Commission.\textsuperscript{17} Here, we do not find this answer to provide additional information that would be helpful in our decision making. Therefore, this pleading is rejected as an impermissible answer.

\textsuperscript{12} California Board July 31, 2019 Denial without Prejudice of Water Quality Certification Application (filed with the Commission on August 1, 2019).

\textsuperscript{13} Because Yuba County filed its request in the relicensing docket, as to which the Commission previously provided the opportunity to intervene, the notice did not provide for intervention.

\textsuperscript{14} Foothills’ member organizations are American Rivers, American Whitewater, California Outdoors, California Sportfishing Protection Alliance, Friends of the River, Gold Country Fly Fishers, Northern California Council of Fly Fishers International (formerly Northern California Council Federation of Fly Fishers), Sierra Club, South Yuba River Citizens League, and Trout Unlimited.


\textsuperscript{16} See Yuba County April 17, 2020 Comments.

\textsuperscript{17} 18 C.F.R. § 385.213(a)(2).
II. Discussion

13. The “waiver” provision of section 401(a)(1) of the CWA is at issue here. As noted above, under section 401 of the CWA, if a state certifying agency “fails or refuses to act on a request for certification, within a reasonable period of time (which shall not exceed one year) after receipt of such request, the certification requirements of [section 401] shall be waived with respect to such federal application.” For the reasons discussed below, we find that the California Board waived its authority under section 401.

A. Hoopa Valley and Commission Precedent

14. In Hoopa Valley, the D.C. Circuit found that “a state waives its Section 401 authority when, pursuant to an agreement between the state and applicant, an applicant repeatedly withdraws and resubmits its request for water quality certification over a period of time greater than one year.” The court concluded that where a licensee each year sent a letter indicating withdrawal of its certification request and resubmission of the same request, “[s]uch an arrangement does not exploit a statutory loophole; it serves to circumvent [FERC’s] congressionally granted authority over the licensing, conditioning, and developing of a hydropower project.” In fact, “[b]y shelving water quality certifications, the states usurp FERC’s control over whether and when a federal license will issue. Thus, if allowed, the withdrawal-and-resubmission scheme could be used to indefinitely delay federal licensing proceedings and undermine FERC’s jurisdiction to regulate such matters.”

15. Following Hoopa Valley, the Commission found that the California Board waived its section 401 authority in Placer County Water Agency. In Placer County, the


19 913 F.3d at 1103.

20 In Hoopa Valley, the court noted that “before each [full]-year passed, [the applicant] sent a letter indicating withdrawal of its water quality certification request and resubmission of the very same . . . in the same one-page letter . . . .” Id. at 1104 (emphasis in original).

21 Id.

22 Id.

Commission held that a formal agreement between a licensee and a state was not necessary to support a finding of waiver; rather, the exchanges between the entities could amount to an ongoing agreement.\(^{24}\) The Commission found that the record showed that the entities worked to ensure that the withdrawal and refiling happened each year,\(^{25}\) given that the licensee submitted evidence that the state sent it emails about each upcoming one-year deadline for the purpose of eliciting a withdrawal and resubmission.\(^{26}\) Based on this functional agreement and the fact that Placer County never filed a new application, the Commission concluded that the process caused lengthy delay and found that the state waived its certification authority.\(^{27}\)

16. Similarly, in *Southern California Edison*, the Commission found that the California Board waived its section 401 authority for relicensing six projects that comprise the Big Creek hydroelectric system.\(^{28}\) There, the Commission rejected the Board’s argument that *Hoopa Valley* was not applicable. While there was no explicit agreement between the applicant and the Board, the Commission found that the record showed the Board directly participated in the withdrawal and resubmittal scheme. The Board staff sent annual emails to the licensee noting the upcoming one-year deadline and explicitly requested withdrawal and resubmittal,\(^{29}\) commenting that “[i]f the one year federal period for certification is insufficient for the [] Board to act, staff will recommend that [Southern California Edison] withdraw and resubmit their request for [water quality certification] for the six Big Creek projects.”\(^{30}\) The Commission found this evidence

\(^{24}\) *Placer County*, 167 FERC ¶ 61,056 at P 16; *see also McMahan Hydroelectric, LLC*, 168 FERC ¶ 61,185, at PP 33-38 (2019); *Pacific Gas and Electric Co.*, 170 FERC ¶ 61,232, at P 27 (2020) (*Pacific Gas and Electric*); *Southern California Edison Co.*, 170 FERC ¶ 61,135, at P 23 (2020) (*Southern California Edison*).

\(^{25}\) *Placer County*, 167 FERC ¶ 61,056 at P 12.

\(^{26}\) *Placer County*, 169 FERC ¶ 61,046 at P 17.

\(^{27}\) *Id.* PP 12, 18.

\(^{28}\) 170 FERC ¶ 61,135 (2020).

\(^{29}\) *Id* P 25.

\(^{30}\) *Id.* P 24; *see also id.* PP 23-29.
demonstrated the state’s coordination with the licensee and was sufficient to support a waiver finding.\(^{31}\)

17. Thereafter, in \textit{Pacific Gas and Electric}, the Commission found that the California Board waived its section 401 authority with respect to the surrender of the Kilarc-Cow Creek Hydroelectric Project No. 606, again stating that an explicit agreement between the applicant and the Board was not necessary to find waiver.\(^{32}\) We found that the record showed that the Board expected the applicant to withdraw and refile its certification application and the applicant cooperated.\(^{33}\) In its comments, the Board indicated that the “usual process” involved the applicant voluntarily withdrawing and refiling its application.\(^{34}\) Moreover, the Commission found unavailing the Board’s assertion that it could not issue a water quality certification until the CEQA process was complete, which often takes more than one year, and determined that the general principle from \textit{Hoopa Valley} still applied.\(^{35}\) The Commission found, as it had previously, that a “state’s reason for delay [is] immaterial.”\(^{36}\)

18. Most recently, in \textit{Nevada Irrigation District}, we again found that the Board waived its authority to issue a water quality certification where the applicant withdrew and refiled its application numerous times, even when an explicit agreement was not in place.\(^{37}\) The Commission found unpersuasive the argument that the Nevada Irrigation District, as the lead agency for CEQA, controlled the timing for the CEQA analysis, and reiterated that the “state’s reason for delay is immaterial.”\(^{38}\) Further, we dispensed with the argument by the Board and Foothills that the timing of the water quality certification, even if it extends beyond one year, would not disrupt the relicensing proceeding because

\(^{31}\) Id. P 25.

\(^{32}\) 170 FERC ¶ 61,232 at P 27.

\(^{33}\) Id.

\(^{34}\) Id.

\(^{35}\) Id. PP 31-33.

\(^{36}\) Id. P 35 (citing \textit{Placer County}, 169 FERC ¶ 61,046 at P 20).

\(^{37}\) 171 FERC ¶ 61,029 (2020).

\(^{38}\) Id. P 28.
ESA consultation was not complete, reaffirming that section 401 of the CWA is clear, and that failure to act within the one-year time limit is absolute.\(^\text{39}\)

**B. Application of Hoopa Valley and Commission Precedent to the Relicensing Proceeding for the Yuba River Project**

19. The California Board, California Fish and Wildlife, and Foothills claim that *Hoopa Valley* does not support a finding of waiver in this proceeding.\(^\text{40}\) They claim that there was no agreement for Yuba County to withdraw and resubmit its application, that Yuba County acted voluntarily and unilaterally in doing so each year before the deadline, that Yuba County’s failure to prepare and submit a CEQA document caused delay and precluded the Board’s issuance of a certification, that the Board’s issuance of a certification even if taking longer than one year would not delay the Commission’s licensing proceeding, and that Yuba County failed to exhaust all state administrative remedies.\(^\text{41}\)

1. **Agreement Not Necessary to Find Waiver**

20. As we have held previously, an explicit written agreement to withdraw and refile is not necessary to support a finding of waiver.\(^\text{42}\) The facts in this proceeding are similar to those in *Pacific Gas and Electric* and *Nevada Irrigation District*, in that Yuba County’s withdrawal and refiling of its application was in response to the Board’s request that it do so. Here, the Board informed Yuba County, on July 25, 2018, one month in advance of the one-year deadline that:

   [Yuba County’s] water quality certification action date for the Yuba River Development Project (FERC No. 2246) is August 24, 2018. A final CEQA

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\(^{39}\) Id. P 29.

\(^{40}\) California Board April 2, 2020 Response at 1; California Fish and Wildlife March 26, 2020 Response at 2; Foothills October 7, 2019 Response at 4; Foothills April 2, 2020 Response at 5.

\(^{41}\) California Board April 2, 2020 Response at 4; California Fish and Wildlife March 26, 2020 at 3; Foothills October 7, 2019 Response at 4-7; Foothills April 2, 2020 Response at 5-8.

\(^{42}\) See *Pacific Gas and Electric*, 170 FERC ¶ 61,232 at P 27; *Southern California Edison*, 170 FERC ¶ 61,135 at P 23; *Placer County*, 167 FERC ¶ 61,056 at PP 17-18; *Nevada Irrigation District*, 171 FERC ¶ 61,029 at P 23; see also *Constitution Pipeline Company, LLC*, 168 FERC ¶ 61,129, at PP 33-34 (2019).
document for the Project has not been filed; therefore, the State Water Board cannot complete the environmental analysis of the Project that is required for certification. Please submit a withdraw/resubmit of the certification application as soon as possible.43

The coordination between the Board and Yuba County alone is sufficient evidence that the California Board sought the withdrawal and resubmittal of the Yuba River application to circumvent the one-year statutory deadline for the state agency to act. As in Hoopa Valley, Placer County, Southern California Edison, Pacific Gas and Electric, and Nevada Irrigation District, the California Board’s efforts constituted a failure to act within the meaning of section 401, in order to provide the Board additional time beyond the one-year deadline to act.44

2. **California Board Was Complicit**

21. The Board alleges that Yuba County presumably withdrew its requests voluntarily.45 We rejected similar arguments in prior proceedings. In Southern California Edison, we found that the California Board had waived its water quality certification authority based on the fact that, in the eight-plus years of the applicant effectuating a withdrawal and resubmittal of its application with a single page letter, the applicant never filed a new application or any new supporting information.46 In reaching this decision, we also relied on record evidence that showed the California Board’s direct participation in the withdrawal and resubmittal scheme, namely annual reminder emails

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43 July 25, 2018 Email from Mr. Philip Choy, California Board, to Mr. Geoff Rabone, Yuba County, and Mr. Jim Lynch, Consultant to Yuba County. Yuba County Petition for Waiver Appendix B at 7.

44 Hoopa Valley, 913 F.3d at 1105 (“The record indicates that PacifiCorp’s water quality certification request has been complete and ready for review for more than a decade.”); Placer County, 169 FERC ¶ 61,046 at P 18; Southern California Edison, 170 FERC ¶ 61,135 at P 25; Pacific Gas and Electric, 170 FERC ¶ 61,232 at P 27; Nevada Irrigation District, 171 FERC ¶ 61,029 at P 23.

45 California Board April 2, 2020 Response at 3; see also California Fish and Wildlife March 26, 2020 Response at 4-5 (“Presumably, [Yuba County] requested withdrawal of its request for water quality verification because it viewed a voluntary withdrawal as preferable to [the Board’s] denial of its request.”).

46 170 FERC ¶ 61,135 at P 28; see also Constitution, 168 FERC ¶ 61,129 at PP 32-37 (rejecting the state’s argument that the applicant voluntarily resubmitted two certification requests in response to the state’s indication that more time was necessary to obtain and review additional information).
that the California Board sent to the licensee just before the one-year deadline, requesting withdrawal and resubmission of the application.\textsuperscript{47} We further concluded that:

\begin{quote}
\[\text{even absent this evidence, prior to and upon receipt of each withdrawal, the California Board had the option of denying certification within the one year it was afforded under the CWA. Therefore, by accepting each of [the licensee’s] withdrawal/resubmission letters, the California Board consented to the scheme of resetting the one-year deadline.}\]
\end{quote}

\textbf{22.} Similarly, in \textit{Pacific Gas and Electric}, we found that the California Board expected and encouraged the certification applicant to withdraw and resubmit an identical application to avoid the CWA’s one-year waiver deadline.\textsuperscript{49} Here, too, the California Board directly asked Yuba County to withdraw and resubmit its application to avoid the CWA’s one-year deadline.

\section{3. CEQA Requirements Cannot Circumvent the CWA’s One-Year Deadline for Action}

\textbf{23.} The Board, California Fish and Wildlife, and Foothills argue that Yuba County did not prepare a CEQA document and by failing to do so prevented the Board from acting on the certification application.\textsuperscript{50} The Commission addressed this argument in \textit{Pacific Gas and Electric}, where the California Board, in every letter the Board sent acknowledging receipt of the resubmitted application, stated that the water quality certification could not be issued without a final CEQA document.\textsuperscript{51} We found that the California Board’s contention that the applicant’s actions contributed to the delay ignored the California Board’s own role in the process.\textsuperscript{52}

\textbf{24.} The Board acknowledged that the water quality certification could not be issued until the CEQA process was complete and, accordingly, that Yuba County would likely

\begin{itemize}
\item \textsuperscript{47} \textit{Id.} P 25.
\item \textsuperscript{48} \textit{Id.}
\item \textsuperscript{49} 170 FERC ¶ 61,232 at P 31.
\item \textsuperscript{50} California Board April 2, 2020 Response at 3; California Fish and Wildlife March 26, 2020 at 2-4; Foothills October 7, 2019 Response at 5-6; Foothills April 2, 2020 Response at 6-7.
\item \textsuperscript{51} 170 FERC ¶ 61,232 at PP 32-33
\item \textsuperscript{52} \textit{Id.} P 31; \textit{see also Nevada Irrigation District}, 171 FERC ¶ 61,029 at P 26.
\end{itemize}
need to withdraw and resubmit its application. Tellingly, as noted above, the Board did not dispute Yuba County’s statements that the project had not changed between applications and that the Board had all of the information it needed to act.

25. The Board, California Fish and Wildlife, and Foothills argue that, because Yuba County is the lead agency for CEQA and controls the timing for CEQA compliance, Yuba County should not benefit from its own actions and the Board should not be deprived of its CWA certification authority. This argument is unpersuasive. We find that the Board’s contention that Yuba County alone is responsible for the delay in issuance of a water quality certification ignores the Board’s own role in the process. The reliance on a state regulatory process (i.e., CEQA compliance) over which the Board has potentially limited control over timing and often takes more than one year to complete does not excuse the Board from complying with the statutory requirements of the CWA. Moreover, as we have explained, the “state’s reason for delay [is] immaterial.” And courts are in agreement that “the plain language of [s]ection 401 outlines a bright-line rule regarding the beginning of review: the timeline for a state’s action regarding a request for certification ‘shall not exceed one year’ after ‘receipt of such request.’” Accordingly, a state may not extend the one-year deadline to act even if a state process may, in practice, often take more than one year to complete. We note that to the extent

53 See supra P 6.

54 California Board April 2, 2020 Response at 3; California Fish and Wildlife March 26, 2020 Response at 4; Foothills October 7, 2019 Response at 5-6; Foothills April 2, 2020 Response at 6-7.

55 Placer County, 169 FERC ¶ 61,046 at P 20; Nevada Irrigation District, 171 FERC ¶ 61,029 at P 28; see also Constitution, 168 FERC ¶ 61,129 at P 37.

56 New York DEC v. FERC, 884 F.3d 450, 455 (2d Cir. 2018) (citing Alabama Rivers All. v. FERC, 325 F.3d 290, 296-97 (D.C. Cir. 2003)); see also Hoopa Valley, 913 F.3d at 1101 (citing Alcoa Power Generating Inc. v. FERC, 643 F.3d 963, 972 (D.C. Cir. 2011)).

57 See, e.g., Nevada Irrigation District, 171 FERC ¶ 61,029 at P 27 (referencing the California Board’s comment that the water quality certification could not be issued until the Board’s CEQA process was complete and the applicant would likely need to withdraw and resubmit its certification application).
a state lacks sufficient information to act on a certification request, it has a remedy: it can deny certification. 58 Delay beyond the statutory deadline, however, is not an option. 59

26. In addition, California Fish and Wildlife and Foothills argue that if Yuba County submits a new application to the Board including a CEQA document it would constitute a new and different application and restart the certification clock. 60 We need not reach this conclusion as this issue has not been presented to us here. 61

4. **ESA Consultation During Relicensing Does Not Alter the One-Year Deadline of the CWA**

27. The Board argues that finding waiver here would serve no purpose, because the Commission cannot issue a license until ESA consultation is complete. 62 Regardless of whether a water quality certification decision is the sole factor delaying a licensing proceeding, the general principle from Hoopa Valley still applies: where an applicant withdraws and resubmits a request for water quality certification to avoid section 401’s

58 Indeed, the state has codified a practice along these lines. See Cal. Code Regs, tit. 23, § 3836(c) (“If an application is determined to be complete by the certifying agency, but CEQA requires that the certifying agency review a final environmental document before taking a certification action, an extension of the federal period for certification cannot be obtained, and the federal period for certification will expire before the certifying agency can receive and properly review the necessary environmental documentation, the certifying agency shall deny without prejudice certification for any discharge resulting from the proposed activity unless the applicant in writing withdraws the request for certification.”) (emphasis added).

59 See Hoopa Valley, 913 F.3d at 1104-05 (“Congress intended Section 401 to curb a state’s ‘dalliance or unreasonable delay’. . . . This Court has repeatedly recognized that the waiver provision was created ‘to prevent a State from indefinitely delaying a federal licensing proceeding.’”) (emphasis in original) (citation omitted).

60 California Fish and Wildlife March 26, 2020 Response at 5-8; Foothills October 7, 2019 Response at 8-9; Foothills April 2, 2020 Response at 13-14.

61 See New York DEC v. FERC, 884 F.3d at 455-56 (“[The CWA] does not specify that this time limit applies only for ‘complete’ applications. If the statute required ‘complete’ applications, states could blur this bright-line rule into a subjective standard, dictating that applications are ‘complete’ only when state agencies decide that they have all the information they need. The state agencies could thus theoretically request supplemental information indefinitely.”).

62 California Board April 2, 2020 Response at 2.
one-year time limit, and the state does not act within one year of the receipt of an
application, the state has failed or refused to act under section 401 and thus has waived its
section 401 authority. Here, we find that the California Board failed to act within the
one-year period on Yuba County’s August 24, 2017 application, thereby waiving its
certification authority.

5. Pursuing State Remedies Not Required

28. The Board argues that Yuba County failed to exhaust its administrative remedies
by neither requesting reconsideration nor otherwise challenging the denial without
prejudice or any alleged failure to act by the Board and has thus waived any rights to now
allege waiver on these bases. The Board’s argument is misplaced. As we have
explained, the issue of whether the California Board waived its certification authority is a
federal question correctly before the Commission in the first instance, and one that must
be resolved by reference to federal law, not state procedure.

The Commission orders:

(A) Yuba County Water Agency’s August 22, 2019 request for the Commission
to find waiver is granted. The Commission determines that the California State Water
Resources Control Board has waived its water quality certification authority under
section 401 of the Clean Water Act for relicensing Yuba County’s Yuba River
Development Project No. 2246.


64 In fact, while the Commission generally does not issue a license prior to the
completion of ESA consultation, we are not prohibited from issuing a license that is
contingent on the completion of consultation. See, e.g., Myersville Citizens for a Rural
Cmty. v. FERC, 783 F.3d 1301, 1320-21 (D.C. Cir. 2015) (upholding the Commission’s
conditional approval of a natural gas facility construction project where the Commission
conditioned its approval on the applicant securing a required federal Clean Air Act air
quality permit from the state).

65 California Board April 2, 2020 Response at n.2.

66 See Pacific Gas and Electric, 170 FERC ¶ 61,232 at P 43; see also Millennium
Pipeline Co., 860 F.3d at 700-01; Keating v. FERC, 927 F.2d 616, 622 (D.C. Cir. 1991)
(“[T]he question before us focuses on FERC’s authority to decide whether the state’s
purported revocation of its prior [section 401 water quality] certification satisfied the
terms of section 401(a)(3) [of the CWA]. We have no doubt that the question posed is a
matter of federal law, and that it is one for FERC to decide in the first instance.”).
This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 825l (2018), and section 385.713 of the Commission’s regulations, 18 C.F.R. § 385.713 (2019).

By the Commission.

(SEAL)

Kimberly D. Bose,
Secretary.

I. INTRODUCTION AND BACKGROUND

Section 401 of the Clean Water Act, 33 U.S.C. § 1341 (Section 401) requires every applicant for a federal license or permit for an activity that may result in a discharge into waters of the United States to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act, 33 U.S.C. § 1313. Section 401 directs the agency responsible for water quality certification (certification) to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law. Section 401 further provides that state certification conditions shall become conditions of any federal license or permit for the project. Section 401 provides for waiver of certification authority if a state “fails or refuses to act on a request for certification within a reasonable amount of time (which shall not exceed one year).” 33 U.S.C. § 1341(a)(1). The State Water Board is designated as the state water pollution control agency for all purposes stated in the Clean Water Act and any other federal act. Cal. Water Code, § 13160.

Consistent with the cooperative federalism established in the Clean Water Act, Section 401 leaves it to the states to establish their own procedures for certification. Section 401 requires each state to establish procedures for public notice and for public hearings where the state deems appropriate, 33 U.S.C. § 1341(a)(1), but otherwise sets no express requirements or limitations on what information the states may
require or what procedures they may follow. Under California law, the applicable procedures include compliance with the California Environmental Quality Act, Cal. Pub. Res. Code § 21000 et seq. (CEQA), which was modeled after the federal National Environmental Policy Act. City of Davis v. Coleman, 521 F.2d 661, 672 (9th Cir. 1975). Under CEQA, the lead agency prepares the environmental impact report or other environmental documentation required under CEQA and the responsible agency cannot issue a certification or other discretionary approval required for the project until the lead agency completes and certifies the adequacy of that environmental documentation. Cal. Pub. Res. Code §§ 21006, 21165, 21000; Cal. Code Regs. tit. 14, §§ 15004(a), 15050, 15096(f). After preparing the environmental documentation, a lead agency then considers whether to proceed with the proposed project. Cal. Code Regs., tit. 14, §§ 15004, 15050. CEQA prohibits a lead agency from approving and implementing a project covered by CEQA prior to completing the process CEQA requires. Cal. Pub. Res. Code §§ 21006, 21000; Cal. Code Regs., tit. 14, §§ 15004, 15050.

California law also establishes procedures by which an applicant for certification or other interested person may seek administrative reconsideration or judicial review of any State Water Board action or failure to act as part of the Section 401 certification process. Cal. Code Regs. tit. 23, § 3867; Cal. Water Code, § 13330. These procedures must be followed by any person who seeks to challenge the State Water Board’s action. Cal. Water Code § 13330(d).

Yuba County Water Agency (YCWA) owns and operates the Yuba River Development Project (Yuba River Project or Project), which is an individually licensed hydroelectric project in the upper Sacramento River watershed that is operated in coordination with other individually licensed projects including the Upper Drum-Spaulding Project (FERC Project No. 2310), the Deer Creek Project (FERC Project No. 14530), the Lower Drum Project (FERC Project No. 14531), the Narrows Hydroelectric Project (FERC Project No. 1403), and the Yuba-Bear Hydroelectric Project (FERC Project No. 2266), several of which are owned and operated by different licensees. The Project was originally licensed by the Commission in 1963. The Commission issued the original license for the Project and those for the related hydroelectric facilities, before state certification authority, now codified as Section 401, was enacted. Absent the authority provided by Section 401, California through the State Water Board did not have the ability to impose hydropower facility conditions on the upper Sacramento River watershed hydroelectric projects to protect water quality in the initial licensing issuance. In addition, applicable water quality standards have been updated since the initial licenses for these projects were issued.

YCWA filed its final license application with the Commission for a new Project license on April 21, 2014, and filed an amended final license application (AFLA) on June 2, 2017. On June 26, 2017, the Commission issued its Notice of Acceptance and Ready for Environmental Analysis (REA), and on July 21, 2017, YCWA filed the first of at least eight rounds of additional changes to the AFLA. Attachment A. The July 21, 2017 amendment updated information on ramping rates, recreational flows and recreational facility plans. On August 24, 2017, YCWA filed its initial application with the State Water Board for a Section 401 certification. Attachment B. On August 25, 2017, the State Water Board filed comments on the REA and preliminary certification conditions with the Commission. Attachment C. Later that fall, YCWA filed a second and third set of amendments to the AFLA, on

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1 The United States Environmental Protection Agency (USEPA) has released, but not yet promulgated, regulations that would seek to standardize certain procedures, including setting bare-minimum requirements for a request for certification sufficient to start a review clock, similar to FERC’s existing regulations. Proposed 40 C.F.R. § 121.5. The USEPA rule acknowledges that additional information may be necessary. Proposed 40 C.F.R. § 151.7 (e)(1)(iii), (e)(2)(iii). As noted in the State Water Board’s comments on the proposed regulations, such standardization is contrary to the structures of cooperative federalism and would be bad policy. Should these regulations take effect, they should not be read to retroactively set procedures or otherwise limit state authority and control prior to promulgation.
September 15, 2017 (regarding amendments to operation of flood control facilities) and November 1, 2017 (amendments to hydropower generation estimates and projected costs of environmental measures). Attachments D, E. On January 25, 2018, YCWA requested that FERC delay environmental review of the Project in light of the anticipated incorporation of the Narrows Hydroelectric Project into the license. Attachment F. On January 31, 2018, the State Water Board advised FERC of additional information needs should transfer of the Narrows Hydroelectric Project be approved, and recommended against delay of environmental review should it not be. Attachment G. In spring and summer of 2018, YCWA filed the fourth, fifth, sixth, seventh, and eighth sets of changes to its AFLA. On April 12, 2018, YCWA submitted a request to replace the AFLA’s existing large woody material management plan at three facilities with a new plan, as well as a request to replace the AFLA’s existing proposed recreation plan with a revised plan. Attachments H, I. On April 27, 2018, YCWA submitted a request to replace the AFLA’s existing proposal for determining water year types and related flows below the Narrows 2 powerhouse with a new proposal, as well as a request to replace the existing ramping plans below Englebright Dam with a revised proposal. Attachments J, K. On July 27, 2018, YCWA submitted a request to replace the AFLA’s existing sediment management proposal for Our House and Log Cabin dams’ sediment management with an amended plan. Attachment L. On August 3, 2018, YCWA withdrew its August 2017 certification application, and submitted a new application. Attachment M. On August 22, 2018, the State Water Board issued a letter confirming YCWA’s withdrawal of the August 24, 2017 application, and accepted the new request as complying with regulatory application filing requirements. Attachment N. The letter noted that the request consisted not only of the application for certification, but also “the FERC license application and other documents included by reference in the certification application” from the FERC files.

At no point did YCWA suggest that its withdrawal of the 2017 certification application was not, in fact, a withdrawal as purported, or that the State Water Board had a duty to act on the withdrawn request. Neither did YCWA contest the State Water Board’s clarification that the new application included documents included by reference in the FERC record.

As the agency undertaking the Project, YCWA is lead agency for purposes of CEQA, and is required to perform environmental review before deciding to proceed with, and then implement, the proposed project. The State Water Board is a responsible agency, and is bound to the lead agency’s CEQA analysis. While YCWA initially approached the State Water Board regarding the intent to commence CEQA compliance in 2014 (Attachment O), YCWA has yet to initiate, let alone complete, preparation of the environmental documentation required under CEQA.

The State Water Board actively engaged in analyzing the potential effects of YCWA’s facilities on water quality, and on potential operation conditions both prior to and after YCWA’s formal filing of an application for certification. In the years prior to and after license expiration, State Water Board staff attended hundreds of “Relicensing Group” meetings in which YCWA, other state and federal agencies, and non-governmental organizations with an interest in relicensing met to develop proposed terms and conditions. The State Water Board further participated with YWCA, Pacific Gas & Electric Company, National Marine Fisheries Service, California Department of Fish and Wildlife, and a broad group of interested parties to discuss watershed-wide mitigation for salmon impacts through the Yuba Salmon Forum. State Water Board management and staff met with FERC regarding information needs and coordination on the Yuba River Development Project in 2014 (Attachment P), and submitted ongoing regular updates to the Commission regarding the processing of the application (Attachment Q), as provided for Memorandum of Understanding executed November 19, 2013 between the State Water
The State Water Board provided FERC with substantive comments and information in the relicensing proceeding over years, including six sets of comments prior to the REA (Attachment S), study needs and preliminary conditions after the REA (Attachments C, G), and Draft EIS comments (Attachment T).

In addition to the substantive review of and engagement with the Project, staff assiduously tracked the one-year deadline to act on YWA’s certification requests to ensure that the State Water Board acted before the one year passed so as to avoid waiving the State Water Board’s Section 401 authority to certify the Project. When the one-year certification period approached in 2018, the State Water Board alerted YWA of the pending deadline. Attachment U. The exchange makes clear that if YWA did not withdraw its certification, the State Water Board’s other course of action would be to deny the request without prejudice, noting that if a withdrawal was not received, it would take several weeks to process the denial. This reminder allowed YWA to decide for itself whether it wished to withdraw and resubmit its certification application, in accordance with past Commission-accepted practice; face a denial of its request; or take some other action. Based on YCWA’s withdrawal of its 2017 application, and submission of a new certification request, the State Water Board understood that YCWA deemed it in its interest to withdraw its certification application, and resubmit its application to restart a new one-year Section 401 certification period. The State Water Board had no preference as to whether YCWA withdrew and resubmitted its certification application, or whether YCWA instead would take no action and trigger a State Water Board denial of the certification application. California law requires the State Water Board to deny certification applications rather than allow its certification authority to lapse. Cal. Code of Regs., tit. 23, 3859 (a) (requiring issuance or denial within the federal period). Consistent with past Commission-accepted practice, when YCWA withdrew its request, it simultaneously submitted a new request for certification, and then submitted notice to the Commission of its actions. At no point prior to filing the waiver petition did YCWA contend that its withdrawal was not intended to actually effect a withdrawal of the 2017 application, that the State Water Board was somehow obligated or required to act on its withdrawn 2017 request, or that the State Water Board should ignore additional FERC submittals that changed the license application, which the State Water Board referenced in its letter accepting the new application. When the timeline for decision on the 2018 request for certification approached, the State Water Board denied the request without prejudice, on July 31, 2019. Attachment V. YCWA did not petition for administrative reconsideration or judicial review of the State Water Board’s letter accepting the new application, or of the July 31, 2019 denial of YCWA’s 2018 application without prejudice.

The Commission issued its final EIS in January 2019, after YCWA’s withdrawal of its 2017 certification application, and before the State Water Board denied YCWA’s 2018 application without prejudice. The final EIS included substantive responses and revisions to the FEIR in light of the State Water Boards comments on the draft EIS, as described in the Final EIS’s Appendix B, “Comments on the Draft EIS.” Attachment W. Based on the current record, including the final EIS and the application as amended, the State Water Board has prepared conditions and is ready to issue certification for YCWA’s Project, except for the need to review and consider information that may be developed in the CEQA document. A draft certification is attached. Attachment X.

In a separate proceeding involving PacifiCorp’s Klamath Hydroelectric Project (FERC Project No. 2082), an intervenor, the Hoopa Valley Tribe, petitioned the Commission for a declaratory order: (a) finding that

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2 As stated in the MOU, “The purpose of [the] MOU is to coordinate the procedures and schedules prior to the Commission's review of hydropower license applications and the State Water Board's review of water quality certification applications as each pertains to the Commission's authorization of non-federal hydropower projects in California.” Attachment R, at p.1.
PacifiCorp failed to diligently pursue re-licensing of the project; (b) ordering PacifiCorp's re-license application dismissed; and (c) directing PacifiCorp to file a plan for decommissioning of project facilities. Alternatively, the Hoopa Valley Tribe petitioned the Commission for a declaratory order finding that the State Water Board and the Oregon Department of Environmental Quality failed to act on PacifiCorp's applications for certification within the one-year time limit required under Section 401 and have thus waived their certification authority. PacifiCorp first applied for certification in 2006, repeatedly withdrawing and resubmitting its requests before expiration of the certification period. On June 19, 2014, the Commission entered an Order Denying Petition for Declaratory Order (147 FERC ¶ 61,216). The Hoopa Valley Tribe, pursuant to 16 U.S.C. § 8251 and 18 C.F.R. § 385.713, requested rehearing of the Commission's June 19, 2014 Order Denying Petition for Declaratory Order (147 FERC ¶ 61,216). The Hoopa Valley Tribe sought judicial review, and on January 25, 2019, a panel of the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) issued its order in Hoopa Valley Tribe v. FERC (Hoopa), 913 F.3d 1099, cert. denied 140 S. Ct. 650 (2019).

After Hoopa, the Commission issued a decision in Placer County Water Agency, 167 FERC ¶ 61,056 (2019) interpreting Hoopa broadly.

On August 22, 2019, YCWA submitted a request to the Commission to determine that the State Water Board waived its Section 401 certification authority, based on the Hoopa and Placer County Water Agency decisions (waiver request). YCWA suggested that under the Placer County Water Agency decision, correspondence alerting a Section 401 certification applicant to a pending Section 401 deadline constituted an agreement to a “scheme” under Hoopa to avoid federal jurisdiction, and requested the Commission to find that waiver had occurred in light of YCWA’s letter withdrawing its application and submitting a new application in 2018. In the alternative, YCWA requested that the Commission find waiver in light of the 2018 letter in combination with the State Water Board’s 2019 denial of YCWA’s request for certification.

On September 4, 2019, YCWA supplemented its waiver request with a comparison to the Commission’s “Order on Voluntary Remand” in Constitution Pipeline Co., LLC, 168 FERC ¶ 61,129 (Aug. 28, 2019), to support the theory that a waiver occurred when YCWA first withdrew its application and submitted a new one. On March 3, 2020, the Commission issued a Notice of Petition for Waiver Determination.

On April 1, 2020, the State Water Board submitted a response identifying a number of reasons why YCWA’s waiver request should be denied.

On May 21, 2020, the Commission issued the Decision, declaring that the State Water Board waived its certification authority related to the Project based on Hoopa and recent Commission precedent. The State Water Board now requests rehearing of the Decision.

II. STATEMENT OF ISSUES

YCWA’s waiver request asserts that the State Water Board has waived its certification authority under Section 401 for YCWA’s relicensing of the Project. To support its contention that Hoopa controls, YCWA asserts that is own action in withdrawing a 2017 certification application and submitting a new application after corresponding with State Water Board staff regarding the impending decision deadline in 2018 was ineffective to either withdraw an application or submit a new application. The State Water Board disputes these assertions. YCWA further asserts that its 2018 application was the same as the 2017 application— a statement contrary to the facts in this proceeding.
In discussing the applicability of *Hoopa*, the Commission continues to widen the gap between the facts at issue in that case and the facts of each subsequent claim for waiver, including here. The Decision jumps from the statement “In *Hoopa*, the D.C. Circuit found that ‘a state waives its Section 401 authority when, pursuant to an agreement between the state and applicant, an applicant repeatedly withdraws-and-resubmits its request for water quality certification over a period of time greater than one year’” to the conclusion that “where a licensee each year sent a letter indicating withdrawal of its certification request and resubmission of the same, ‘[s]uch an arrangement does not exploit a statutory loophole; it serves to circumvent [the Commission’s] congressionally granted authority over the licensing, conditioning, and developing of a hydropower project.’” Decision at para. 14. The State Water Board does not dispute that the *Hoopa* decision includes the statements quoted in the Decision; missing from the Decision is any consideration of the significant discussion and description of the “agreement” present in *Hoopa*. Such a written agreement that expressly called for the applicant to consistently withdraw its application to avoid state waiver is conspicuously absent in this case. As discussed further below, the Decision essentially reads out of *Hoopa* the fact of an agreement to “[shelve] water quality certifications” and “indefinitely delay federal licensing proceedings and undermine FERC’s jurisdiction to regulate such matters.” *Id.* at para. 18, quoting *Hoopa*, 913 F.3d at p. 1103.

In addition to there being no agreement here, there are other clear distinctions between the situation here and that found by the court in *Hoopa*. In this proceeding withdrawal by the applicant occurred only once—the “repeated” nature from *Hoopa* is absent. Further, in this instance there is no delay to the Commission’s administrative process attributable to the State Water Board: at the time of YCWA’s withdrawal of its Section 401 application, FERC had not completed its environmental impact statement and section 7 Endangered Species Act consultation had not been completed. Additionally, while this instance involved only a single letter withdrawing and resubmitting the application, the application at issue had been amended at least eight times in a manner relevant to water quality certification. These amendments were included in the new certification application. Furthermore, this proceeding involves a request for a declaratory order by an applicant that has failed to exhaust its state law administrative remedies, an issue not addressed in *Hoopa*. The *Hoopa* litigation was also brought by a third party, not the applicant, and the State Water Board was not a party.

Finally, this case also differs from most previous California-project related proceedings in which the Commission has declared certification to be waived based on withdrawal and resubmittal because in this case the applicant, YCWA, is the CEQA lead agency and failed to prepare the environmental document CEQA requires before the State Water Board can issue certification. It is both inconsistent with the purposes of Section 401 and grossly inequitable for the Commission to find that the State Water Board waived its certification authority based on a failure to act by the applicant, not the state.

**ISSUE 1. Whether a “Coordinated Scheme” to Avoid Federal Authority Was Present, Sufficient to Trigger Waiver under *Hoopa***

In *Hoopa*, the court found that the applicant and the certifying agency had a formal contractual agreement not to act on a certification application, in order to halt the Commission’s existing hydroelectric relicensing process and allow an alternative settlement process regarding dam removal to take place instead. That agreement included an explicit requirement on the applicant to withdraw and resubmit the same application annually in order to restart the State Water Board’s review timeline so as to avoid waiver, and was implemented over many years. In those circumstances, the court found that there was a withdrawal and resubmittal “scheme” aimed at indefinite delay that prevented federal action, and concluded that the “scheme” was ineffective to extend the review period. *Hoopa*, 913 F.3d at 1100-01 (“the issue in this case is whether the states waive Section 401 authority by deferring review and agreeing
with a licensee to treat repeatedly withdrawn and resubmitted water quality certification requests as new requests.

The Commission has issued a series of decisions, including Placer County Water Agency. Constitution Pipeline, Southern California Edison, 170 FERC ¶ 61,135 (2020), Pacific Gas & Electric Co., 170 FERC ¶ 61,171 (2020), incorrectly expanding Hoopa beyond these facts to find that an “implied” agreement is sufficient to render an applicant’s withdrawal and resubmittal of an application ineffective to re-start the action timeline, and that therefore an agency waives by failing to act on the withdrawn application. This extension of Hoopa is not supported by the Court of Appeals’ reason or by Section 401.

In this Decision, the Commission compounds its prior errors by stating that no agreement regarding delay or regarding withdrawal and resubmittal – implied or otherwise – is necessary for a withdrawal and resubmittal of an application to result in waiver. Decision Header II.B.1. Instead, the Commission finds the Board’s failure to act on a withdrawn request constituted waiver based on “reminder emails” that purportedly evidence encouragement of and “direct participation in the withdrawal and resubmittal scheme” making the State Water Board “complicit” in the applicant’s withdrawal of the request. Decision at para. 22. It finds this despite the fact that the procedure was accepted at the time by the Commission as restarting the time clock. See, e.g., Nat’l Fuel Gas Supply Corp. Empire Pipeline, Inc., 164 FERC ¶ 61,084, paragraphs 40-41 & n. 85 (2018); New York State Department of Environmental Conservation v. FERC, 884 F.3d 450, 456 (2nd Cir. 2018). The Decision does not explain how a “scheme” can occur absent agreement, or address what function such a “scheme” might serve. This is an unwarranted extension of the Hoopa opinion.

YCWA argues that the July 25, 2018 e-mail exchange regarding withdrawal of the application included an “order” from the State Water Board to withdraw and re-submit its certification application. The Decision reads this communication as “direction” from the Board. This interpretation is not supported by the communication. The exchange explains that the Board does not have YCWA’s environmental analysis as is necessary to complete evaluation of YCWA’s certification application within one year, as CEQA is not yet complete. The exchange informs the applicant if its options: YCWA could withdraw its application promptly, or the State Water Board management would initiate the process necessary to deny YCWA’s application without prejudice. At the time of the exchange, Mr. Choy and Mr. Lynch were meeting on a frequent basis, as the Relicensing Group worked to reach agreement on the amendments YCWA submitted on July 27, 2017. See Attachment K. The reminder of the timeline and of the consequences if YCWA did not withdraw its application did not constitute an “order” or an “agreement” to a “scheme” to circumvent federal authority or avoid processing an application. The reminder instead shows a practical discussion between a responsible regulator and an applicant of the need for an action on the current application in light of the passage of time – be that a State Water Board denial or a withdrawal by YCWA. The documents submitted by YCWA demonstrate that State Water Board staff, consistent with the Commission’s prior orders and tacit approval, notified YCWA that the one-year deadline under Section 401 was approaching and that the time for YCWA to avoid having its request for certification denied was rapidly approaching, if YCWA wished to exercise this option. See e.g. Nat’l Fuel Gas Supply Corp. Empire Pipeline, Inc., 164 FERC ¶ 61,084, paragraphs 40-41 & n. 85 (2018); New York State Department of Environmental Conservation v. FERC, 884 F.3d 450, 456 (2nd Cir. 2018).

The record certainly does not indicate a lack of action on the part of the State Water Board. As noted above, the State Water Board was actively reviewing YCWA’s license application and engaged with developing changes to the proposal that would affect the Project’s water quality impacts. The State Water Board never entered into an agreement with YCWA to hold in abeyance all state permitting reviews, including Section 401 certification, “in an unsuccessful attempt to circumvent FERC’s regulatory
authority of whether and when to issue a federal license,” which was a foundational factor in the D.C. Circuit’s *Hoopa* decision. *Hoopa*, 913 F.3d at 1103.

Further, the documents show clearly that while YCWA withdrew its application exactly once, there was never any agreement between YCWA and the State Water Board, nor any “coordinated scheme,” a factor the *Hoopa* court found determinative; the State Water Board merely gave YCWA a courtesy notification that it was time to withdraw if YCWA wished to do so, as otherwise a denial without prejudice would move forward. The communication does not reflect any preexisting agreement or “scheme.”

One significant factor relied on by the court in *Hoopa* was the pre-existing agreement to delay issuance of a decision. *Hoopa*, 913 F.3d at 1100-01 (“… the issue in this case is whether states waive Section 401 certification authority by deferring review and agreeing with a licensee to treat repeatedly withdrawn and resubmitted water quality certification requests as new requests,”) (emphasis added); id. at 1104 (“This case presents the set of facts in which a licensee entered into a written agreement with the reviewing states to delay water quality certification.”) (emphasis added). In *Hoopa*, the court dealt with a written agreement to hold state processing and environmental reviews in abeyance while requests for certification were repeatedly withdrawn and resubmitted. Id. at 1001-02. Here, there was no agreement to hold processing of requests for certification or environmental review in abeyance or to otherwise delay preparation of environmental documentation or issuance of certification.

The State Water Board’s review was not completed within one year of YCWA’s initial submission of its Section 401 application due to ongoing changes to the Project and the lack of information on the proposed Project’s impacts on water quality, not, as in *Hoopa*, to allow for implementation of a settlement agreement to which the state and the applicant were both parties. At the time of YCWA’s application withdrawal, the Project’s proposed terms affecting water quality were in flux, with the most recent request to amend the AFLA having been filed less than a week prior. Furthermore, FERC had not completed its environmental review under NEPA, or a biological assessment it was conducting jointly for related projects on the river, and review under the Endangered Species Act (ESA), 16 U.S.C. §1531 et seq., for the Project had not concluded. Finally, YCWA had failed to initiate environmental review under CEQA, despite discussions regarding initiating CEQA in 2014 and 2015 and clear statements from the State Water Board to both YCWA and to the Commission that CEQA review must be completed before the State Water Board could issue certification. Unlike the facts as discussed in *Hoopa*, there was no deferral of review by the State Water Board, nor was there an agreement regarding YCWA’s withdrawal and resubmittal of its requests for certification in order to effectuate this purpose.

California Code of Regulations, title 23, section 3836, subdivision (c) requires the State Water Board to deny water quality certification actions without prejudice when CEQA is not timely completed, the applicant fails to withdraw the certification request and it is not possible to extend the federal period for review. The State Water Board never entered into an agreement with YCWA, and does not know why YCWA ultimately chose to withdraw its application rather than have the State Water Board deny its application without prejudice. Unlike in *Hoopa*, where the D.C. Circuit considered a formal written agreement signed by the Governor of California and abeyance resolutions adopted by the full State Water Board, here there was no negotiation and no agreement prompting withdrawal and resubmittal of a certification application for the Project that occurred while the State Water Board waited for YCWA to complete the CEQA environmental documents and ESA processes for the Project.

The Decision also fails to consider a meeting between FERC and State Water Board staff regarding the Yuba River Development Project certification and regular correspondence from the State Water Board to the Commission under the Memorandum of Understanding executed November 19, 2013 between the
State Water Board and the Commission (MOU). See Attachments P, Q & R. This meeting and
correspondence belie the existence of any agreement to defer review of YCWA’s certification request.
Under the MOU, the State Water Board submitted to the Commission on a semi-annual basis a list of
pending projects and, for each project “…(2) the dates by which the State Water Board needs to act on
requests for water quality certification; (3) the projected dates for a final decision on the merits of water
quality certification for each project; and (4) the processing status of both the water quality certification
and license applications.” Attachment R, MOU, at p. 5. These submittals show the State Water Board
communicated to the Commission regularly that YCWA’s action under CEQA was a necessary
precondition for certification issuance, and that additional changes were anticipated to coordinate the
Project with others in the watershed and in light of ongoing ESA compliance. See Attachment Q.
Additionally, State Water Board staff met with FERC staff specifically in regard to information needs
and processing for the Project, and noted the need for YCWA to coordinate in order to timely complete
CEQA, as CEQA timing was not in the State Water Board’s control. See Attachment P. In this regard
the history of the State Water Board’s work on the certification for the Project is completely unlike the
agreement discussed in Hoopa.

In its Decision, the Commission effectively concedes there was no actual agreement to delay review of
YCWA’s application, to circumvent or impede the federal decision, or that the applicant would withdraw
and resubmit a request for certification. Instead, the Commission mischaracterizes work-a-day
communications between junior level staff and the YCWA project manager and consultant regarding an
impending decision deadline and the Commission–sanctioned methods of application withdrawal and
denial without prejudice procedures, as an “order” to withdraw the application. Decision at paras. 7, 20.
It is unclear what authority the Board might have been exercising in such an “order,” how it could be
exercised by line staff, and why an applicant would bow to such an order. The communication itself
makes clear that the result of not following the perceived “direction” of the Board would simply result in
a denial of the application without prejudice. Given the context of the communication, it is clear that
YCWA had the choice whether to promptly withdraw its application or have its request for certification
denied without prejudice. In ignoring this choice, the Commission strays far from the facts of Hoopa,
dispensing not only with the need for a formal agreement to delay a federal decision, but also eliminating
any requirement that the withdrawal and resubmittal be pursuant to that agreement.

Apparently the Commission expects, notwithstanding the Commission’s own longstanding acquiescence
to this process, see e.g. Nat’l Fuel Gas Supply Corp. Empire Pipeline, Inc., 164 FERC ¶ 61,084,
paragraphs 40-41 & n. 85 (2018); New York State Department of Environmental Conservation v. FERC,
884 F.3d 450, 456 (2nd Cir. 2018), that an applicant is not empowered to withdraw its own request. And
further, the Commission expects that a state is required to deny an applicant’s already-withdrawn request
for certification, and deems a state’s failure to deny the withdrawn request as acceptance of the
applicant’s withdrawal, making the state “complicit.”

The Commission does not even attempt to bridge the factual disparity between the abeyance agreement
considered in Hoopa that was implemented through multiple years of withdrawal and resubmittal letters
and the bare record of a single withdrawal and resubmittal in this case.
Citing to waiver orders in *Placer County Water Agency, Southern California Edison*, 3 *Pacific Gas & Electric*, 4 and *Constitution Pipeline Co.*, which all found an “implied” of “functional” agreement as the basis for waiver, the Decision completely writes out of existence the requirement for an agreement regarding deferral of review. Instead, the Commission concludes, erroneously but as though dispositive of the issue, “the [State Water Board] expected and encouraged the certification applicant to withdraw and resubmit an identical application to avoid the CWA’s one-year waiver.” Decision para 22, emphasis added. The State Water Board’s regulation cited by the Commission clearly indicates, however, that YCWA had a choice of withdrawing its request for certification or having its request denied without certification. See Decision note 60. “Expectation” does not equate with an agreement. Furthermore, “encouragement” is only possible to someone exercising a choice.

The statement that the Board desired that a resubmitted application be “identical” is completely unsupported. Unlike in *Hoopa*, where an unchanged application was part of the agreement to hold the FERC process in abeyance pending the implementation of a settlement agreement, there is no information that the Board anticipated that the ongoing changes to the AFLA would not be included in any new application.

That the State Water Board recognized YCWA may prefer to withdraw and resubmit its request, and gave it the opportunity to make that request in light of the impending timeline, does not negate the fact that either option was available. YCWA was explicitly made aware that the State Water Board would have denied the application without the applicant’s withdrawal. Even without the explicit e-mail from line staff regarding management direction on submitting such a letter, YCWA was on notice through State Water Board regulations that the request would be denied if CEQA review was not complete. See Cal. Code Regs. tit. 23, § 3836, (c). While the Decision equates the formal agreement present in *Hoopa* with the “expect[ation]” or “encourage[ment]” by the State Water Board of YCWA’s withdrawal and resubmittal of its request for certification, not only do those not constitute an agreement between YCWA and the State Water Board, the record does not even support a finding of an “expectation” by the State Water Board regarding YCWA’s withdrawal and resubmittal of any request. Similarly unavailing is the Decision’s interpretation of a failure to reject a standard withdrawal and resubmittal letter as evidence of being “complicit” in a “scheme.”

In *Hoopa*, the purpose of refraining from processing a water quality certification application was to prevent the FERC relicensing process from moving forward such that it would interfere with implementation of a settlement agreement. FERC had indicated that it was prepared to issue a license, pending certification issuance, but was prevented from doing so over a number of years. Here, in contrast, at the time of YCWA’s single withdrawal of certification, FERC was not finished with NEPA review, nor with an anticipated joint biological assessment of the Project and other projects whose operations similarly affect fish and wildlife in the watershed. FERC and the State Water Board communicated regularly regarding the status of these reviews, as well as regarding the CEQA process. See Attachments G, P, Q, S, T. Additionally, Endangered Species Act review was not complete. There was no repeated action, or intent to delay. In fact, the State Water Board requested that FERC not delay the NEPA review process unless a potential change to further coordinate the YRDP with the Narrows Hydroelectric Project would occur. Attachment G. No improper purpose of delaying federal action was

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3 The State Water Board requested rehearing of this decision on March 20, 2020 and the Commission has not yet ruled on that request.

4 The State Water Board requested rehearing of this decision on April 20, 2020 and the Commission has not yet ruled on that request.
possible, and the Decision has failed to consider that it is unclear what scheming or complicity would achieve, or to articulate the purpose of any alleged “scheme.”

In sum, there was no agreement and no scheme to hold processing of a request for certification or CEQA document preparation in abeyance in this case, no intent or actual delay, and no prior agreement for repeated withdrawal and resubmittal of a certification request. That withdrawal and resubmittal occurred once, at the applicant’s own volition and in order to avoid denial of the certification request, does not constitute the kind of agreement to a “scheme” found objectionable in Hoopa, and is not a basis for finding waiver in this proceeding.

**ISSUE 2. Whether the State Water Board Failed to Act Within One Year of a Pending Certification Request**

The State Water Board never failed or refused to act on a request for certification within one year of a pending request: YCWA’s own documents show that YCWA voluntarily withdrew its previously pending 2017 certification request before the one-year deadline for action lapsed.\(^5\) Attachment M. YCWA now asks the Commission to conclude in effect that the State Water Board’s failure to reject YCWA’s own action – voluntary withdrawal of its request for certification – is the legal equivalent of a failure or refusal to act on the initial request. The Commission erred in accepting YCWA’s disavowal of its own action in withdrawing certification.

The State Water Board, by its own regulations, must act on a request for certification before the federal period for certification expires. Cal. Code Regs. tit. 23, § 3859. Absent YCWA’s voluntary withdrawal of its application before the expiration of the State Water Board’s one-year period to act on it, the State Water Board would have denied YCWA’s request for certification. Board staff correspondence with the applicant confirmed that failure to timely withdraw the application would result in the application being denied. See Attachment U, e-mail from Philip Choy to Jim Lynch on July 25, 2018 at 11:08, noting the time necessary to route a denial without prejudice. Consistent with logic and Commission precedent, the State Water Board has recognized that an applicant’s decision to withdraw its request for certification before expiration of the certification period eliminates any need to approve or deny the withdrawn request. Nat’l Fuel Gas Supply Corp. Empire Pipeline, Inc., 164 FERC ¶ 61,084, paragraphs 40-41 & n. 85 (2018); New York State Department of Environmental Conservation v. FERC, 884 F.3d 450, 456 (2nd Cir. 2018).

Unlike what the D.C. Circuit concluded occurred in Hoopa, in this case the Project applicant did not act pursuant to an agreement for delay of processing a certification request when it voluntarily withdrew its request for certification. This is unmistakably clear when compared to the scenario considered in Hoopa. There, the court considered the effect of the Klamath Hydroelectric Settlement Agreement (KHSA), which it described as a “formal agreement” resulting from negotiations among “a consortium of parties – California, Oregon, Native American tribes, farmers, ranchers, conservation groups, fishermen, and PacifiCorp [the hydroelectric project owner] … to resolve the procedures and risks associated with” a hydroelectric project licensing proceeding. Hoopa, 913 F.3d at 1101. The court concluded that “the states’ efforts, as dictated by the KHSA, constitute [failure and refusal to act under Section 401].” Id. at

\(^5\) Additionally, the State Water Board denied the 2018 application without prejudice on July 31, 2019. The Board disagrees with YCWA’s petition that a denial of certification, regardless of whether it occurs after a prior withdrawal and resubmittal of an application, constitutes a failure to act on the request. The Decision did not reach this question.
1104, emphasis added. The court also noted that it “has never addressed the specific factual scenario presented in this case, i.e., an applicant agreeing with the reviewing states to exploit the withdrawal-and-resubmission of water quality certification requests over a lengthy period of time.” Id. at 1105, emphasis added.\(^6\) The relevant facts of that case are not present here.

In fact, the court in Hoopa quoted from Alcoa Power Generating Inc. v. FERC, 643 F.3d 963, 972 (D.C. Cir. 2011), the relevant proposition that “[t]he purpose of the waiver provisions is to prevent a State from indefinitely delaying a federal licensing proceeding by failing to issue a timely water quality certification under Section 401.” Hoopa, 913 F.3d at 1101, emphasis added. Here YCWA asked the Commission to conclude that the project applicant’s own voluntary actions can be cause for waiver of the State’s section 401 certification authority. That proposition finds no support in Hoopa, where the court concluded that a formal agreement, to which the Hoopa Valley Tribe was not a party, operated to the detriment of the Hoopa Valley Tribe, the party asserting waiver: “Hoopa’s interests are not protected directly as it is not a party to the KHSA …, nor are its interests protected indirectly through any participation by FERC in those same settlement agreements.” Id. at 1105-06. Here, neither YCWA nor the Commission sits in the position of the Hoopa Valley Tribe; as discussed in section Issue 3, infra, YCWA never raised any complaints or concerns about delay, and, as the Project applicant who has here asserted waiver, YCWA would have been a beneficiary of and party to an agreement had one existed.

In addition to ignoring the status of the parties here, the Commission also ignored seemingly all factual discussions in any court decisions. This is most clearly shown by the Decision’s inclusion of a quotation from New York DEC v. FERC, 884 F.3d 450, 455 (2d Cir. 2018), on the unrelated question of when the time period for review begins as support for its own conclusion in PCWA that a “state’s reason for delay [is] immaterial.” See Decision para. 28. This reliance on New York DEC v. FERC shows that the Commission’s new rule is completely unconstrained by the facts the Hoopa court found to be egregious and to merit the remedy of waiver. See Hoopa, 913 F.3d at 1104 (“This case presents the set of facts in which a licensee entered a written agreement with the reviewing states to delay water quality certification…..”). Any real consideration of facts shows the present case bears no resemblance to the facts upon which the Hoopa decision relied because there is no actual agreement (see Issue 1, supra), YCWA is the party requesting a finding of waiver, YCWA stands to benefit from a finding of waiver, YCWA solely caused the delay in water quality certification, and YCWA failed to exhaust its state administrative remedies.

Under these circumstances, finding that YCWA was not able to effectively withdraw an application for certification, and that therefore the State Water Board was required to act on the withdrawn certification, was in error.

**ISSUE 3: Was the 2018 Certification Application “New”**

The Decision inadequately addresses the major question expressly unanswered by Hoopa, namely what degree of difference between applications constitutes a substantially new application for certification.\(^7\)

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\(^6\) In fact, the State Water Board was not a party to KHSA. But the holding of the case is based on the facts as stated in the D.C. Circuit’s opinion, not a materially different set of facts known to the State Water Board or other persons or entities not parties to the litigation.

\(^7\) In Hoopa, the D.C. Circuit noted that question was not before it, declining to resolve the issue of how different a request must be to constitute a new request such that it restarts the one-year clock. Hoopa, 913 F.3d at 1104.
The Decision attempts to sidestep this question by pointing out that YCWA noted that the State Water Board had all of the information necessary to process its request on file, and that the Board “did not dispute Yuba’s statements that the project had not changed and that the application was complete.” Decision at para. 7. In fact, YCWA had filed at least eight formal changes to the AFLA, seven of which were submitted between the filing of the 2017 request for certification and the 2018 withdrawal of that request. Attachments D, E, H – L. These changes are significant to the certification application in that they include changes in the proposed operations that affect water quality, such as changes in flows, large woody material and sediment management. While YCWA’s letter is somewhat ambiguous in stating that the project had not changed, but also in referring to the 2017 AFLA which had been changed, it would be nonsensical to assume that the new application YCWA stated it was submitting did not include the changes to the June 2017 AFLA. This is particularly true since many of the changes to the AFLA stemmed from agreements in the Relicensing Group, which the State Water Board advised. See Attachments H-L (listing State Water Board staff in the e-mail headers with the Relicensing Group letters of support). The State Water Board’s letter accepting items in the FERC record that had been incorporated by reference indicate that the Board was considering not the outdated AFLA as it was originally submitted, but also additional changes to the AFLA. Attachment N. As noted above, YCWA did dispute this characterization after receiving the letter.

The Commission’s cursory treatment of this important question fails to address why the State Water Board would have deemed the certification request incomplete or “disputed” or further attempted to clarify YCWA’s statements regarding other necessary information in light of the Commission’s view that even a bare-bones request that does not include a detailed description of the project is sufficient to constitute a request starting the certification period and the fact that a restatement of updates to the project description already in the files were never before considered necessary to restart the time limit of Section 401.

Here, other separate processes were ongoing and had not been completed when the initial application was submitted and accepted by the State Water Board, including CEQA, which was not completed by YCWA within one year of YCWA’s initial application filing date and is still not complete. Thus, even though the application was complete for filing purposes, and the State Water Board was prepared to consider the information in the application, the application was not, in fact, complete for a decision. The Project was unquestionably changing, regardless of whether YCWA referred to those changes in its 2018 certification application and whether the State Water Board “considered” the application complete. The Commission erred in failing to address this issue.

**ISSUE 4. YCWA Has Failed to Exhaust Its Administrative Remedies**

YCWA never requested reconsideration of or otherwise challenged any action or failure to act by the State Water Board prior to its present request for a finding of waiver, despite the clear availability of an administrative remedy to do so. California Code of Regulations, title 23, section 3867 provides that “an

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The Commission fails to address its own past or current regulations regarding what little information is needed to constitute a “request” for certification for purposes of starting the one-year clock under Section 401, when a new application is needed, or what constitutes a new application for purposes of seeking a license from the Commission. See. e.g., *Waiver of the Water Quality Certification Requirements of Section 401(a)(1) of the Clean Water Act*, Order No. 464, 52 Fed. Reg. 5446 (Feb. 23, 1987); *California v. FERC* (1992) 966 F.2d 1541; see also 18 CFR 4.35.
aggrieved person may petition the state board to reconsider an action or failure to act taken by the executive director.” (emphasis added). See id. §§ 3838 (a) (delegating authority to the executive director to issue or deny certification), 3859 (a) (requiring executive director to issue or deny certification before the period for certification expires); see also Cal. Water Code, § 13330(a) (authorizing judicial review after remedy of administrative reconsideration is exhausted). YCWA never pursued, let alone even suggested, any different course of action, instead choosing to withdraw its request for certification.

By failing to exhaust its administrative remedies regarding the State Water Board’s November 16, 2018 denial without prejudice or any alleged failure to act by the State Water Board on its prior (withdrawn) request for certification, YCWA has waived any rights to now allege waiver on that basis. U.S. v. Superior Court (1941) 19 Cal.2d 189, 194; Abelleira v. District Court of Appeal, Third Dist. (1941) 17 Cal.2d 280, 293. Declaratory relief will not be issued to a party that has failed to exhaust its administrative remedies. Contractors’ State License Bd. v. Superior Court, 28 Cal. App. 5th 771, 780–82 (Cal. Ct. App. 2018); cf. Ross v. Blake, 136 S. Ct. 1850 (2016) (requiring exhaustion of available state administrative remedies before federal court review).

The issue presented by YCWA’s failure to exhaust administrative remedies is not whether the Commission has purview to review an issue such as waiver, but whether it is appropriate for the Commission to review an issue that might otherwise be in its purview when the party raising the issue has failed to satisfy a procedural prerequisite for review, and the party aggrieved by that failure objects. Exhaustion of administrative remedies is a procedural prerequisite, so fundamental that it is often referred to as jurisdictional. See, e.g., State Water Res. Control Bd. Cases, 136 Cal. App. 4th 674, 791 (2006). This reflects the importance of ensuring that administrative agencies whose actions or failures to act are reviewed have a fair opportunity to consider and respond beforehand to any issues raised as part of that review. “The purpose of the rule of exhaustion of administrative remedies is to provide an administrative agency with the opportunity to decide matters in its area of expertise prior to judicial review. [Citation.] The decision-making body ‘is entitled to learn the contentions of interested parties before litigation is instituted. If [plaintiffs] have previously sought administrative relief ... the Board will have had its opportunity to act and to render litigation unnecessary, if it had chosen to do so.’” Id. at 794 quoting Napa Citizens for Honest Government v. Napa County Bd. of Supervisors, 91 Cal.App.4th 342, 384 (2001); see Smith v. Berryhill, 139 S. Ct. 1765, 1779 (2019) (“Fundamental principles of administrative law, however, teach that a federal court generally goes astray if it decides a question that has been delegated to an agency if that agency has not first had a chance to address the question.”)

The Clean Water Act embodies congressional intent to preserve and protect the primary responsibilities of the states. 33 U.S.C. § 1251 (b). This respect for state laws and state institutions is particularly strong in Section 401, which provides that each state shall adopt its own procedures. Id. at § 1341(a)(1).

California has adopted administrative procedures for certification that include procedures for administrative reconsideration, not just to review final certification, but for review of any action or failure to act as part of the certification process. Respect for those procedures, and the role of the state under Section 401, dictates that the Commission should not decide the merits of whether certification has been waived, but dismiss the petition for failure to exhaust administrative remedies where an applicant has failed to request administrative reconsideration.

ISSUE 5. Whether the State Water Board’s Deadlines to Act on YCWA’s Certification Applications Were or Should Be Equitably Tolled
Prior to Hoopa, all relevant parties – the Commission, YCWA, and the State Water Board – understood that the State Water Board’s one-year deadline to act on YCWA applications for certification began anew each time YCWA submitted a certification application, regardless of how much the application had changed. The State Water Board reasonably relied on the Commission’s explicit conclusion that an applicant’s withdrawal and resubmittal of even the same Section 401 request started a new one-year period to act on the resubmitted application. The Commission should therefore, at a minimum, apply the doctrine of equitable tolling to the State Water Board’s deadline to have acted on YCWA’s 2017 certification application. Statutory deadlines are equitably tolled “if the litigant establishes two elements: (1) that he has been pursuing his rights diligently, and (2) that some extraordinary circumstance stood in his way and prevented timely filing.” Menominee Indian Tribe of Wisconsin v. United States, 136 S. Ct. 750, 755 (2016). Equitable tolling is especially appropriate here because the State Water Board relied on the Commission’s determinations that an applicant’s withdrawal and resubmittal of even the same application commenced a new one-year certification period. Bowden v. United States, 106 F.3d 433, 438 (D.C. Cir. 1997) (equitable tolling is appropriate where a party is “misled about the running of a limitations period … by a government official’s advice upon which they reasonably relied”); Jarrell v. U.S. Postal Serv., 753 F.2d 1088, 1092 (D.C. Cir. 1985); accord Bull S.A. v. Comer, 55 F.3d 678, 681 (D.C. Cir. 1995).

The Commission has long held that applicants’ withdrawal of an application and resubmittal of an application starts a new one-year period, including at the time of YCWA’s single withdrawal and resubmittal. Barrish & Sorenson Hydroelectric Co., Inc., 68 FERC ¶ 62,161, 64,258 (Aug. 12, 1994); Ridgewood Maine Hydro Partners, L.P., 77 FERC ¶ 62,201, 64,425 (Dec. 27, 1996); Cent. Vt. Pub. Serv. Co., 113 FERC ¶ 61,167, 61,653 at P 19 (Nov. 17, 2005). As recently as 2018—the year of YCWA’s withdrawal and resubmittal for the Project—the Commission stated, “[w]e reiterate that once an application is withdrawn, no matter how formulaic or perfunctory the process of withdrawal and resubmission is, the refiling of an application restarts the one-year waiver period under section 401(a)(1).” Constitution Pipeline Co., LLC, 162 FERC ¶ 61,014 at P 23 (Jan. 11, 2018), rehearing denied 164 FERC ¶ 61029 (July 19, 2018), order on voluntary remand, 168 FERC ¶ 61129 (Aug. 28, 2019), rehearing denied, 169 FERC ¶ 61199, 62461 (Dec. 12, 2019). The State Water Board relied on the Commission’s representations. The State Water Board pursued its rights diligently to make sure it did not fail to act within the one-year certification period. Cf. Cent. Vt. Pub. Serv. Co., 113 FERC ¶ 61,167, 61,653 (Nov. 17, 2005) (contrasting withdrawal and resubmittal of a request for certification, which would have avoided waiver, with a settlement agreement whereby no action was taken on a request for certification for more than one year, which did not avoid waiver). The Commission should apply the doctrine of equitable tolling to avoid subjecting the State Water Board to the inequitable consequences of applying a bright-line rule finding waiver anytime an applicant withdraws and resubmits a certification application.

While the Decision does not address the important factual differences discussed in Issues 1, 2, and 3 above, it is clear that imposing a waiver in these circumstances is not merely application of the law as decided in Hoopa. Rather, it is a Commission policy to adopt an expansive interpretation of Hoopa, far beyond what was decided in that case; the Decision simply does not follow from the language of the statute in the absence of facts like the specific ones considered in Hoopa. Section 401 states that if a state “fails or refuses to act on a request for certification” within one year after receipt of the request, the state waives certification. Nothing in the statute states or suggests that a state “fails” or “refuses” to act if it takes no further action on a request that has been withdrawn. Nothing in the multiple filings by the State and in the active work it engaged in on this application suggests a failure or refusal to act on a pending request. And nothing in Section 401 suggests that if a new request is filed a prior request that has been withdrawn should be treated as if it was still pending with the original filing date. The Hoopa opinion did
not interpret the language of the statute to mean that a state has failed or refused to act if it takes no further action on a request when that request has been withdrawn and new request has been filed, but instead found, based on the facts of that case, that the states had “defied” the statute by “shelving water quality certifications” through “deliberate and contractual idleness.” *Hoopa*, 913 F.3d at 1104. The *Hoopa* court’s reference to “contractual idleness” underscores the point that its holding is based on a formal agreement under which the processing of requests was held in abeyance. The Commission’s expansive interpretation of the case, applying waiver far beyond anything addressed in *Hoopa* or in the statutory language, is an application of Commission policy, not judicial precedent. In the State Water Board’s view that policy pronouncement is contrary to the principles of cooperative federalism embodied in Section 401, and should be rescinded. At the very least, the Commission should recognize that it is a policy pronouncement, and not apply it retroactively in a manner that deprives states of certification authority even though they were acting to preserve that authority in a manner consistent with Commission precedent.

The court in *Hoopa* quoted from *Alcoa Power Generating Inc. v. FERC*, 643 F.3d 963, 972 (D.C. Cir. 2011), the relevant proposition that “[t]he purpose of the waiver provisions is to prevent a State from indefinitely delaying a federal licensing proceeding by failing to issue a timely water quality certification under Section 401.” *Hoopa*, 913 F.3d at p. 1101, emphasis added. On the date the Commission issued the Decision, the applicant, YCWA, still had not completed either its CEQA analysis required by State law or its obligations under the ESA. In other post-*Hoopa* decisions the Commission made at least a token effort at addressing this issue, however the Decision completely abandons even those token efforts, instead stating only “Regardless of whether a water quality certification decision is the sole factor delaying a licensing proceeding, the general principle from *Hoopa Valley* still applies: where an applicant withdraws and resubmits a request for water quality certification to avoid section 401’s one-year time limit, and the state does not act within one year of the receipt of an application, the state has failed or refused to act under section 401 and thus has waived its section 401 authority.” Decision at para. 27. The Commission’s approach embodied by the Decision completely writes out of *Hoopa* the relevance of delay by the state agency responsible for issuing certification, which makes its reliance on cherrypicked language from *Hoopa* unsound and legally untenable.

Finally, prior to submitting its waiver request, YCWA never pursued or even suggested any different course of action, choosing instead to withdraw its request for certification. The Commission likewise never raised any objections to YCWA’s withdrawal and resubmittal, or gave the State Water Board any indication that it intended to move forward without a certification. As identified above, under the MOU the State Water Board has been providing the Commission with regular updates regarding the status of each project pending before it. At no time did the Commission ever raise the issue of potential waiver or suggest that it or YCWA was prejudiced by the delay. As discussed above, *Hoopa* does not foreclose application of equitable tolling in this case where equity so clearly supports it. Nor does *Hoopa* require or justify retroactive application to find waiver of certification under Section 401 in this case.

**ISSUE 6. Whether YCWA Is Entitled to the Relief Sought Due to its Unclean Hands**

The Decision does not take into account the equitable doctrine of unclean hands. Under that doctrine, an entity like YCWA asking for equitable relief “must come with clean hands.” *Northbay Wellness Group, Inc. v. Beyries*, 789 F.3d 956, 959 (9th Cir. 2015), quoting *Johnson v. Yellow Cab Transit Co.*, 321 U.S. 383, 387 (1944); see also *McKennon v. Nashville Banner Pub. Co.*, 513 U.S. 352, 360 (1995) [“suitor who engaged in his own reprehensible conduct in the course of the transaction at issue must be denied equitable relief because of unclean hands”]. Unclean hands is an applicable consideration in Commission
Section 401’s one-year certification period is subject to equitable defenses. Zipes v. Trans World
Airlines, 455 U.S. 385 (1982) (Title VII timeliness deadlines are not jurisdictional); Millennium Pipeline
statutory waiver deadline was “subject to waiver, estoppel and equitable tolling.”).

Here, YCWA comes to the Commission with unclean hands. YCWA’s amendment of terms affecting
water quality and its failure to prepare the environmental documentation it is required to prepare under
CEQA are the reason the State Water Board could not issue certification within one year after YCWA
filed its applications for certification. YCWA elected to withdraw its application for Section 401
certification rather than face denial of its application by the State Water Board, and elected to submit a
new application to induce the State Water Board to continue working on its certification decision with the
hopes of obtaining a favorable certification decision. Notwithstanding the fact that YCWA induced the
Board not to issue a denial on its 2017 application by withdrawing it when alerted that failure to do so
would result in denial, and that the applicant has still not completed its own necessary work for its
requested Project license, YCWA now seeks relief from the Commission claiming that its own
withdrawal and resubmittal of its application were “per forma” and not a “new” application, despite its
portrayals to the contrary, and was therefore ineffective to give the State Water Board a new one-year
period to act on a request for certification. If YCWA had not elected to withdraw and then resubmit its
application to the State Water Board, the State Water Board would have simply denied the request for
certification, thereby assuring that it did not waive its certification authority. Conversely, had YCWA not
altered its project description, and completed its other required work on the Project, the State Water Board
could have timely issued a certification. The draft certification attached further demonstrates the State
Water Board’s processing of the certification request, and intent and ability to issue certification pending
YCWA’s completion of its responsibilities under CEQA. YCWA should not stand to benefit from its
lack of finality in project proposal, its inaction on CEQA compliance, and its own actions in withdrawing
and resubmitting its application for certification, thereby avoiding the imposition of the conditions of
certification that will be properly imposed on its Project to protect water quality.
III. CONCLUSION

For all of the above reasons, the State Water Board requests that the Commission rehear and reconsider its May 21, 2020 Decision. The Commission should recognize that the State Water Board has not waived its certification authority. The Commission should not issue a license for the Project until YCWA has completed all required analyses and the State Water Board has an opportunity to issue certification, with conditions the State Water Board determines to be necessary to protect water quality, based on the State Water Board’s evaluation of the potential water quality impacts of the Project, including modifications made to the Project pursuant to the required environmental analyses.

Submitted on this 20th day of June, 2020.

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CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary of the Federal Energy Regulatory Commission in this proceeding (Yuba River Development Project, FERC Project No. 2246).

Dated in Sacramento, CA, on this 20th day of May, 2020.

Ann Marie Ore
Water Quality Certification Program
Manager, Division of Water Rights
State Water Resources Control Board
1001 I Street, 14th Floor
Sacramento, CA 95814
(916) 319-9387
ORDER DENYING REHEARING

(Issued July 21, 2020)

1. On May 21, 2020, the Commission granted a petition for declaratory order filed by Yuba County Water Agency d/b/a Yuba Water Agency (Yuba County) (Order on Waiver). The Commission determined that the California State Water Resources Control Board (California Board) waived its authority under section 401(a)(1) of the Clean Water Act (CWA) to issue water quality certification for the relicensing of the Yuba River Development Project No. 2246 (Yuba River Project). On June 22, 2020, the California Board and Foothills Water Network filed timely requests for rehearing of the Order on Waiver.

2. On July 7, 2020, Yuba County filed a motion for leave to answer and answer to the requests for rehearing filed by the California Board and Foothills Water Network. Rule 713(d)(1) of the Commission’s Rules of Practice and Procedure prohibits answers to a request for rehearing. Accordingly, we deny Yuba County’s motion and reject its filing.

3. On rehearing, the California Board and the Foothills Water Network argue that: (1) the Commission erred in finding that the California Board and Yuba County had an agreement to defer CWA section 401’s one-year statutory time limitation in violation of

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Hoopa Valley Tribe v. FERC (Hoopa Valley);\(^4\) (2) the California Board never failed to act within one year from receiving Yuba County’s water quality certification request;\(^5\) (3) the Commission should not have acted on Yuba County’s request for declaratory order until Yuba County exhausted all remedies with the California Board;\(^6\) (4) the Commission lacks authority under the FPA and the CWA to invalidate the state’s water quality certification procedures;\(^7\) (5) the Commission should not retroactively apply Hoopa Valley to the facts of this case;\(^8\) and (6) Yuba County’s request is without merit because Yuba County came to the Commission with unclean hands.\(^9\)

4. For the reasons discussed in the Order on Waiver and as further explained in Commission precedent,\(^{10}\) we reaffirm the Order on Waiver’s determination that the California Board waived its authority under CWA section 401(a)(1) to issue water quality certification for the relicensing of the Yuba River Project No. 2246.

5. Specifically, we find that the Order on Waiver sufficiently addressed: (1) the existence of an agreement between the California Board and Yuba County in violation of

\(^4\) California Board Rehearing Request at 6-13; Foothills Water Network Rehearing Request at 15-23; Hoopa Valley Tribe v. FERC, 913 F.3d 1099 (D.C. Cir. 2019) (rejecting a coordinated withdrawal-and-resubmission scheme between the applicant and the state certifying agency).

\(^5\) California Board Rehearing Request at 11-12; Foothills Water Network Rehearing Request at 11-14, 23-25.

\(^6\) California Board Rehearing Request at 13-14.

\(^7\) Foothills Water Network Rehearing Request at 29-34.

\(^8\) California Board Rehearing Request at 14-16; Foothills Water Network Rehearing Request at 27-29.

\(^9\) California Board Rehearing Request at 16-17; Foothills Water Network Rehearing Request at 25-27.

Hoopa Valley;\(^{11}\) (2) the California Board’s failure to act on Yuba County’s water quality certification within one year;\(^{12}\) (3) whether Yuba County must exhaust all administrative remedies with the California Board before seeking a petition for declaratory order with the Commission;\(^{13}\) and (4) whether Yuba County came to the Commission with unclean hands.\(^{14}\) No further discussion is warranted.

6. We note that petitioners, for the first time on rehearing, argue that the Commission cannot invalidate the state’s water quality certification procedures or retroactively apply Hoopa Valley to the facts of this case. The Commission looks with disfavor on parties raising issues for the first time on rehearing that could have been raised earlier,\(^ {15}\) particularly in California Board’s or Foothills Water Network’s prior comments on Yuba County’s petition for declaratory order.\(^ {16}\) Therefore, we dismiss petitioners’ arguments on this matter. Nonetheless, we find that that the Commission took no action to invalidate California Board’s CWA section 401 procedures; rather, it determined that the application of those procedures in this proceeding violated the express language of CWA section 401.\(^ {17}\) Further, notwithstanding the Commission’s past construction of CWA section 401, we must resolve cases before us based on current law, and the Hoopa Valley

\(^{11}\) Order on Waiver, 171 FERC ¶ 61,139 at PP 20-22 (determining that an explicit written agreement is not necessary to find a waiver of CWA section 401 water quality certification).

\(^{12}\) Id. PP 23-26 (the California Board cannot circumvent CWA’s one-year deadline to act on applications for water quality certification).

\(^{13}\) Id. P 28 (finding that Yuba County does not have to exhaust all administrative remedies prior to seeking a waiver determination from the Commission).

\(^{14}\) Id. P 25 (finding unpersuasive the California Board’s and Foothill Water Network’s argument that Yuba County benefitted from its own inaction).

\(^{15}\) See 18 C.F.R. § 385.713(c)(3) (2019) (new matters may be raised in a rehearing request only when “based on matters not available for consideration by the Commission at the time of the final decision or final order”). See also Balt. Gas & Elec. Co., 91 FERC ¶ 61,270, at 61,922 (2000) (“We look with disfavor on parties raising on rehearing issues that should have been raised earlier. Such behavior is disruptive to the administrative process because it has the effect of moving the target for parties seeking a final administrative decision.”).

\(^{16}\) See California Board April 2, 2020 comments; Foothills Water Network April 2, 2020 comments.

\(^{17}\) Yuba Cty. Water Agency, 171 FERC ¶ 61,139 at P 25.
court did not limit its ruling to prospective cases. We see no justification for not applying *Hoopa Valley* here.

The Commission orders:

California State Water Resources Control Board’s and the Foothills Water Network’s requests for rehearing are hereby dismissed or denied, as discussed in the body of this order.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,
Deputy Secretary.

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18 *Pac. Gas & Elec. Co.*, 172 FERC ¶ 61,064 at P 39 (“notwithstanding the Commission’s past construction of section 401, we must resolve cases before us based on current law, and the *Hoopa Valley* court did not limit its ruling to prospective cases”); *Pac. Gas & Elec. Co.*, 172 FERC ¶ 61,065 at P 33 (same); *S. Cal. Edison Co.*, 172 FERC ¶ 61,066 at P 35 (same); *see Placer Cty. Water Agency*, 167 FERC ¶ 61,056 at P 15 (“The *Hoopa Valley* court did not in any way indicate that its ruling was limited solely to the case before it, and to conclude that the court’s decision does not apply to similarly-situated cases would fail to give full effect to that ruling. We are aware of no sound legal or equitable basis for doing so.”); *see also Constitution Pipeline Co., LLC*, 169 FERC ¶ 61,199 at PP 29-34 (providing an in-depth discussion of the Commission’s application of *Hoopa Valley*).
NATIONAL FUEL GAS SUPPLY CORPORATION, EMPIRE PIPELINE, INC., Petitioners, v. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, BASIL SEGGOS, COMMISSIONER, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, JOHN FERGUSON, CHIEF PERMIT ADMINISTRATOR, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, Respondents.

Notice: PLEASE REFER TO FEDERAL RULES OF APPELLATE PROCEDURE RULE 32.1 GOVERNING THE CITATION TO UNPUBLISHED OPINIONS.

Prior History: [**1] Petition for review from the New York State Department of Environmental Conservation.


Opinion

[*69] SUMMARY ORDER

UPON DUE CONSIDERATION, IT IS HEREBY ORDERED, ADJUDGED, AND DECREED that the decision of the New York State Department of Environmental Conservation is VACATED AND REMANDED.


Our review pursuant to the Natural Gas Act proceeds in two steps. First, we "review de novo whether the state
agency complied with the requirements of the relevant federal law." Islander E. Pipeline Co. v. Conn. Dept of Envtl. Prot., 482 F.3d 79, 94 (2d Cir. 2006) ("Islander East I"). Second, if we determine that the state has complied with federal law, we "analyze[] the state agency's factual determinations under the more deferential arbitrary-and-capricious standard of review usually accorded state administrative bodies' assessments of state law principles." Id. (internal quotation marks omitted).

Petitioners argue that the Department "applied the wrong legal standard by requiring certainty rather than a 'reasonable assurance' of compliance." Petitioner Br. at 35 (quoting 40 C.F.R. § 121.2(a)(3); see also 33 U.S.C. § 1341(a)(3) - (4). In other words, because the Denial Letter states that the Department is required "to [*70] certify that a project meets State water quality standards," Sp. App. at 3, the Department demanded "absolute certainty" that the project would comply with State water quality standards, rather than a reasonable assurance that the project would not violate those standards. Petitioner Br. at 35-37. The Department agrees that the "reasonable assurance" standard is applicable. It argues that the Denial Letter applied that standard and that Petitioners "failed to demonstrate that the project would satisfy New York's water quality standards," Sp. Br. at 42-43. Because the parties in fact agree on the correct standard to be applied and given that we vacate the Department's decision and remand for further explanation from the Department, we assume without deciding for purposes of the instant appeal that the Department complied "with federal law" and applied the "reasonable assurance" standard. Accordingly, we proceed to step two in the analysis. Islander East I, 482 F.3d at 94.1

1 Petitioners also assert that the Department impermissibly relied on a "factor[] which Congress has not intended it to consider," namely political considerations. Petitioner Br. at 23 (quoting Motor Vehicle Mfrs. Ass'n of U.S. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43, 103 S. Ct. 2856, 77 L. Ed. 2d 443 (1983)). Unlike in Islander East I, where there was record evidence that the denial was "a matter of 'strategy' in opposing the pipeline," 482 F.3d at 105, Petitioners' argument that the Department relied on political pressure is not supported by the record. The record here is not so sparse and the denial not so summary as in Islander East I, and a petitioner "must point to more than continued political opposition for us to find agency bad faith." Islander E. Pipeline Co. v. McCarthy, 525 F.3d 141, 164 (2d Cir. 2008) ("Islander East II").

"Under the arbitrary-and-capricious standard, judicial review of agency action is necessarily [*4] narrow." Islander East II, 525 F.3d at 150 (citing State Farm, 463 U.S. at 43). The Department was required to "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." State Farm, 463 U.S. at 43 (internal quotation marks omitted); accord Natural Res. Def. Council v. U.S. Envtl. Protection Agency, 658 F.3d 200, 215 (2d Cir. 2011). To determine whether the Department's action was arbitrary and capricious, we consider whether it: "relied on factors which Congress has not intended it to consider"; "entirely failed to consider" any important aspect of the problem before it; or "offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Islander East II, 525 F.3d at 150-51 (quoting State Farm, 463 U.S. at 43).

Although this is a close case, the Denial Letter here insufficiently explains any rational connection between facts found and choices made. We reach this conclusion mindful of the fact that Article III judges lack the expertise upon which we presume agency determinations rely. Although an expert on riparian disturbance might read the Denial Letter and infer a connection between the facts in the record and the Department's ultimate decision to deny the permit, we cannot with [*5] a sufficient degree of assurance conclude that was the case. Specifically, there are no record citations in the Denial Letter and there are no citations to specific projects or studies the Department may have considered.

Moreover, the Denial Letter further reflects that, as a basis for its denial, the Department relied on considerations outside of Petitioners' proposal. See Sp. [*71] App. at 6-7.2 These considerations include the Department's discussion of permanent culverts, wet

2 Under Islander East II, a state agency may consider "a worst case scenario," but in that case "[s]ubstantial evidence support[ed]" the agency's finding that there was scientific or technological uncertainty that warranted its consideration of a worst case scenario. 525 F.3d at 157. Here, by contrast, the agency appears to have considered a separate application in formulating its decision, or possibly used a boilerplate denial but failed to delete portions that did not relate to the instant application. Sp. App. at 8. This deficiency cannot be cured on appeal by the agency making cursory statements about its own past experiences.
crossings, and intake pits, id., which shows either a misunderstanding of the record or possibly that when it was considering the Pipeline the Department relied on determinations made with respect to other pipeline projects. It is clear, moreover, that the Denial Letter mistakenly referenced Petitioners' proposed use of permanent culverts and wet-crossings. Compare J. App. at 869 (indicating that Petitioners would not use permanent culverts or wet-crossings) with Sp. App. at 6-7 (describing "construction in the wet" and Petitioners' alleged proposed use of "permanent culverts or temporary bridges"). While the Denial Letter does address Pipeline features proposed by Petitioners in the same sentence, i.e., that the Pipeline will cross 35 streams using temporary bridges that the Department concluded will have a negative effect on water quality, or that "construction in dewatered conditions will . . . cause significant damage or destruction to both riparian and in-stream habitat, in turn causing violations of State water quality standards," Sp. App. at 7, from the face of the Denial Letter, we must conclude the Department relied in part on mistakenly identified project features to reach its final determination.

Finally, although the Department was not required to adopt FERC's water quality findings, see Stewart Park & Reserve Coal., Inc. v. Slater, 352 F.3d 545, 557-58 (2d Cir. 2003), the Department failed to address evidence in the record that supported those findings. At oral argument, Petitioners asserted that (1) FERC made explicit findings as to the permanency of the water quality effects of the proposed project that the Department failed to consider, and (2) the Department failed to consider evidence in the record that supports FERC's findings. Oral Arg. 3:46; see also Sp. App. at 7 ("More broadly, riparian habitat surrounding streams within the [Pipeline Right of Way] will be permanently impacted by construction activities involving excavation and burial of the pipeline . . . "). The Department should have addressed such evidence in the record in the Denial Letter. See Islander East I, 482 F.3d at 88.

Because the Department did not sufficiently articulate the basis for its conclusions, on appeal we cannot evaluate the Department's conclusions and decide whether they are arbitrary and capricious. [*72] We are not permitted to provide "a reasoned basis for the agency's action that the agency itself has not given." State Farm, 463 U.S. at 43 (internal quotation marks [*8] omitted). We express no opinion as to whether there is substantial evidence in the record to support the Department's denial. Accordingly, we do not remand for the record to be supplemented, but instead for the limited purpose of giving the Department an opportunity to explain more clearly—should it choose to do so—the basis for its decision.

Petitioners argue that the Department has already used the time allotted to it to consider Petitioner's application. Petitioner Br. at 19. "[A] failure-to-act claim is one over which the District of Columbia Circuit would have 'exclusive' jurisdiction." Constitution Pipeline Co. v. N.Y. State Dept' of Envtl. Conservation, 868 F.3d 87, 100 (2d Cir. 2017) (quoting 15 U.S.C. § 717r(d)(2)). Petitioners are free to present any evidence of waiver to FERC in the first instance. See Millennium Pipeline Co. v. Seggos, 860 F.3d 696, 700, 429 U.S. App. D.C. 403 (D.C. Cir. 2017).

Accordingly, we VACATE the decision of the Department and REMAND this case with instructions for the Department to more clearly articulate its basis for the denial and how that basis is connected to information in the existing administrative record.

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3 As relevant, Petitioners' proposal states:

National Fuel does not plan or propose to cross any flowing or inundated streams with a wet trenched/open cut method. However, even with the best laid plans, unforeseen and unplanned challenges can occur, rendering all other crossing methods impracticable. If this should happen at any location during the course of construction, National Fuel would communicate and coordinate with [the Department] on any alternative proposed crossing method (not previously proposed/approved), and would not commence the crossing unless and until [the Department grants] the appropriate review and authorization/approval. . . . National Fuel plans to install equipment crossing structures that minimize in-stream disturbance and footprint/streambed occupancy, [*7] and as such will avoid the use of culverts covered with stone in streams.

J. App. at 869.
"Collector." 
"Includes"; "including."

(10) The term "collector" means collector of internal revenue.
(b) The terms "includes" and "including" when used in a definition contained in this Act shall not be deemed to exclude other things otherwise within the meaning of the term defined.

SEC. 502. SEPARABILITY CLAUSE
If any provision of this Act, or the application thereof to any person or circumstances, is held invalid, the remainder of the Act, and the application of such provisions to other persons or circumstances, shall not be affected thereby.

SEC. 503. EFFECTIVE DATE OF ACT
Except as otherwise provided, this Act shall take effect upon its enactment.

Approved, August 30, 1935, at 6 p.m.

[CHAPTER 830.]
AN ACT
To amend the National Defense Act.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President is hereby authorized to call annually, with their consent, Reserve officers, for active Army duty, not to exceed at any time one thousand Reserve officers of the combatant arms and the Chemical Warfare Service in the grade of second lieutenant, for active duty with the Regular Army: Provided, That nothing herein contained shall affect the number of reserve officers that may be called to active duty under existing laws, nor the conditions under and for which they may be so called.

Sec. 2. That, for the period of ten years beginning July 1, 1936, the Secretary of War is authorized to select annually, in addition to the graduates from the United States Military Academy, fifty officers who shall be commissioned in the Regular Army: Provided, That the Secretary of War shall determine for each annual increment the number to be allotted among the promotion list branches: And provided further, That the number to be appointed in the promotion list branches shall be selected from such reserve officers who have received the training herein authorized or from graduates of the Army Air Corps Training Center.

Approved, August 30, 1935.

[CHAPTER 831.]
AN ACT
Authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the works of improvement of rivers, harbors, and other waterways are hereby adopted and authorized, to be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers, in accordance with the plans recommended in the respective reports hereinafter designated and subject to the conditions set forth in such documents; and that hereafter Federal investigations and improvements of rivers, harbors, and other waterways shall be under the jurisdiction of and shall be prosecuted by the War Department.
under the direction of the Secretary of War and the supervision of the Chief of Engineers, except as otherwise specifically provided by Act of Congress:

- Criehaven Harbor, Maine; House Document Numbered 310, Seventy-second Congress;
- Saco River, Maine; Rivers and Harbors Committee Document Numbered 11, Seventy-fourth Congress;
- Corea Harbor, Maine; Rivers and Harbors Committee Document Numbered 27, Seventy-fourth Congress;
- Lynn Harbor, Massachusetts; Rivers and Harbors Committee Document Numbered 7, Seventy-first Congress;
- Boston Harbor, Massachusetts; House Document Numbered 244, Seventy-second Congress;
- Boston Harbor, Massachusetts; Rivers and Harbors Committee Document Numbered 29, Seventy-fourth Congress;
- Mystic River, Massachusetts; Rivers and Harbors Committee Document Numbered 33, Seventy-fourth Congress;
- Gloucester Harbor and Annisquam River, Massachusetts; Rivers and Harbors Committee Document Numbered 39, Seventy-second Congress;
- Weymouth Fore River, Massachusetts; House Document Numbered 207, Seventy-second Congress;
- Weymouth Back River, Massachusetts; Rivers and Harbors Committee Document Numbered 32, Seventy-second Congress;
- Cape Cod Canal, Massachusetts; Rivers and Harbors Committee Document Numbered 15, Seventy-fourth Congress;
- New Bedford Harbor, Massachusetts; Rivers and Harbors Committee Document Numbered 16, Seventy-fourth Congress;
- Vineyard Haven Harbor, Massachusetts; Rivers and Harbors Committee Document Numbered 55, Seventy-fourth Congress;
- Thames River, Connecticut; Rivers and Harbors Committee Document Numbered 18, Seventy-fourth Congress;
- Connecticut River below Hartford, Connecticut; House Document Numbered 49, Seventy-third Congress;
- New Haven Harbor, Connecticut; House Document Numbered 479, Seventy-second Congress;
- Southport Harbor, Connecticut; Rivers and Harbors Committee Document Numbered 36, Seventy-fourth Congress;
- Stamford Harbor, Connecticut; Rivers and Harbors Committee Document Numbered 8, Seventy-fourth Congress;
- Connecticut River, at East Hartford, Connecticut; The Secretary of War is authorized and directed to proceed with the construction of dikes, drainage gates, suitable pumping plants, and other facilities for controlling floods on the Connecticut River at East Hartford, Connecticut, pursuant to a special survey made by the district engineer at Providence, Rhode Island, supplementing the survey in House Document Number 308, Sixty-ninth Congress, First Session, and in conformity with either Plan A or Plan B designated in the report of said supplemental survey; selection of the plan to be executed shall be made by the Secretary of War with the approval of the town of East Hartford; Provided, That the cost of such work shall not exceed $658,000; Provided further, That the prosecution of this project shall be subject to approval by the Board of Engineers for Rivers and Harbors;
- Mamaroneck Harbor, New York; Rivers and Harbors Committee Document Numbered 4, Seventy-fourth Congress;
Projects—Concluded.

Mattituck Harbor, New York; House Document Numbered 8, Seventy-first Congress;
Coney Island Creek, New York; Rivers and Harbors Committee Document Numbered 12, Seventy-third Congress;
Sag Harbor, New York; Rivers and Harbors Committee Document Numbered 32, Seventy-fourth Congress;
Buttermilk Channel, New York Harbor, New York; Rivers and Harbors Committee Document Numbered 55, Seventy-fourth Congress;
Hudson River Channel at Weehawken and Edgewater, New Jersey: The existing project is hereby modified in accordance with the recommendations in the report submitted in Rivers and Harbors Committee Document Numbered 49, Seventy-second Congress;
Hudson River Channel, New York and New Jersey; House Document Numbered 309, Seventy-second Congress;
Tarrytown Harbor, New York; House Document Numbered 262, Seventy-second Congress;
Rondout Harbor, New York; Rivers and Harbors Committee Document Numbered 17, Seventy-third Congress;
Hudson River between Troy and Waterford, New York; Senate Document Numbered 155, Seventy-second Congress;
Great Lakes-Hudson River Waterway; Rivers and Harbors Committee Document Numbered 20, Seventy-third Congress. All Acts or parts of Acts inconsistent herewith are hereby repealed;
New York and New Jersey Channels; Rivers and Harbors Committee Document Numbered 17, Seventy-first Congress, and House Document Numbered 133, Seventy-fourth Congress;
Cut-off channel between Raritan River and Arthur Kill, New Jersey; House Document Numbered 60, Seventy-third Congress;
Rahway River, New Jersey; House Document Numbered 66, Seventy-third Congress;
Elizabeth River, New Jersey; Rivers and Harbors Committee Document Numbered 24, Seventy-second Congress;
Manasquan River, New Jersey; Commerce Committee Document, Seventy-fourth Congress;
Compton Creek, New Jersey; House Document Numbered 58, Seventy-third Congress;
Shrewsbury River, New Jersey; House Document Numbered 157, Seventy-first Congress, and Rivers and Harbors Committee Document Numbered 31, Seventy-fourth Congress;
Delaware River, between Philadelphia, Pennsylvania, and Trenton, New Jersey; Rivers and Harbors Committee Documents Numbered 11, Seventy-third Congress, and 66, Seventy-fourth Congress;
Delaware River, Pennsylvania, New Jersey, and Delaware; Rivers and Harbors Committee Document Numbered 5, Seventy-third Congress;
Wilmington Harbor, Delaware; Rivers and Harbors Committee Document Numbered 32, Seventy-third Congress;
Inland Waterway from Delaware River to Chesapeake Bay, Delaware and Maryland; House Document Numbered 201, Seventy-second Congress, and Rivers and Harbors Committee Documents Numbered 18 and 24, Seventy-third Congress;
Big Timber Creek, New Jersey; Rivers and Harbors Committee Document Numbered 12, Seventy-third Congress;
Mantua Creek, New Jersey; Rivers and Harbors Committee Document Numbered 14, Seventy-third Congress;
Barnegat Inlet, New Jersey; Rivers and Harbors Committee Document Numbered 19, Seventy-third Congress;
Maurice River, New Jersey; House Document Numbered 275, Seventy-third Congress;
Delaware Bay Harbor of Refuge, Broadkill River, and Inland Waterway between Rehoboth Bay and Delaware Bay, Delaware; Rivers and Harbors Committee Document Numbered 56, Seventy-fourth Congress;
Ocean City Harbor and Inlet, and Sinepuxent Bay, Maryland; Rivers and Harbors Committee Documents Numbered 38, Seventy-second Congress, and 60, Seventy-fourth Congress;
Upper Thoroughfare, Deals Island, Maryland; Rivers and Harbors Committee Document Numbered 37, Seventy-second Congress;
Twitch Cove and Big Thoroughfare River, Maryland; Rivers and Harbors Committee Document Numbered 67, Seventy-fourth Congress;
Knapps Narrows, Maryland; House Document Numbered 308, Seventy-second Congress;
Annapolis Harbor, Maryland; Rivers and Harbors Committee Document Numbered 23, Seventy-third Congress;
Pocomoke River, Maryland; House Document Numbered 227, Seventy-fourth Congress;
Parish Creek, Maryland; House Document Numbered 185, Seventy-fourth Congress;
Honga River and Tar Bay (Barren Island Gaps), Maryland; Rivers and Harbors Document Numbered 35, Seventy-fourth Congress;
Tangier Channel, Virginia; Rivers and Harbors Committee Document Numbered 51, Seventy-second Congress;
Starlings Creek, Virginia; Rivers and Harbors Committee Document Numbered 46, Seventy-fourth Congress;
Washington Harbor; Rivers and Harbors Committee Document Numbered 22, Seventy-fourth Congress;
Potomac River, north side of Washington Channel, District of Columbia; Rivers and Harbors Committee Document Numbered 13, Seventy-third Congress; Provided, That the work recommended in the said document shall be prosecuted in accordance with the recommendations of the Board of Engineers for Rivers and Harbors, except that the District of Columbia shall be required to contribute the sum of $389,000 to the cost of the improvement;
Horn Harbor, Virginia; Rivers and Harbors Committee Document Numbered 22, Seventy-third Congress;
Nomini Bay and Creek, Virginia; Rivers and Harbors Committee Document Numbered 30, Seventy-second Congress;
Mill Creek, Virginia; Rivers and Harbors Committee Document Numbered 20, Seventy-fourth Congress;
Totuskey Creek, Virginia; House Document Numbered 183, Seventy-second Congress;
Mattaponi River, Virginia; Rivers and Harbors Committee Document Numbered 47, Seventy-third Congress;
Channel connecting York River, Virginia, with Back Creek at Slaght's Wharf; Rivers and Harbors Committee Document Numbered 6, Seventy-fourth Congress;
Jackson Creek, Virginia; Rivers and Harbors Committee Document Numbered 41, Seventy-third Congress;
Little Wicomico River, Virginia; Rivers and Harbors Committee Document Numbered 24, Seventy-fourth Congress;
Norfolk Harbor, Virginia; House Document Numbered 182, Seventy-third Congress;
Hampton Creek, Virginia; Rivers and Harbors Committee Document Numbered 34, Seventy-second Congress;
Phoebus Channel, Virginia; Rivers and Harbors Committee Document Numbered 33, Seventy-second Congress;
Channel from Pamlico Sound to Beaufort Harbor, North Carolina; House Document Numbered 485, Seventy-second Congress;
Rollinson Channel, North Carolina; House Document Numbered 218, Seventy-second Congress;
Inland waterway from Beaufort, North Carolina, to Cape Fear River, including the waterway to Jacksonville, North Carolina; House Document Numbered 67, Seventy-fourth Congress;
Meherrin River, North Carolina; Rivers and Harbors Committee Document Numbered 43, Seventy-fourth Congress;
Cape Lookout Harbor of Refuge, North Carolina; House Document Numbered 786, Seventy-first Congress;
Smiths Creek, Wilmington, North Carolina; Senate Document Numbered 23, Seventy-second Congress;
Intracoastal waterway from Cape Fear River, North Carolina, to Saint Johns River, Florida; Rivers and Harbors Committee Documents Numbered 11 and 14, Seventy-second Congress;
Shipyard River, South Carolina; Rivers and Harbors Committee Document Numbered 45, Seventy-third Congress;
Waterway from Charleston to Beaufort, South Carolina; House Document Numbered 129, Seventy-second Congress;
Savannah Harbor, Georgia; House Document Numbered 276, Seventy-third Congress;
Savannah River below Augusta, Georgia; Report of the Chief of Engineers dated June 19, 1933;
Intracoastal waterway from Jacksonville to Key West, Florida; Rivers and Harbors Committee Document Numbered 44, Seventy-second Congress;
Saint Johns River, Florida, Jacksonville to the ocean; Report of the Chief of Engineers dated June 5, 1935;
Lake Worth Inlet, Florida; House Document Numbered 185, Seventy-third Congress, and Rivers and Harbors Committee Document Numbered 42, Seventy-fourth Congress;
Fort Pierce Harbor, Florida; House Document Numbered 222, Seventy-second Congress, and Rivers and Harbors Committee Document Numbered 21, Seventy-fourth Congress;
Port Everglades, Florida; Rivers and Harbors Committee Document Numbered 25, Seventy-fourth Congress;
Miami Harbor, Florida; report of the Chief of Engineers, dated August 30, 1933;
Caloosahatchee River and Lake Okeechobee drainage areas, Florida: The existing project is hereby modified to provide that the United States shall maintain all project works when completed and shall bear the cost of all drainage structures heretofore or hereafter constructed in connection with said project; Provided, That the total cash contribution required of local interests toward the cost of the project shall be $500,000.
Tampa Harbor, Florida; Senate Document Numbered 22, Seventy-second Congress;
Anclote River, Florida; Rivers and Harbors Committee Document Numbered 36, Seventy-third Congress;
La Grange Bayou, Florida; Rivers and Harbors Committee Document Numbered 49, Seventy-fourth Congress;
Homossassa River, Florida; Rivers and Harbors Committee Document Numbered 30, Seventy-fourth Congress;
Caseys Pass, Florida; Report of the Chief of Engineers dated June 5, 1935;
Channel from Apalachicola River to Saint Andrews Bay, Florida; Rivers and Harbors Committee Document Numbered 52, Seventy-second Congress;
Saint Andrews Bay, Florida; House Document Numbered 33, Seventy-third Congress;
Waterway from Choctawhatchee Bay to West Bay, Florida; House Document Numbered 259, Seventy-second Congress;
Intracoastal waterway from Choctawhatchee Bay to Pensacola Bay, Florida; Rivers and Harbors Committee Document Numbered 42, Seventy-third Congress;
Pensacola Harbor, Florida; House Document Numbered 253, Seventy-second Congress;
Chickasaw Creek, Alabama; House Document Numbered 47, Seventy-third Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Black Warrior, Warrior, and Tombigbee Rivers, Alabama; House Documents Numbered 728, Seventy-first Congress, and 56, Seventy-third Congress; and in accordance with the modifications of the recommendation in said Document Numbered 56, submitted in Rivers and Harbors Committee Documents Numbered 45, Seventy-third Congress, and 26, Seventy-fourth Congress;
Pearl River, Mississippi and Louisiana, from Jackson, Mississippi, to a point on the Pearl River between Poplarville, Mississippi, and Bogalusa, Louisiana, and with a view to providing a six-foot channel from the mouth of Pearl River to a point between Poplarville, Mississippi, and Bogalusa, Louisiana, subject to final approval by the Board of Engineers for Rivers and Harbors;
Bayou La Combe, Louisiana; Rivers and Harbors Committee Document Numbered 53, Seventy-second Congress;
Bayou Lafourche, Louisiana; House Document Numbered 45, Seventy-third Congress: Provided, That the Chief of Engineers may in his discretion modify the project with respect to the selection of the outlet pass to be improved;
Waterway from the intracoastal waterway to Bayou Dulac, Louisiana; House Document Numbered 206, Seventy-second Congress;
Bayous Petit Anse and Carlin, Louisiana; House Document Numbered 225, Seventy-second Congress;
Mermentau River, Louisiana; Rivers and Harbors Committee Document Numbered 29, Seventy-second Congress;
Lake Charles Deep Water Channel, Louisiana; House Document Numbered 172, Seventy-second Congress;
Sabine-Neches Waterway, Texas; Rivers and Harbors Committee Documents Numbered 27, Seventy-second Congress, and 12, Seventy-fourth Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement: Provided further, That the Chief of Engineers is authorized and directed to construct all works necessary to prevent the escape into Sabine Lake of dredged material hereafter deposited on the lake frontage owned by the city of Port Arthur, and to construct suitable permanent protective works to prevent the erosion of the material so deposited at a cost not to
Projects—Contd.

$600,000, the funds necessary for these purposes to be in addition to those provided for the project as set forth in said document;

Galveston Harbor, Texas; Rivers and Harbors Committee Documents Numbered 31, Seventy-second Congress, and 57, Seventy-fourth Congress: Provided, That the Chief of Engineers is authorized and directed to construct groins to protect the seawall constructed by the United States and the City of Galveston in accordance with the plans submitted in House Document Numbered 400, Seventy-third Congress, and at a cost not to exceed $234,000, the funds necessary for this purpose to be in addition to those provided for the project as set forth in said documents;

Galveston Channel, Texas; Rivers and Harbors Committee Document Numbered 61, Seventy-fourth Congress;

Channel from Galveston Harbor to Texas City, Texas; Rivers and Harbors Committee Documents Numbered 4 and 46, Seventy-third Congress, and 62, Seventy-fourth Congress;

Houston Ship Channel, Texas; Rivers and Harbors Committee Documents Numbered 28, Seventy-second Congress, and 58, Seventy-fourth Congress;

Clear Creek and Clear Lake, Texas; House Document Numbered 264, Seventy-third Congress;

Freeport Harbor, Texas; Rivers and Harbors Committee Document Numbered 15, Seventy-second Congress, and in accordance with the modification of the aforesaid report recommended in Rivers and Harbors Committee Document Numbered 29, Seventy-third Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Channel from Aransas Pass to Corpus Christi, Texas; House Document Numbered 130, Seventy-second Congress, and Rivers and Harbors Committee Documents Numbered 23, and 63, Seventy-fourth Congress;

Channel from Pass Cavallo to Port Lavaca, Texas; Rivers and Harbors Committee Document Numbered 28, Seventy-fourth Congress;

Port Aransas, Texas; Rivers and Harbors Committee Documents Numbered 35, Seventy-second Congress, and 40, Seventy-third Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Brazos Island Harbor, Texas: The existing project is hereby modified in accordance with the report submitted in Rivers and Harbors Committee Document Numbered 10, Seventy-second Congress;

Wolf River (Memphis Harbor), Tennessee; Rivers and Harbors Committee Document Numbered 45, Seventy-fourth Congress;

Wolf River, Tennessee; Rivers and Harbors Committee Document Numbered 26, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Mississippi River between Missouri River and Minneapolis; House Document Numbered 137, Seventy-second Congress, and Rivers and Harbors Committee Document Numbered 44, Seventy-fourth Congress;

Saint Croix River, Wisconsin and Minnesota; House Document Numbered 184, Seventy-second Congress;

Missouri River, completion of improvement from mouth to Sioux City, Iowa, and construction of Fort Peck Dam; House Document Numbered 238, Seventy-third Congress;
Illinois Waterway, Illinois; House Documents Numbered 180 and 184, Seventy-third Congress;
Cumberland River, Kentucky and Tennessee; House Document Numbered 88, Seventy-third Congress;
Monongahela River, Pennsylvania and West Virginia; The Tygart River Reservoir project now being prosecuted by the War Department under the provisions of the National Industrial Recovery Act;
Allegheny River, Pennsylvania; House Document Numbered 721, Seventy-first Congress, and Rivers and Harbors Committee Document Numbered 16, Seventy-second Congress; and in accordance with the modification of the recommendation in said Document Numbered 721, submitted in Rivers and Harbors Committee Document Numbered 27, Seventy-third Congress;
Beaver and Mahoning Rivers, Pennsylvania and Ohio; of the width and depth provided in House Document Numbered 277, Seventy-third Congress, as a Federal project and to continue to Lake Erie at or near Ashtabula, Ohio, subject to the final approval of the whole project from the Ohio River to Lake Erie by the Board of Engineers for Rivers and Harbors;
Kanawha and Ohio Rivers, West Virginia and Ohio; House Document Numbered 31, Seventy-third Congress;
Green and Barren Rivers, Kentucky: The existing project is hereby modified in accordance with the report submitted in House Document Numbered 480, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Grand Marais Harbor, Minnesota; Rivers and Harbors Committee Document Numbered 22, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Agate Bay Harbor, Minnesota; Rivers and Harbors Committee Document Numbered 17, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Duluth-Superior Harbor, Minnesota and Wisconsin; House Document Numbered 482, Seventy-second Congress;
Ashland Harbor, Wisconsin; Rivers and Harbors Committee Document Numbered 46, Seventy-second Congress;
Keweenaw Waterway, Michigan; House Document Numbered 55, Seventy-third Congress;
Presque Isle Harbor, Michigan; House Document Numbered 473, Seventy-second Congress;
Marquette Harbor, Michigan; Rivers and Harbors Committee Document Numbered 20, Seventy-second Congress;
Menominee Harbor and River, Michigan and Wisconsin; Rivers and Harbors Committee Document Numbered 28, Seventy-third Congress;
Green Bay Harbor, Wisconsin; Rivers and Harbors Committee Document Numbered 40, Seventy-second Congress;
Sturgeon Bay and Lake Michigan Ship Canal, Wisconsin; Rivers and Harbors Committee Document Numbered 9, Seventy-fourth Congress;
Kewaunee Harbor, Wisconsin; Rivers and Harbors Committee Document Numbered 48, Seventy-second Congress;
Two Rivers Harbor, Wisconsin; House Document Numbered 727, Seventy-first Congress, and Rivers and Harbors Committee Document Numbered 25, Seventy-third Congress;
Manitowoc Harbor, Wisconsin; Rivers and Harbors Committee Document Numbered 39, Seventy-third Congress;
Sheboygan Harbor, Wisconsin; Rivers and Harbors Committee Document Numbered 47, Seventy-fourth Congress;
Port Washington Harbor, Wisconsin; House Document Numbered 168, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Port Washington Harbor, Wisconsin; Rivers and Harbors Committee Document Numbered 44, Seventy-fourth Congress;
Milwaukee Harbor, Wisconsin; House Document Numbered 289, Seventy-second Congress;
Kenosha Harbor, Wisconsin; Rivers and Harbors Committee Document Numbered 19, Seventy-fourth Congress;
Calumet Harbor and River, Illinois and Indiana; House Document Numbered 494, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Indiana Harbor, Indiana; Rivers and Harbors Committee Document Numbered 29, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Michigan City Harbor, Indiana; Rivers and Harbors Committee Document Numbered 34, Seventy-fourth Congress;
South Haven Harbor, Michigan; Rivers and Harbors Committee Document Numbered 9, Seventy-third Congress, and report of the Chief of Engineers dated December 21, 1934: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Saint Joseph Harbor, Michigan; Rivers and Harbors Committee Document Numbered 32, Seventy-fourth Congress;
Holland Harbor and Black Lake, Michigan; Rivers and Harbors Committee Document Numbered 43, Seventy-fourth Congress;
Grays Reef Passage, Michigan; Rivers and Harbors Committee Document Numbered 5, Seventy-fourth Congress;
Muskegon Harbor, Michigan; Rivers and Harbors Committee Document Numbered 64, Seventy-fourth Congress;
Leland Harbor, Michigan; Rivers and Harbors Committee Document Numbered 23, Seventy-fourth Congress;
Great Lakes—Connecting waters, principal harbors, and river channels; Rivers and Harbors Committee Document Numbered 53, Seventy-fourth Congress: Provided, That the project for the downbound channel across Harsen's Island is not adopted or authorized herein, and the construction of said channel shall not be commenced until it is subsequently authorized by Congress;
Channel between Mackinac Island and Round Island, Michigan; Rivers and Harbors Committee Document Numbered 2, Seventy-second Congress;
Channels in Lake Saint Clair, Michigan; Rivers and Harbors Committee Document Numbered 3, Seventy-second Congress;
Detroit River, Michigan; Rivers and Harbors Committee Document Numbered 1, Seventy-second Congress;
Alpena Harbor, Michigan; Rivers and Harbors Committee Document Numbered 42, Seventy-second Congress;
Black River, Michigan; Rivers and Harbors Committee Document Numbered 54, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;
Rouge River, Michigan; Rivers and Harbors Committee Document Numbered 19, Seventy-second Congress, and Commerce Committee Document containing report of the Chief of Engineers dated April
27, 1934: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Toledo Harbor, Ohio; Rivers and Harbors Committee Document Numbered 21, Seventy-second Congress;

Sandusky Harbor, Ohio; Rivers and Harbors Committee Document Numbered 2, Seventy-third Congress;

Huron Harbor, Ohio; House Document Numbered 478, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Lorain Harbor, Ohio; House Document Numbered 469, Seventy-second Congress, and Rivers and Harbors Committee Document Numbered 51, Seventy-fourth Congress, and Commerce Committee Document containing the report of the Chief of Engineers dated June 8, 1934: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Cleveland Harbor, Ohio; House Document Numbered 477, Seventy-second Congress, and Rivers and Harbors Committee Document Numbered 39, Seventy-fourth Congress;

Fairport Harbor, Ohio; House Document Numbered 472, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Ashtabula Harbor, Ohio; House Document Numbered 43, Seventy-third Congress;

Conneaut Harbor, Ohio; House Document Numbered 48, Seventy-third Congress;

Erie Harbor, Pennsylvania; House Document Numbered 52, Seventy-third Congress;


Black Rock Harbor and Tonawanda Channel, New York; House Document Numbered 28, Seventy-third Congress;

Rochester Harbor, New York; House Document Numbered 484, Seventy-second Congress;

Great Sodus Bay Harbor, New York; Rivers and Harbors Committee Document Numbered 28, Seventy-second Congress;

Oswego Harbor, New York; Rivers and Harbors Committee Document Numbered 7, Seventy-fourth Congress;

Ogdensburg Harbor, New York; House Document Numbered 266, Seventy-second Congress: Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Santa Barbara Harbor, California; Commerce Committee Document containing the report of the Chief of Engineers dated September 25, 1934;

San Diego Harbor, California; House Document Numbered 223, Seventy-third Congress;

Los Angeles and Long Beach Harbors, California; Commerce Committee Document containing the report of the Chief of Engineers dated August 18, 1934;

San Francisco Harbor, California; Rivers and Harbors Committee Document Numbered 50, Seventy-second Congress;

Lower San Francisco Bay, California; House Document Numbered 279, Seventy-second Congress, and in accordance with the modification of said report submitted in Rivers and Harbors Committee Document Numbered 8, Seventy-third Congress;
Redwood Creek, California; Rivers and Harbors Committee Document Numbered 10, Seventy-third Congress; Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Richmond Harbor, California; Rivers and Harbors Committee Documents Numbered 7, Seventy-third Congress, and 10, Seventy-fourth Congress;

Napa River, California; Rivers and Harbors Committee Document Numbered 6, Seventy-second Congress; Provided, That no expense shall be incurred by the United States for the acquiring of any lands required by this improvement;

Monterey Harbor, California; Rivers and Harbors Committee Document Numbered 45, Seventy-second Congress;

Crescent City Harbor, California; Rivers and Harbors Committee Document Numbered 46, Seventy-fourth Congress;

Humboldt Harbor and Bay, California; Rivers and Harbors Committee Document Numbered 14, Seventy-fourth Congress;

San Joaquin River and Stockton Channel, and Suisun Bay, California; Report of the Chief of Engineers dated June 10, 1933;

Sacramento River, California; Rivers and Harbors Committee Document Numbered 35, Seventy-third Congress;

Sacramento River and tributaries, California (debris control); Rivers and Harbors Committee Document Numbered 50, Seventy-fourth Congress;

Middle River and connecting channels, California; Rivers and Harbors Committee Document Numbered 48, Seventy-second Congress; Provided, That no expense shall be incurred by the United States for the acquiring of any lands required for the purpose of this improvement;

Coos Bay, Oregon, Inner Harbor; Commerce Committee Document containing the report of the Chief of Engineers dated April 26, 1934;

Coquille River, bar and entrance, Oregon; Commerce Committee Document containing the report of the Chief of Engineers dated December 20, 1934;

Umpqua River, Oregon; Rivers and Harbors Committee Document Numbered 9, Seventy-second Congress;

Columbia and Lower Willamette Rivers, below Portland, Oregon, and Vancouver, Washington: The existing project is hereby modified in accordance with the reports submitted in House Documents Numbered 233 and 249, Seventy-second Congress, and Rivers and Harbors Committee Documents Numbered 9, Seventy-third Congress, and 1, Seventy-fourth Congress;

Columbia River, Oregon; construction of dam, ship lock, and works for the utilization of surplus power, at the site at Bonneville recommended in the report of the Chief of Engineers dated August 21, 1933;

Multnomah Channel, Oregon; Rivers and Harbors Committee Document Numbered 47, Seventy-second Congress;

Youngs Bay and Youngs River, Oregon; House Document Numbered 209, Seventy-second Congress;

Columbia and Snake Rivers, Oregon, Washington, and Idaho; Rivers and Harbors Committee Documents Numbered 23, Seventy-second Congress, and 16, Seventy-third Congress;

Bakers Bay, Washington; House Document Numbered 44, Seventy-third Congress;

Willapa River and Harbor, Washington; Rivers and Harbors Committee Documents Numbered 41, Seventy-second Congress, and 37, Seventy-third Congress;

Olympia Harbor, Washington; Rivers and Harbors Committee Document Numbered 21, Seventy-third Congress;

Tacoma Harbor, Washington; Rivers and Harbors Committee Document Numbered 55, Seventy-second Congress;

Seattle Harbor, Washington; House Document Numbered 211, Seventy-second Congress;


Port Gamble Harbor, Washington; House Document Numbered 152, Seventy-second Congress;

Swinomish Slough, Washington; Report of the Chief of Engineers, dated May 21, 1933;

Wrangell Harbor, Alaska; House Document Numbered 202, Seventy-second Congress;

Wrangell Narrows, Alaska; House Document Numbered 647, Seventy-first Congress;

Dry Pass, Alaska; House Document Numbered 470, Seventieth Congress;

Stikine River; Alaska; House Document Numbered 210, Seventy-second Congress;

Kodiak Harbor, Alaska; House Document Numbered 208, Seventy-second Congress;

Petersburg Harbor, Alaska; House Document Numbered 483, Seventy-second Congress;

Egegik River, Alaska; House Document Numbered 51, Seventy-third Congress;

Cordova Harbor, Alaska; Rivers and Harbors Committee Document Numbered 33, Seventy-third Congress;

Harbor of refuge at Seward, Alaska; Rivers and Harbors Committee Document Numbered 3, Seventy-fourth Congress;


Sitka Harbor, Alaska; Rivers and Harbors Committee Document Numbered 59, Seventy-fourth Congress;

Honolulu Harbor, Hawaii; House Document Numbered 54, Seventy-third Congress;

Port Allen, Hawaii; House Document Numbered 30, Seventy-third Congress;

Kaunakakai Harbor, Hawaii; House Document Numbered 35, Seventy-third Congress;

San Juan Harbor, Puerto Rico; Rivers and Harbors Committee Document Numbered 38, Seventy-fourth Congress;

Mayaguez Harbor, Puerto Rico; House Document Numbered 215, Seventy-second Congress, and subject to the modification recommended in Rivers and Harbors Committee Document Numbered 1, Seventy-third Congress;

Ponce Harbor, Puerto Rico; The existing project is hereby modified in accordance with the report submitted in Rivers and Harbors Committee Document Numbered 18, Seventy-second Congress;


SEC. 2. That for the purpose of controlling floods, improving navigation, regulating the flow of the streams of the United States, providing for storage and for the delivery of the stored waters thereof, for the reclamation of public lands and Indian reservations,
and other beneficial uses, and for the generation of electric energy
as a means of financially aiding and assisting such undertakings,
the projects known as "Parker Dam" on the Colorado River and
"Grand Coulee Dam" on the Columbia River, are hereby authorized
and adopted, and all contracts and agreements which have been
executed in connection therewith are hereby validated and ratified,
and the President, acting through such agents as he may designate,
is hereby authorized to construct, operate, and maintain dams, struc-
tures, canals, and incidental works necessary to such projects, and
in connection therewith to make and enter into any and all necessary
contracts including contracts amendatory of or supplemental to
those hereby validated and ratified. The construction by the Secre-
tary of the Interior of a dam in and across the Colorado River at
or near Head Gate Rock, Arizona, and structures, canals, and inci-
dental works necessary in connection therewith is hereby authorized,
and none of the waters, conserved, used, or appropriated under the
works hereby authorized shall be charged against the waters allo-
cated to the upper basin by the Colorado River compact, nor shall
any priority be established against such upper basin by reason of
such conservation, use, or appropriation; nor shall said dam, struc-
tures, canals, and works, or any of them, be used as the basis of
making any such charge, or establishing any such priority or right,
and all contracts between the United States and the users of said
water from or by means of said instrumentalities shall provide
against the making of any such charge or claim or the establish-
ment of any priority right or claim to any part or share of the water of
the Colorado River allocated to the Upper Basin by the Colorado
River compact, and all use of said instrumentalities shall be in com-
pliance with the conditions and provisions of said Colorado River
compact and the Boulder Canyon Project Act.

Preliminary exami-
nations and surveys
authorized.

Sec. 3. The Secretary of War is hereby authorized and directed
to cause preliminary examinations and surveys to be made at the
following-named localities, the cost thereof to be paid from appro-
priations heretofore or hereafter made for such purposes: Provided,
That no preliminary examination, survey, project, or estimate for
new works other than those designated in this or some prior Act
or joint resolution shall be made: Provided further, That after the
regular or formal reports made as required by law on any examina-
tion, survey, project, or work under way or proposed are submitted
no supplemental or additional report or estimate shall be made unless
authorized by law: And provided further, That the Government shall
not be deemed to have entered upon any project for the improvement
of any waterway or harbor mentioned in this Act until the project
for the proposed work shall have been adopted by law:

Localities emu-
larated.

Long Cove, Maine.
Chandler River, Maine.
Ile au Haut Thoroughfare, Maine.
Eastport Harbor, Maine.
Frenchboro Harbor, Maine.
Stonington Harbor, Maine.
Bagaduce River, Maine.
Prouts Neck, Maine, with a view to the establishment of a harbor
of refuge.
Hendrick's Harbor, Maine.
Saint Croix River, Maine.
Bar Harbor, Maine.
Monhegan Harbor, Maine.
Ogunquit-Perkins Cove, Maine.
Cranberry Island Harbor, Maine.
Kennebec River, Maine, with a view to dredging the river from Augusta to Gardiner.
Harbor at Cuttyhunk, Massachusetts.
Plum Island and Parker Rivers, Massachusetts.
Shore at Gay Head, Massachusetts, with a view to preventing further erosion.
Rock Harbor, Massachusetts.
Shore at Manomet Point, Plymouth Harbor, Massachusetts, with a view to constructing a breakwater.
Westport River, Massachusetts.
Boston Harbor, Massachusetts: Navigable waters adjacent to the shores of Winthrop and East Boston.
The Merrimack River, Massachusetts, with a view to making the river navigable from Lowell to the sea.
Lewis Bay and the Harbor at West Yarmouth, Massachusetts.
Town River, Quincy, Massachusetts.
Inner harbor, Block Island, Rhode Island.
Ash Creek, Connecticut.
Indian Neck Harbor, Connecticut.
Milford Harbor, Connecticut.
Bridgeport Harbor, Connecticut.
The Race, between Block Island Sound and Long Island, Connecticut, with a view to removing Valient Rock and other obstructions.
Westcott Cove, Stamford Harbor, Connecticut.
Noank Cove, Connecticut.
Woodmont Harbor, Connecticut.
Providence River and Harbor, Rhode Island.
Blackstone River, from Narragansett Bay at Providence, Rhode Island, to Worcester, Massachusetts.
Lake Champlain, Vermont, with a view to reopening the old channel through the South Hero sand bar in the vicinity of Milton and South Hero.
Lake Champlain, Vermont, with a view to reopening the channel between East Alburg and West Swanton.
New York State Barge Canal from Three Rivers Point to the city of Syracuse, New York.
Moriches Inlet, Long Island, New York.
Goldsmith Inlet, Long Island, New York.
Long Island Intracoastal Waterway, from East Rockaway Inlet to Great Peconic Bay, New York.
Hashamomuck (Arshamomaque) Creek, Long Island, New York.
Irvington Harbor, New York.
Channel between Travers Island and Glen Island, New York.
Waterway from the Hudson River at or near Piermont, New York, to a point at or near the headwaters of the Hackensack River, New Jersey.
Otter River, Vermont, with a view to making the river navigable from Vergennes to Lake Champlain.
Deep waterway to connect Lake Saint Francis on the Saint Lawrence River with the Hudson River at Albany by way of Lake Champlain, with a view to determining the advisability and cost of such a connection between the Saint Lawrence Waterway, as proposed by treaty, and the sheltered waters of the Atlantic coast between Boston, Massachusetts, and Norfolk, Virginia.
Delaware and Raritan Canal, New Jersey.
Sandy Hook Bay, off Atlantic Highlands, New Jersey, with a view to providing an anchorage area.

Shark River, New Jersey.

Passaic River, New Jersey, from the Eighth Street Bridge, Wallingford, to the Passaic Street Bridge at Garfield.

Menantico Creek, Cumberland County, New Jersey.

Cedar Run Creek, New Jersey, from the Main Channel to Wire Creek.

New Jersey Intra-coastal waterway from Shrewsbury River to Delaware Bay above Cape May by way of the Manasquan-Barnegat Canal and including an entrance thereto through Barnegat Inlet.

Keyport Harbor, New Jersey.

Way Cake Creek, New Jersey.

West Creek, New Jersey.

Waterway across Cape May County, New Jersey, to connect the New Jersey State Inland Waterway with Delaware Bay.

Delaware River, between Easton and Stroudsburg, Pennsylvania.

Chesapeake and Delaware Canal at Chesapeake City, Maryland, with a view to providing an anchorage basin; also to determine if street improvements, in connection with changes of bridges under the existing project, should be made.

Construction of a sea-level waterway between Great Choptank Waterway and Little Choptank River, Maryland.

Wicomico River, Maryland, from Chaptico Wharf to Budd's Landing.

McCreadys Creek, Elliott, Dorchester County, Maryland.

Goose Creek, Maryland.

Channel connecting Plain Dealing Creek and Oak Creek, Maryland.

Back Creek, Anne Arundel County, Maryland.

Saint Marys River, Maryland.

Drum Point Harbor, Maryland.

Lake Conoy, Maryland, and entrance thereto from Potomac River.

Channel connecting Magothry River and Cypress Creek, Anne Arundel County, Maryland.

Channels to Lake Ogleton and Walnut Lake, Anne Arundel County, Maryland.

Farm Creek, Maryland.

Little Creek, Queen Annes County, Maryland.

Jones Creek and Nanticoke River in the vicinity of Waterview and Nanticoke, Wicomico County, Maryland.

Harbor at the mouth of Fishing Creek, at the north end of Calvert County, Maryland.

Little Island Creek, Talbot County, Maryland.

Head of Northeast River, Maryland.

Channel in Southeast Branch of Fox Creek, Dorchester County, Maryland.

Rockhall Harbor, Kent County, Maryland.

Broadwater Creek, Maryland.

Saint Jerome Creek, Saint Marys County, Maryland.

Upper Chesapeake Bay and Susquehanna River, Havre de Grace, Maryland; for a boat basin and harbor adjoining the City Park, and a channel leading thereto from Point Concord, subject to the approval of the Board of Engineers for Rivers and Harbors.

Channel from George Island Landing, Maryland, to deep water in Chincoteague Bay.

Waterway from Little Annemessex River to Tangier Sound, Maryland, by way of Cedar Creek, a land cut, and Flat Cap Creek.
Waterway between Cambridge Creek and Fishing Bay, by way of Little Blackwater River, Maryland.
Black Walnut Harbor, Talbot County, Maryland.
Channel at the entrance of the Claiborne-Annapolis Ferry at Matapeake, Maryland.
Jones Creek, Wicomico County, Maryland, and Nanticoke River at and in the vicinity of Waterview.
Waterway from Pocomoke River, at or near Snow Hill, Maryland, to Chincoteague Bay.
Upper Thoroughfare, Deals Island, Maryland.
Neale Sound, Maryland.
Dogue Run, Virginia.
Coan River, Virginia.
Winter Harbor, Virginia.
Occupacia Creek, Virginia.
Chincoteague Bay, with a view to establishing a harbor of refuge at Greenbackville and Franklin City, Accomac County, Virginia, and protection of adjoining shore from storm depredation.
Inland waterway from Chesapeake Bay to Chincoteague Bay, Virginia.
Onancock River, Virginia.
Waters connecting Cherrystone Channel with Cape Charles, Virginia, with a view to establishing a harbor of refuge at Cape Charles with a minimum depth of ten feet.
Salter's Creek, Newport News, Virginia, and channel connecting with the deep waters in Hampton Roads.
Channel from Back River to the public landing in Wallace Creek, Elizabeth City County, Virginia.
Channel from Pamlico Sound to Mill Creek, North Carolina.
Channel from deep water in Back Sound, North Carolina, through Shackleford Banks, to deep water in Lookout Bight.
Vandermere Harbor and Bay River at Bayboro, North Carolina.
From Croatan Sound to Manns Harbor, North Carolina.
Drum Inlet, North Carolina; near the town of Atlantic with a view to preserving the same to a depth of twelve feet at low water.
Waterway from Charleston, South Carolina, to Columbia, South Carolina.
Ashley River, South Carolina: Municipal yacht basin and connecting channels, and channel to the grounds of the South Carolina Military Academy (the Citadel).
Pee Dee River, South Carolina, with a view to obtaining a navigable channel from the point where Jericho Creek connects the Pee Dee River with the Waccamaw River to a point approximately seventeen miles from Georgetown, where the Thoroughfare also connects the Pee Dee River with the Waccamaw River.
Lower Altamaha River and Darien Harbor, Georgia.
Waterway from the Saint Johns River to the Kissimmee River, Florida, and thence to the Okeechobee Cross-Florida Canal Channel.
Waterway from Banana River to Mosquito Lagoon, Merritt Island, Florida.
Waterway from the mouth of Tampa Bay, Florida, to the mouth of the Manatee River; thence up the Manatee River to approximately its source; thence easterly to Fort Pierce Harbor.
Saint Lucie, West Palm Beach, Hillsboro, North New River, and Miami Canals, Florida.
Melbourne Harbor and Crane Creek, Florida.
Miami Harbor, Florida.
Miami Beach, Florida, turning basin at east end of municipal channel opposite causeway docks of Peninsular Terminal Company.
Preliminary surveys—Continued.

Waterway from DeLeon Springs to Saint Johns River, Florida.

An inlet or ship channel connecting the Atlantic Ocean with the Intracoastal Waterway at or near Eau Gallie, Florida.

Oklahoma River, Florida, with a view to securing a channel six feet in depth and of suitable width to Leesburg and into Lake Harris.

Side channels or basins at Palm Beach, Courtenay, and Eau Gallie, Florida, with a view to providing connections with the intracoastal waterway.

Clearwater Harbor, Florida, including Big Pass and Little Pass, Hillsboro Inlet, Broward County, Florida.

New River Inlet and Sound, Florida.

Sarasota Bay, Florida.

Deepening of the present channel at the northeasterly end of Charlotte Harbor and Peace River from Punta Gorda, Florida, to Cleve-

land, Florida.

Cut-off from Lemon Bay to Gulf of Mexico and the opening of Lemon Bay for inland waterway purposes.

Carrabelle Harbor, Florida, with a view to providing a channel of twenty-five feet across the bar and in the channel to the docks at Carrabelle.

Waterway and turning basin of suitable dimensions from Intracoastal Waterway, Jacksonville to Key West, to a point at or near Jacksonville Beach, Florida.

Daytona Beach, Florida.

Saint Lucie Inlet, Florida.

Jupiter Inlet, Florida.

Pirates Cove Channel, in Sacaruma Bay, Pirates Cove, and Johnson’s Pass, Florida.

Waterway from the Saint Johns River at or near Sanford, Florida, to Tampa, by way of the Kissimme and Alafia Rivers and Tampa Bay.

Channel beginning at terminal of Seaboard Airline Railway and extending through the Bay of Naples and adjacent waters to Gor-
don’s Pass and the jettying of Gordon’s Pass. Also inside route from Seaboard Airline Railway terminals through the Bay of Naples, Dollar Bay, and adjacent waters to Big Marco Pass with the deepening of Little Marco Pass and the entrance of the pass into Rookery Bay.

Intracoastal waterway from the Caloosahatchee River to the Withlacoochee River, Florida, with a view to securing a waterway of suitable dimensions, and for the purpose of affording suitable exit to the north for craft using the Okeechobee Cross-Florida Canal.

Intracoastal waterway from Apalachicola Bay to the Withlacoochee River, Florida.

Keaton Beach, Taylor County, Florida.

Keaton Beach Harbor, Florida.

Carrabelle, Crooked, Ochlockonee Rivers, and Ochlochonee Bay, Florida.

Wakulla River, Florida.

Waterway from a point in the Grand Lagoon by way of Bayous Grand and Chico to Pensacola Bay, Florida, as an extension of the intracoastal 1 waterway.

Waterway from Bon Secours Bay, Alabama, to the Gulf by way of Oyster Bay.

Waterway to connect the Tombigbee and Alabama Rivers with the Perdido River, Alabama and Florida.

1 So in original.
Channel to Point Chugae, Dauphin Island, Alabama, and channel from Point Chugae to the old basin, or Indian Mounds, with a view to providing a harbor of refuge.

Mississippi Sound in the vicinity of Pass Christian, Mississippi.

Pascagoula Harbor and Horn Island Pass, Mississippi.

Boston Canal, Vermilion Parish, Louisiana.

Ship Canal from Houma, Louisiana, to the Gulf of Mexico.

Bayou DuLarge, Louisiana.

Vinton Waterway, Louisiana.

Lake Charles Deep Water Channel, Louisiana.

Lake Charles Ship Channel, Louisiana, from Lake Charles to the Gulf of Mexico at a point east of the mouth of the Calcasieu River, including proposed routes by way of the Calcasieu River, the Intra-coastal Waterway, and a land cut and any other route appearing more practicable.

Grand Bayou Pass, Louisiana.

Bayou Dupre, Louisiana.

Bayou La Loutre, Saint Malo, and Yscloskey, Louisiana.

Bayou Rigaud, Louisiana.

Bayou Sennette, Louisiana.

Waterway from White Lake to Pecan Island, Louisiana.

Waterway from the Intra-coastal Waterway, by way of the Florence Canal, to Gueydan, Vermilion Parish, Louisiana.

Bayou Saint John, Louisiana.

Houma-Terrebonne Ship Canal, Louisiana.

Franklin Canal, Saint Mary Parish, Louisiana.

Sabine-Neches Waterway, Texas, with a view to constructing revetment work to retain the spoil deposited in Sabine Lake.

Greens Bayou and Pass Palacios (Cotton Bayou), Texas.

Waterway from Offatt’s Bayou to San Luis Pass, Galveston Island, Texas.

Arroyo Colorado, Texas, from Llano Grande Lake to its mouth.

Pass Cavallo, Texas, and channel from Pass Cavallo to Port O’Connor and Port Lavaca.

Jefferson-Shreveport Waterway, Texas and Louisiana, with a view to determining advisability of enlargement of existing project and of taking into consideration in this connection establishment of reservoir on Cypress River above Jefferson to assure better water supply.

White River, Arkansas.

Arkansas River, Arkansas and Oklahoma.

Black River, Arkansas and Missouri, and waterway connecting the Black River with the Mississippi River at or near Cape Girardeau.

Hatchie River, Tennessee.

Obion and Forked Deer Rivers, and South Fork of Forked Deer River, Tennessee.

Cumberland River, above Nashville, Tennessee.

Ohio River, below Ironton, Ohio, with a view to the construction of dam.

That portion of the Monongahela River in the State of Pennsyl-

vania with a view of determining what provisions can be made to prevent the erosion of the banks and the destruction of valuable property and the consequent filling of the channel by deposition from the erosion.

Caney Creek, Grayson County, Kentucky.

Lewis Creek, Ohio County, Kentucky.
Preliminary surveys—Continued.

Grand Traverse Bay, Michigan.
At mouth of Black River or Little Girls Point (Ohmans Creek), Gogebic County, Michigan.
At the mouth of Tobacco River near Gay, Michigan, with a view to providing a harbor of refuge for small vessels.
A ship canal connecting Lake Superior and Lake Michigan from Lake Au Train in Lake Superior to Little Bay De Noc in Lake Michigan.
At mouth of Black River and at Little Girl's Point (Ohman's Creek), Gogebic County, Michigan.
With a view to establishing a harbor of refuge at Manitowoc and Two Rivers, Wisconsin, and protection of adjoining shores from storm depredation.
Big and Little Suamico Rivers, Wisconsin.
Channels in the harbors at Washington Island, Door County, Wisconsin.
Pensaukee Harbor, Wisconsin.
Fond du Lac Harbor and vicinity, Lake Winnebago, Wisconsin.
Wilmette Harbor, Illinois.
Waterway from Lake Michigan through Black Lake, by way of Zeeland, Hudsonville, and Jenison, to a point on Grand River near Grandville, thence up Grand River to Grand Rapids, with a turning basin at Grand Rapids; or any preferable alternative route between Grand Rapids and Lake Michigan.
Cheboygan Harbor and Cheboygan River, Michigan.
New Buffalo, Michigan.
Port Austin Harbor, Michigan.
Port Sanilac Harbor, Michigan.
Carvers Bay, Michigan.
Bete Grise Bay, Michigan.
Frankfort Harbor, Michigan.
Fair Haven Harbor, Michigan.
Port Huron Harbor, Michigan.
Clinton River, Michigan.
Detroit River, Michigan, with a view to providing a navigation channel of suitable width and depth located entirely on the American side of the river, and to provide a channel two hundred feet wide and eight feet deep from deep water in Detroit River, in the vicinity of Grosse Isle Light, to deep water at Sugar Island, passing east of Grosse Isle and west of Stony Island.
Waiska River, Michigan.
Crooked and Indian Rivers, Michigan.
Naubinway Harbor, Mackinac County, Michigan.
At or near Marblehead, Ohio, with a view to establishing a harbor.
At or near Put-in-Bay, Ohio, with a view to establishing a harbor.
Vermilion Harbor, Ohio.
Rocky River Harbor, Ohio.
Cattaraugus Creek, New York.
Barcelona Harbor, New York.
Deep channel waterway from Lake Ontario near Olcott, New York, to the Niagara River at Tonawanda, New York; from Lake Ontario via Eighteen Mile Creek to Lockport, New York, and from Lockport to Tonawanda via the western end of the New York State Barge Canal; with a view to determining the possibility, feasibility, practicability, and cost of development for deep channel traffic.
Cayuga Creek and Little River, Niagara Falls, New York.
Alexandria Bay Harbor, New York.
Morristown Harbor, New York.
Port Ontario Harbor, New York.
Olcott Harbor, New York.
Wilson Harbor, New York.
Green River, at or near Green River, Utah, with a view to preventing shore erosion, and to submit a report thereon to the Congress as soon as practicable.
Redondo Beach Harbor, California.
Santa Monica Harbor, California.
Palo Alto Harbor, San Francisco Bay, California.
Southampton Bay, California.
Richardsons Bay, California.
Russian River, California.
Old River, California.
Alsea Bay, Oregon.
Yamhill River at Lafayette, Oregon.
Columbia River, Oregon and Washington, from Tongue Point to the sea.
Seaside Harbor, Oregon.
Port Orford, Oregon.
Columbia River, at and near Hammond, Oregon, with a view to preventing erosion caused by the construction of the south jetty, and providing a protected harbor near the mouth of said river.
Willamette River, Oregon, from Eugene to Springfield.
Sandy River, near Troutdale, Oregon.
Trask River, Oregon.
Miami River, Oregon.
Kilchis River, Oregon.
Wilson River, Oregon.
Chetco Cove, Oregon.
Columbia River at Rainier, Oregon.
De Poe Bay, Oregon.
Skipanon Channel, Oregon, with a view to deepening and widening the channel to accommodate all present and prospective traffic. Skipanon River, Oregon, with a view to modification of the existing project to provide for the needs of navigation above the railroad bridge.
Westport Slough, Oregon.
Coos River and its tributaries, Oregon, with a view to flood control and the prevention of erosion of the banks and the consequent filling of the channel.
Columbia River, Lake River, and Vancouver Lake, near Vancouver, Washington.
Elokomin Slough, or River, Washington.
Chehalis River, from the mouth of Skookumchuck River to the Grays Harbor County Line, Washington.
Shelton Harbor, Washington.
Bain Harbor, Washington.
Duwamish River, Washington.
Bethel Harbor, Alaska.
Douglas Harbor, Alaska.
Haines Harbor, Alaska.
Juneau Harbor, Alaska.
Kake Harbor, Alaska.
Metlakatla Harbor, Alaska.
Ship canal across Prince of Wales Island, Alaska.
Sitka Harbor, Alaska.
Unalaska Harbor, Alaska.
Valdez Harbor, Alaska.
Skagway Harbor, Alaska.
Homer Harbor, Kachemak Bay, Alaska.
Preliminary surveys—Continued.

Tanana River and Chena Slough, Alaska.
Hilo Harbor, Hawaii.
Port Allen, Hawaii.
Welles Harbor, Midway Island.
Wake Island.
Aguadilla Harbor, Puerto Rico.
Guayanes Harbor, Yabucoa, Puerto Rico.
Saint Thomas Harbor, Virgin Islands.

Lake Champlain to Hudson River water- way.
Vol. 36, p. 1631.

Sec. 4. That the International Joint Commission created by the treaty between the United States and Great Britain relating to boundary waters between the United States and Canada, signed at Washington January 11, 1909, under the provisions of article 9 of said treaty, is requested to investigate the advisability of the improvement of a waterway from Montreal through Lake Champlain to connect with the Hudson River, together with the estimated cost thereof, and to report to the Dominion of Canada and to the Congress of the United States, with its recommendations for cooperation by the United States with the Dominion of Canada in the improvement of said river.

Reports; contents.

Sec. 5. Every report submitted to Congress in pursuance of any provision of law for preliminary examination and survey looking to the improvement of the entrance at the mouth of any river or at any inlet, in addition to other information which the Congress has directed shall be given, shall contain information concerning the configuration of the shore line and the probable effect thereon that may be expected to result from the improvement having particular reference to erosion and/or accretion for a distance of not less than ten miles on either side of the said entrance.

Sec. 6. That the surveys authorized pursuant to section 1 of the River and Harbor Act of January 21, 1927, and House Document Numbered 308, Sixty-ninth Congress, first session, shall be supplemented by such additional study or investigation as the Chief of Engineers finds necessary to take into account important changes in economic factors as they occur, and additional stream-flow records, or other factual data.

Sales authorized.

Sec. 7. That when any land which has been heretofore or may be hereafter purchased or acquired for the improvement of canals, rivers and harbors is no longer needed, or is no longer serviceable, it may be sold in such manner as the Secretary of War may direct, and any moneys received from such sale shall be deposited in the Treasury to the credit of miscellaneous receipts.

Amounts collected from defaulting contractors, etc.

Sec. 8. That any amounts collected from defaulting contractors or their sureties under contracts entered into in connection with river and harbor or flood-control work prosecuted by the Engineer Department, whether collected in cash or by deduction from amounts otherwise due such contractors, hereafter shall be credited in each case to the appropriation under which the contract was made.

East River; portion declared nonnavigable.

Sec. 9. That all of that portion of the East River, in the county of Brown, State of Wisconsin, extending from Baird Street, in the city of Green Bay, east and south, be, and the same is hereby, declared to be a nonnavigable stream within the meaning of the Constitution and Laws of the United States of America. That the right of Congress to alter, amend, or repeal this section is hereby expressly reserved.

West Fork of the South Branch of the Chicago River.

Sec. 10. That that portion of the West Fork of the South Branch of the Chicago River in Cook County, Illinois, lying between the west line (produced north) of the Collateral Channel of the Sanitary District of Chicago, in the northwest quarter of section 36, township 39 north, range 13 east, third principal meridian, and a line one
thousand three hundred feet east of and parallel to the west line of section 30 (section line in South Western Avenue), township 39 north, range 13 east, third principal meridian, in the city of Chicago, Illinois, as the same now exists or may hereafter be extended, is hereby declared to be a nonnavigable stream within the meaning of the Constitution and laws of the United States.

The right to alter, amend, or repeal this section is hereby expressly reserved.

Sec. 11. That the Secretary of War is authorized to grant permission, on such terms as he may deem reasonable, to the City of Cascade Locks, Oregon, to make connection with the Government-owned water main at Cascade Locks and take water therefrom for use for fire-protection purposes only.

Sec. 12. That the pier constructed along the west coast of Lake Huron, Michigan, at Greenbush, Michigan, by Carl E. Schmidt, of Oscoda, Michigan, be, and the same is hereby, legalized to the same extent and with like effect as to all existing or future laws and regulations of the United States as if the permit required by the existing laws of the United States in such cases made and provided had been regularly obtained prior to the construction of said pier.

That the right to alter, amend, or repeal this section is hereby expressly reserved.

Sec. 13. That the Court of Claims shall have jurisdiction to hear and determine claims for damages to oyster growers upon private or leased lands or bottoms arising from dredging operations and use of other machinery and equipment in making such improvements: Provided, That suits shall be instituted within one year after such operations shall have terminated.

Sec. 14. That the Secretary of War is authorized and directed to have prepared and transmitted to Congress at the earliest practical date after January 3, 1936, a compilation of preliminary examinations, surveys, and appropriations for works of river and harbor improvement similar in general form and subject matter to that which was prepared in accordance with the Act of March 4, 1913, and printed in House Document Numbered 1491, Sixty-third Congress, third session: Provided, That the report to be prepared in accordance with this provision shall be a revised edition of the report printed in the document above mentioned, extended to January 1, 1936.

Approved, August 30, 1935.

[CHAPTER 832.]

AN ACT

Authorizing the Chippewa Indians of Wisconsin to submit claims to the Court of Claims.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all claims of whatsoever nature which the Chippewa Tribe or Bands of Indians of Wisconsin may have against the United States, which have not heretofore been determined by the Court of Claims or the Supreme Court of the United States, may be submitted to the Court of Claims with the right of appeal to the Supreme Court of the United States by either party, anything in the Judicial Code of the United States or amendments thereto to the contrary notwithstanding, for determination of the amount, if any, due said Indians from the United States under any treaties, agreements, or laws of Congress, or for the misappropriation or waste of any of the funds or lands of said Indians or band or bands thereof, or for the failure of the United
September 9, 2008

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SUBJECT: SUPPLEMENTAL ANALYSIS TO ACCOMPANY RESOLUTION NO. R1-2007-0028 IN THE MATTER OF PETITION TO THE NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD TO: 1) ORDER PACIFICORP TO SUBMIT A REPORT OF WASTE DISCHARGE AND/OR 
2) ISSUE WASTE DISCHARGE REQUIREMENTS FOR IRON GATE AND COPCO HYDROELECTRIC FACILITIES

The attached document contains the supplemental analysis that supports the North Coast Regional Water Quality Control Board's findings in Resolution No. R1-2007-0028 in the matter cited above. This analysis was ordered by the Sonoma County Superior Court in the case of KARUK TRIBE OF NORTHERN CALIFORNIA, KLAMATH RIVERKEEPER, PACIFIC COAST FEDERATION OF FISHERMEN'S ASS'N., INSTITUTE FOR FISHERIES RESEARCH V. CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, NORTH COAST REGION (Case No. SCV 241368).

Sincerely,

Catherine Kuhlman
Executive Officer

Attachments: (2) Preemption Cover Letter Preemption Analysis
SUPPLEMENTAL ANALYSIS TO ACCOMPANY RESOLUTION NO. R1-2007-0028 IN
THE MATTER OF PETITION TO THE NORTH COAST REGIONAL WATER QUALITY
CONTROL BOARD TO: 1) ORDER PACIFICORP TO SUBMIT A REPORT OF WASTE
DISCHARGE AND/OR 2) ISSUE WASTE DISCHARGE REQUIREMENTS FOR IRON
GATE AND COPCO HYDROELECTRIC FACILITIES

In Resolution No R1-2007-0028 (Resolution), the North Coast Regional Water Quality Control
Board (Regional Water Board) denied a petition requesting that it order Pacificorp to file a
Report of Waste Discharge (ROWD) and/or issue waste discharge requirements (WDR) for
Copco and Iron Gate Reservoirs. These hydroelectric facilities are regulated under the Federal
Power Act through a federal license issued by the Federal Energy Regulatory Commission
(FERC). The Regional Water Board’s denial was based on a line of controlling cases holding
that for single-purpose hydroelectric facilities, the Federal Power Act preempts state law, except
for proprietary rights to water. (See Resolution, Finding 18 [citing First Iowa Hydro-Electric
Cooperative v. FPC (1946) 328 U.S. 152; California v. FERC (1990) 495 U.S. 490; Sayles
Hydro Associates v. Maughan (9th Cir. 1993) 985 F.2d 451].) Though the Federal Power Act
preempts issuance of WDRs for FERC-regulated facilities, the Regional Water Board found
that compliance with water quality standards and other appropriate requirements of state law
would be implemented through a water quality certification order under section 401 of the Clean
Department of Ecology (1994) 511 U.S. 700; S.D. Warren Co. v. Maine Board of Env’il
Protection (2006) 126 S.Ct. 1843].) For FERC licensed hydroelectric facilities in California,
water quality certification is processed by the State Water Resources Control Board
(State Water Board), not the Regional Water Board. (See Resolution, Finding 20 [citing
Cal. Code Regs., tit. 23, § 3855].)

Petitioner filed suit and on June 12, 2008, the Sonoma County Superior Court ordered the
Regional Water Board to set aside portions of the Resolution, reconsider the original petition,
and make a determination whether the Porter-Cologne Water Quality Control Act is preempted
by the Federal Power Act in light of all of the relevant law. “If respondent analyzes the purpose
and effect of the state laws at issue, respondent may find that they are preempted, but it is
unclear whether respondent performed such an analysis.” (Tentative Ruling, p. 8.) A return on
the writ is due on October 10, 2008. The Regional Water Board approved a motion directing
the Executive Officer to comply with the court’s order with the assistance from the Office of
Chief Counsel.

Upon further review of the Resolution, the pleadings (including the original petition and
supplemental filing), relevant case law and the court’s ruling, and with assistance from legal
counsel, I conclude that the Regional Water Board’s original findings are correct. Copco and
Iron Gate Reservoirs are operated as part of the FERC licensed Klamath Hydroelectric Project.
So long as Copco and Iron Gate Reservoirs are operated under a FERC license, including any
annual licenses or a new license issued as part of pending relicensing proceedings, the
Regional Water Board is preempted from exercising its state law water quality regulatory authority by requiring WDRs for Copco and Iron Gate Reservoirs. Any new FERC license issued pursuant to the pending relicensing proceedings will be subject to section 401 of the Federal Clean Water Act, however. As authorized by section 401 of the Clean Water Act, the State Water Board will apply appropriate state water quality requirements as part of its decision to issue or deny water quality certification, and the State Water Board’s action will be applied to the Klamath Hydroelectric Project through the FERC licensing proceeding for which the certification is issued or denied. No amendment to the original Resolution is required. The Resolution is supplemented by additional analyses presented below.

Regulatory Overview

The Clean Water Act is a comprehensive federal water quality law designed to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” (33 U.S.C. § 1251(a).) The regulatory framework follows a “cooperative federalism” approach whereby individual states adopt and implement major provisions of the law provided that certain minimum standards and criteria are met and approved by the United States Environmental Protection Agency (EPA). The Clean Water Act requires states to establish water quality standards that specify both the beneficial uses of water bodies and the levels of quality that must be met and maintained in order to protect the designated uses. (Id. § 1313.) In California, beneficial uses of water bodies and objectives necessary to protect the beneficial uses are prescribed in Water Quality Control Plans (Basin Plan). In addition, the Basin Plans reflect, incorporate, and implement applicable portions of national and statewide water quality plans and policies.

Under section 402 of the Clean Water Act, a National Pollutant Discharge Elimination System (NPDES) permit is required for all point source discharges of pollutants to surface waters of the United States. NPDES permits typically regulate the discharge of treated sewage, stormwater, and other pollutants discharged through a discrete conveyance such as a pipe, ditch or channel. An NPDES permit contains effluent limitations based on applicable technology and water quality standards. Under section 401 of the Clean Water Act, water quality certification by the state is required for any activity requiring a federal license or permit, which may result in any discharge to surface waters. (33 U.S.C. § 1341.) This includes a “discharge” that may not be considered a “discharge of a pollutant” requiring an NPDES permit. (S.D. Warren Co. v. Maine Board of Envtl. Protection (2006) 547 U.S. 370, 375-378.) In issuing water quality certification, the state may impose conditions on a federal project or a project required to obtain a federal permit, in order to certify that the project protects beneficial uses and meets water quality objectives as specified in the Basin Plan.

The Porter-Cologne Water Quality Control Act (Water Code, § 13000 et seq.) is California’s broad-based regulatory program implemented by the State Water Board and nine regional water boards. The Act integrates portions of the federal Clean Water Act, specifically the NPDES permit process (33 U.S.C. § 402; see Water Code, § 13370 et seq.), and certain
federal water quality planning requirements (33 U.S.C. §§ 205, 308, 303; see Wat. Code, §§ 13170, 13240 et seq.). (See William R. Atwater & James Markle, Overview of California Water Rights and Water Quality Law, 19 Pac.L.J. 957 (1988) [also published in the preface to West's Annotated California Water Code].) Each regional board formulates, adopts and updates a Basin Plan for its region, subject to approval by the State Water Board and, for waters subject to the Clean Water Act, the EPA.

Under the Porter-Cologne Act, discharges of waste to waters of the state that are not NPDES “discharges of pollutants” require the issuance of waste discharge requirements (WDR) unless otherwise waived. WDRs are a creation of state law, without the imprimatur of federal law that NPDES permits and water quality certifications carry. Discharges of waste that are not subject to NPDES permits include runoff from nonpoint sources such as agricultural activities and waste discharges to land or to groundwater. Like NPDES permits, WDRs are water quality permits. WDRs prescribe requirements, such as limitations on temperature, toxicity, or pollutant levels, as to the nature of any discharge. (Wat. Code, § 13260, subd. (a).) WDR’s may also specify conditions where no discharge will be permitted. (Id., § 13241.) WDR’s may also include monitoring and reporting requirements. (See id. § 13267, Cal. Code Regs., tit. 23, § 2230.) WDRs implement the Basin Plan, taking into consideration the beneficial uses to be protected, and water quality objectives reasonably required for that purpose, other waste discharges, and the need to prevent nuisance. (Wat. Code, § 13263, subd. (a).)

Water Code section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the state, other than into a community sewer system, shall file with the Regional Water Board a report of waste discharge (ROWD) containing such information and data as may be required by the Regional Water Board, unless the Regional Water Board waives such requirement. The ROWD serves as an application for a WDR permit that must describe the wastes to be discharged, the setting for the discharge, and the method of treatment or containment.

The issuance of WDRs is a discretionary act that triggers the application of the California Environmental Quality Act (CEQA). (Pub. Resources Code, §§ 21000-21177.) CEQA is a state law that requires California decision-makers to analyze and mitigate where feasible the environmental impacts that may result from projects subject to state approval.

Discharges from the tailrace of a dam, absent the addition of a pollutant, are not considered discharges of pollutants and therefore are not subject to federal NPDES permitting. (See National Wildlife Federation v. Consumers Power Co. (6th Cir. 1988) 862 F.2d 580; National Wildlife Federation v. Gorsuch, (D.C.Cir.1982) 693 F.2d 156.) However, discharges from the tailrace of a dam may be considered a “discharge of waste” under the Porter-Cologne Act, and may be subject to WDRs. (See, e.g., Lake Madrone Water District v. SWRCB (1989) 209 Cal.App.3d 163.) Though not common, a regional water board may issue WDRs or other orders to the owners and operators of dams and reservoirs that are not FERC licensed hydropower facilities. Because dams and reservoirs implicate water rights, the State Water Board must be consulted and may decide to address water quality issues through its water rights authority. (See State Water Board Order No. WQ 89-18 [Central Valley Regional Water

California Environmental Protection Agency

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Board issued WDRs to the Bureau of Reclamation for its high temperature releases from Shasta dam; however, the State Water Board opted to address water quality issues using its water rights authority to better coordinate water supply issues.}

The State Water Board, Division of Water Rights is the agency charged with various responsibilities including the administration of the water rights permit system. In granting applications to appropriate water and other water right actions, the State Water Board, Division of Water Rights must consider the protection of beneficial uses and water quality standards in the Basin Plan. (Wat. Code, § 1243.5; 1258; see generally id. § 174 [combining water quality and water right authority in the State Water Board, so that water pollution and water quality are considered whenever applications for water right permits are approved].) The State Water Board has the authority to require terms and conditions that in its judgment will best develop, conserve, and utilize water in the public interest. (Wat. Code, §§ 1253, 1257.) Discretionary actions taken by the State Water Board, Division of Water Rights, are also subject to the requirements of CEQA.

To clarify the preemption and Clean Water Act case law at issue, it is helpful to distinguish between the federal and state laws establishing permitting requirements or other procedures through which water quality requirements may be applied, and the substantive water quality law that may be applied through those requirements. Generally, substantive water quality law is a blend of federal and state standards codified in the Basin Plan and elsewhere, and includes the beneficial use designations and objectives to protect the beneficial uses. Procedural water quality law specifies the federal or state permit mechanism that may be required for an activity, and will vary depending on the type of activity and nature of the discharge. Whether a given discharge is subject to an NPDES permit, water quality certification, or WDR permit can be considered a permitting or procedural requirement. At the risk of grossly over-simplifying what is a very complicated regulatory regime, generally speaking, NPDES permits, water quality certification, and WDR permits implement the same body of substantive state and federal water quality laws, because the federal permitting requirements require or authorize the state to apply appropriate requirements of state law as part of the federally required permit or certification. (See, e.g. 33 U.S.C. § 1311(b)(1)(C), 1342(a) [in addition to implementing specified Clean Water Act requirements, NPDES permits must implement any more stringent water quality requirements established under state or federal law].)

Preemption Cases

Some confusion in this case may have resulted because the two controlling preemption decisions came from actions by the State Water Board through the Division of Water Rights. Petitioner asserts that the federal case law addressing the preemptive effect of the Federal Power Act (FPA) does not address water quality because “[t]he State Board was proceeding pursuant to its water rights permitting authority -- regulatory authority wholly separate from Porter-Cologne’s water quality program.” (Petitioners’ Opening Brief at 28.) This argument fails to recognize that state water rights authority incorporates broad water quality and environmental authority, and it was precisely this exercise of water quality and environmental authority that the courts disallowed. As analyzed in more detail below, the federal holdings
apply equally or more to the Regional Water Board, because the actions that the State Water Board was preempted from taking were the same or similar state water quality and environmental requirements to those that petitioner requests in this case.

In California v. FERC, (1990) 495 U.S. 490, the Supreme Court disallowed a state water right permit condition requiring that the project comply with instream flow requirements to protect fish. Although the condition was imposed pursuant to the state’s water right permitting authority, the requirements established under the condition were water quality requirements focused on protecting the fisheries beneficial use. Had these requirements been a proprietary water right requirement, the Court would have upheld the condition under its narrow construction of section 27 in the Federal Power Act, which upholds state authority over “the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.” However, because the flow requirement was to protect the fishery, the court “decline[d] at this late date to revisit and disturb the understanding of § 27 set forth in First Iowa. As petitioner prudently concedes, First Iowa’s interpretation of § 27 does not encompass the California regulation at issue: California’s minimum stream flow requirements neither reflect nor establish ‘proprietary rights’ or ‘rights of the same nature as those relating to the use of water in irrigation or for municipal purposes.’” (Id. at 498.) Not willing to disturb a precedent set by First Iowa, the Court concluded that the flow requirement conflicted with FERC’s comprehensive planning authority and was preempted. (Id. at 506.)

In Sayles Hydro Associates v. Maughan, the State Water Board requested that the federal licensees conduct certain environmental studies for CEQA compliance before it could issue a water right permit. Again, even though the state requirements were imposed in the context of a water right permit, these studies focused on the environmental impacts of the project, including water quality, not water rights. The Court found that State could have no more involvement because there were no conflicting water right claims or impact to prior water right holders within the watershed. “If Congress has ‘occupied the field,’ anything the State Board does except for deciding proprietary water rights conflicts with federal law.” (Id. at 454 [italics added].) Because the issue of field preemption was purely legal, it did not even need to know the outcome of the studies or what requirements the State Water Board might have imposed as a result of the studies — merely requiring that the FERC licensees conduct the studies was preempted. (Ibid.) “Since forcing the [licensees] to provide environmental impact reports to the State Board has nothing to do with determining proprietary rights in water, federal preemption bars the state requirements.” (Id. at p. 455.) Thus, the Ninth Circuit Court of Appeals solidified and expanded the holding in California v. FERC, and made clear that all state permitting requirements, other than requirements applying proprietary water rights-related law, are field preempted.

In California v. FERC, the state could not enforce a water quality requirement designed to protect fisheries, and in Sayles Hydro, the state could not even require CEQA studies to make information available to the State Water Board and the interested public about the environmental impacts of the FERC licensed hydropower project. The fact that these cases were decided in the context of a state water rights permit and not WDR is a distinction without substance. Like a state water right permit, a WDR is also a state permit that would include
water quality requirements and CEQA studies and mitigation. As with a state water right permit, the requirement to obtain a WDR is established under state law, and there is no federal law requirement that the permit or WDR be obtained. (See Wat. Code, §§ 1052, 1225, 13260, 13261, 13263, 13264.) Proprietary water rights law is the only state law preserved by section 27 of the FPA.

Petitioner contends that the state is subject to only conflict preemption, and may impose requirements that "merely supplement [Pacificorp's] existing FERC license" with additional requirements to protect water quality." (Petitioners' Opening Brief at 29.) Petitioner relies on California Oregon Power Company v. Superior Court, (1956) 45 Cal. 2d 858 (COPCO), which held that California could prosecute a public nuisance action involving operation of two hydroelectric dams. Although one of the dams at issue in COPCO is also involved in this case, the circumstances were different. The dams did not have a FERC license, and the dam owner did not apply for a license until after the nuisance action was initiated. (Id. at 861) Like this case, and unlike COPCO, California v. FERC and Sayles Hydro concern state regulation of dams that have a FERC license.

The court in COPCO expressed the view that the Federal Power Act did not establish occupation of the field preemption, and that the state could impose operational requirements that did not amount to a veto of the project. (Id. at 868-869) But the court did not hold that the state could regulate the dams' operations even after a FERC license was issued, a fact pattern that was not before the court. Indeed, in rejecting the argument that FERC regulation occupied the field, the court emphasized the fact that the facilities did not have a FERC license. (Ibid. ["The federal commission has not purported to adjudicate that question [whether dam operations constituted a public nuisance] or do anything about it except to have defendant apply for a license for its dams, Copco 1 and 2, which for many years it has maintained without any effort to obtain a license and the commission has done nothing in regard to the problem"].)

The distinction between project operations before and after a FERC license is issued is critical because in issuing a license, FERC determines what it believes to be the appropriate balance between the environmental problems that may be caused by dam operations and the benefits of hydroelectric power generation. Thus, in California v. FERC, the United States Supreme Court held that the state could not issue a water right permit imposing instream flow requirements that "supplement" the requirements of the FERC license, because so doing "would disturb and conflict with the balance embodied" in the FERC licensing decision. (495 U.S. 490, 506.) In the view of the United States Supreme Court, conditions imposed in a state permit that are in addition to or supplement the requirements of the FERC license but do not preclude operation of the project are still preempted because they have the effective of overriding FERC's licensing determination, and thus amount to a veto. (Id. at 506-507.)

Assuming that COPCO can be read to apply even after a FERC license has been issued, it is inconsistent with California v. FERC and Sayles Hydro. COPCO stated that the state may not veto the project, which the court equated with the proposition that "the state may not block the project completely." (458 Cal.2d 858, 868.) But COPCO was decided before California v. FERC, which held that the state could not "veto" the FERC licensing decision by imposing additional requirements in a
state permit. As Sayles Hydro concludes, this amounts to occupation of the field preemption. A state permit cannot impose any requirements, other than those addressing proprietary rights, whether or not those requirements conflict with the terms of the FERC license.

COPCO also precedes the further expansion of the environmental responsibilities of FERC and its predecessor agency the Federal Power Commission (FPC) by the federal courts. (See, e.g., Scenic Hudson Preservation Conference v. FPC (2d Cir. 1989) 354 F.2d 608 [requiring FPC to consider fisheries and aesthetic evidence in making licensing determination]; Udall v. FPC (1967) 387 U.S. 428 [requiring the FPC to evaluate environmental impacts of hydropower project]; Tennessee Valley Authority v. Hill (1978) 437 U.S. 153 [blocking completion of dam project that would harm the endangered snail darter].) Additionally, since COPCO, the FPA itself has undergone amendments further broadening the scope of FERC's authority over hydropower projects. (See, e.g. Electric Consumers Protection Act of 1986, 16 U.S.C.A. § 808 [amending FPA to require FERC decisions to give "equal consideration" to environmental matters, including fish and wildlife protection, energy conservation and recreation].) In fact, the Court cited FERC's expanded responsibility to set appropriate conditions for protection of fish and wildlife in California v. FERC as an additional reason for recognizing FERC's "broad and paramount federal regulatory role," to the exclusion of state regulation under its own permit system. (495 U.S. 490, 499-500.)

Petitioners' argument that the state may impose requirements that do not conflict with the federal license was properly addressed by the United States District Court in denying plaintiffs' claims for injunctive relief in a separate private nuisance lawsuit. (McConnell v. PacifiCorp (N.D. Cal. 2007) 2007 WL 2385096. There, plaintiffs sought a permanent injunction directing PacifiCorp to cease operation of Iron Gate and Copco dams and reservoirs in a manner that causes Microcystis aeruginosa blooms, discharges of toxins associated with the algae bloom, and discharges of water at temperatures and with dissolved oxygen concentrations harmful to fish and other aquatic species. (Id. at p.7.) Citing the preemption cases, the court concluded:

"As in the above-cited decisions, the Klamath Hydroelectric Project is subject to the FPA, which gives FERC broad powers and exclusive licensing authority of the development and operation of non-federal hydropower projects on navigable waters. The FPA establishes an elaborate regulatory regime that charges FERC with the responsibility for balancing 'the interests of the hydropower licensees and other participants in the licensing process.'

Pursuant to First Iowa, California v. FERC, and Sayles Hydro, operational changes to a particular program ostensibly arising out of state law are prohibited."

(Id at p.6 [citations omitted].)

Despite the clear holdings of California v. FERC and Sayles Hydro, and an additional warning about sanctions from the court in Sayles Hydro, Petitioner asks that the Regional Water Board
impose environmental requirements under state law, independent of FERC licensing proceedings. (See Sayles Hydro, supra, 958 F.2d 451, 456 [reasoning that the federal law requirement that FERC consider state agency recommendations on environmental matters as part of the FERC licensing process supports the conclusion that states cannot impose those requirements independently, and concluding with a warning that that the state's "unwillingness to accept" the conclusion that FERC licensing occupies the field of environmental regulation, leaving no room for the state to independently impose its requirements, although warranting sanctions in that case, "gives us pause"]).) The Regional Water Board was legally correct to decline this invitation.

**Clean Water Act Authority**

Fortunately, Congress gave states a mechanism to apply many of their environmental requirements – specifically those relating to water quality – in connection with the FERC licensing process.

Section 401 of the Clean Water Act provides:

"Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into navigable waters, shall provide the licensing or permitting agency a certification from the State...that any such discharge will comply with the applicable provisions of section 1311, 1312, 1313, 1316 and 1317 of this title."

(33 U.S.C. §1341.)

Section 401(d) provides further that the certification shall set forth any effluent limitations and other limitations, monitoring requirements to assure compliance with limitations, and "any other appropriate requirement of State law set forth in such certification." (33 U.S.C. § 1341(d) [italics added].)

When applicable, section 401 of the Clean Water Act gives the states broad powers over FERC licensed hydroelectric projects, including the power to impose additional conditions or even veto the licensing or relicensing of a project to FERC licensing. (Id. §§ 1341(a) ["No license shall be granted if certification is denied."], 1341(d) ["Any certification provided under this section . . . shall become a condition on any Federal license or permit subject to the provisions of this section."].) At first blush, this might seem inconsistent with California v. FERC and Sayles Hydro, which held that the Federal Power Act preempts state authority to deny, impose additional conditions of operation, or even request additional information of FERC licensees based on water quality or other environmental concerns. But there are two important differences between 401 certification authority and the state permitting requirements at issue in California v. FERC and Sayles Hydro.
First, the water quality certification requirements of section 401 of the Clean Water Act are established under federal law. A federal law like the Federal Power Act may preempt state permitting requirements, like those providing for protection of water quality pursuant to water right permitting or WDR, but a federal law does not preempt another federal law. To be sure, section 401 of the Clean Water Act incorporates state law requirements. (See, e.g. id. § 1341(d) [certification may apply any appropriate “requirement of State law”].) But where a federal law incorporates state requirements, it makes those requirements federal requirements. For purposes of federal preemption analysis, the substantive requirements of state law applied through the water quality certification process become requirements of federal law. (See also id. § 1365(a), (f)(5) [authorizing federal Clean Water Act citizen suits, in federal district court, for violation of water quality certification requirements.])

Second, states exercise water quality certification authority in connection with the FERC licensing process. In this regard, conditions of certification are like the recommendations a state agency may make to FERC as part of the FERC licensing process, a power the Sayles Hydro court recognized the states retain. (See Sayles Hydro, supra, 985 F.2d 451, 456 fn. 2.) If a state agency recommends conditions of approval based on what state law would require if the state agency had authority to apply state law and FERC accepts those recommendations and adopts them as conditions of the FERC license, the licensing process has effectively applied state substantive law requirements to the FERC licensee. A water quality certification is similar, except that the state’s conditions are not mere recommendations – they are binding on FERC. With both non-binding recommendations accepted by FERC and binding certifications, the state’s environmental requirements apply to the licensee through the FERC licensing process and as conditions of the FERC license.

The United States Supreme Court upheld the applicability of 401 certification requirements to FERC licensed hydroelectric facilities in PUD No. 1 of Jefferson County v. Washington Department of Ecology (1994) 511 U.S. 700. The State of Washington issued a water quality certification conditioning certification on minimum instream flow requirements. The Court did not engage in a Federal Power Act preemption analysis because the case involved a competing federal statute – the Federal Clean Water Act – that incorporates federal and state requirements. Once state authority was triggered by the federal requirement that “any activity subject to a federal permit or license which may result in any discharge into navigable waters” receive water quality certification, the Court broadly construed the state’s authority to condition its certification for the project. This holding brings in substantive state water quality laws, but only through the statutory implementation provisions of section 401 the federal Clean Water Act as applied to FERC licensing.

In PUD No. 1, the United States Supreme Court upheld the state’s condition of water quality certification requiring attainment of minimum instream flows for a hydroelectric project based on protection of the designated beneficial use. (511 U.S. 700, 723.) Washington had designated the stream reach as Class AA with designated uses of salmon and other fish migration, rearing, spawning, and harvesting. (Id. at 714.) The Basin Plan did not have specified criteria, but the Court found that the state could impose conditions that required the project to be consistent with both components of the water quality standard. (Id. at 717 [criteria component of water
quality standard cannot reasonably be expected to anticipate every water quality issue on a
given water body. In addition, the Court rejected the argument that minimum instream flows
were not sufficiently related to water quality regulation. (Id. at 717-720.) The Clean Water Act
describes pollution broadly as "the man-made or man induced alteration of the chemical,
physical, biological, and radiological integrity of the water," (33 U.S.C. § 1362(19)), and
expressly recognizes that pollution may result from "changes in the movement, flow, or
circulation of any navigable waters or groundwaters, including changes caused by the
construction of dams, levees, channels, causeways, or flow diversion facilities" (33 U.S.C. §
1314(f)(F)). (511 U.S. 700, 719-20.) In S.D.Warren Co. v. Maine Board of Env’t Protection,
(2006) 547 U.S. 370, the Court unanimously upheld the state’s jurisdiction to establish
conditions applicable to hydroelectric projects subject to FERC relicensing, but again, only by
way of a certification under section 401 of the Clean Water Act issued as part of the relicensing
process.

State water quality certification authority over FERC licensed hydroelectric projects is broad
substantively but subject to relatively narrow procedural limitations governing how and when
that authority may be exercised. The state has broad authority to deny or condition certification
based on federal or state water quality requirements. But the state only has an opportunity to
deny or condition certification in connection with the FERC licensing process, which occurs only
when the original license is issued, the project is relicensed, or the licensee applies for a FERC
license amendment. And the state must exercise that authority through the certification
process. The initiation of a FERC relicensing proceeding provides authority for the state to
apply its water quality certification requirements; it does not lift the Federal Power Act
preemption that applies to independent state law permitting requirements like WDR or
environmental requirements for water right permitting.

Thus, the state’s Clean Water Act authority over FERC licensed hydroelectric projects is issued
through the water quality certification process. Section 401 of the Clean Water Act establishes
both the legal authority by which the state may determine what conditions are necessary to
meet applicable water quality requirements and the process by which that authority may be
exercised. The state must act through its certification, not through a state law permitting
process that applies independently of FERC licensing. In California, the State Water Board
issues water quality certification for FERC licensed projects, not the Regional Water Board.
(Cal. Code Regs., tit. 23, § 3855.) Requiring WDRs would not only impermissibly interfere with
the federal regulatory regime over hydropower, it would also run afoul of state regulations
assigning water quality certification responsibilities over FERC-regulated facilities to the State
Water Board.
Scope of Preemption

Petitioners repeatedly overstate the Regional Water Board's findings regarding preemption. To be clear, Resolution R1-2007-0028 did not find that the FPA preempts the "entire field of water quality regulation." To the contrary, the Regional Board expressly acknowledged that under section 401 of the Clean Water Act, a state may impose conditions on a federal project or a project required to obtain a federal permit, in order to certify that the project protects beneficial uses and meets water quality objectives as specified in the Basin Plan. (See Resolution, finding 19.) And the state's water quality certification authority includes authority to oversee compliance with the state's conditions of certification, and take enforcement action is necessary, after a FERC license has been issued based on the state's certification. (See Wat. Code, §§ 13385-13387.)

The state's water quality certification authority also includes the authority to set monitoring and reporting requirements, either as conditions of a certification or as needed for the State Water Board's review of an application for water quality certification. Under Water Code section 13383, the State Water Board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements for any person who discharges, or proposes to discharge to navigable waters. (Wat. Code, § 13383, subd. (a) [authorized by section 13160, which designates the State Water Board the agency responsible for administering federal Clean Water Act requirements].) This includes the establishment and maintenance of monitoring equipment or methods, including where appropriate, biological monitoring methods, sampling effluent, and other information reasonably required for water quality certification. (Wat. Code, § 13383, subd. (b)). Other information that may reasonably be required would include any studies reasonably necessary for the State Water Board to review an application for water quality certification and determine what conditions of certification may be appropriate. Failure of PacifiCorp to provide the requested data and/or additional studies requested under Water Code section 13383 could result in civil liability from $10,000 up to $25,000 for each day in which the violation occurs. (Wat. Code, § 13385.) The State Water Board may also deny the application for water quality certification without prejudice if the applicant fails to provide the information requested by the State Water Board that is needed in order to make its determination. (Cal. Code Regs., tit. 23, § 3837, subd. (b)(2).)

In addition, the Federal Power Act does not preempt Basin Planning. The state may be preempted when it seeks to impose Basin Plan objectives on a FERC licensed project pursuant to WDR or other orders, but the Basin Plan itself does not impose any requirements on the FERC licensee. Of course, the program of implementation included in a Basin Plan should take into account where the State and Regional Water Boards have implementation authority and where they do not. Thus, the Basin Plan program of implementation may provide for implementation through water quality certifications instead of through the WDR or water right orders that would be relied on if there were no preemption problem. It should also be noted that Basin Plans are not limited to actions that the Water Boards themselves can apply and enforce. (See Wat. Code, § 13242, subd. (a) [Basin Plan program of implementation may include "recommendations for appropriate action by any entity"]; United States v. State Water Resources Control Bd. (1986) 182 Cal.App.3d 82, 120 [observing, in the context of a Basin Plan, that "the State Water Resources Control Board may impose some form of enforcement if a party fails to comply with a State Water Board basin plan"].)

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Plan addressing the water quality impacts of water supply project operations, that "nothing in the federal [Clean Water] act or California's Porter-Cologne Act allows the Board to limit the scope of its basin planning function to such water quality standards as are enforceable under the Board's water rights authority"). Thus, in addition to providing for implementation through water quality certification, a Basin Plan may include recommendations for actions by FERC. Indeed, the Basin Plans are part of the comprehensive plan that FERC must consider as part of its hydropower licensing decisions. (See 18 C.F.R. § 2.19(a)(2).)

This preemption analysis focuses on the issuance and administration of a state WDR permit for Copco and Iron Gate dams, as this is the relief Petitioners requested. It is not intended to address other circumstances, not present here, where the state retains authority to regulate the water quality impacts of FERC licensed projects. (See, e.g., State Water Board Order WR 2008 – 0014 at p. 31 [the Federal Power Act exempts state authority over consumptive use or other non-hydroelectric power use from federal preemption, and case law recognizes state regulatory authority in fields where the state ordinarily would be preempted where the state is regulating operations by the state itself or by a political subdivision of the state].) This analysis addresses the state's water quality certification authority, but only to the extent necessary to make clear that requiring submission of a ROWD or issuance of WDR does not involve the exercise of that water quality certification authority, and to explain why the preemption analysis for water quality certification is different from the preemption analysis for WDR. In sum, rather than saying that the FPA preemptions "the entire field of water quality regulation," Resolution R1-2007-0028 recognizes that the issuance and administration of WDR is preempted by the FPA, and that preemption is occupation of the field preemption.

Upon further review and analyses, the Regional Water Board was correct in finding that it cannot require PacifiCorp to submit a ROWD and/or issue WDRs for the Copco and Iron Gate facilities. Federal and state water quality laws will control through the issuance of water quality certification issued by the State Water Board, Division of Water Rights, pursuant to section 401 of the Clean Water Act. This conclusion does not change even if an applicant withdraws its application for certification to the State Water Board. So long as the facilities are regulated by a FERC license, including an annual license or a new license issued as part of the pending relicensing proceedings, the Regional Water Board is preempted from requiring the submittal of a ROWD and issuing WDRs. Licensees must receive state water quality certification from the state for its license renewal. In the interim, and as previously stated, Regional Water Board staff shall continue to diligently develop the Klamath TMDLs, and will continue to participate in the FERC relicensing process to ensure that the State Water Board water quality certification imposes conditions to ensure that the project meets Basin Plan requirements.

9/9/08
Date

Catherine Kuhlman, Executive Officer

California Environmental Protection Agency
California’s Water Market, By the Numbers: Update 2012

November 2012

Ellen Hanak and Elizabeth Stryjewski

Supported with funding from the S. D. Bechtel, Jr. Foundation
Summary

This report provides an overview of the policy context for water marketing and the related practice of groundwater banking and summarizes recent trends in both areas. The water market enables the temporary, long-term, or permanent transfer of the rights to use water in exchange for compensation. The ability to transfer these rights adds flexibility to the state’s water supply—helping to address temporary drought conditions and to accommodate longer-term changes in the pattern of demand. Groundwater banking involves the deliberate storage of surface water in aquifers during relatively wet years, for use in dry years. Both tools are part of a modern water management portfolio that will enable California to manage its water resources sustainably, benefitting both the economy and the environment. Given the physical, financial, and environmental limits on expanding overall water supplies in California and the prospect of supply reductions caused by a warming climate, both tools are likely to become increasingly important.

Although state and federal policies have supported the development of water marketing and groundwater banking, no official publications track their evolution in California. Since the early 2000s, PPIC has tracked these trends in an effort to fill this information gap. This report provides an update of the 2002 PPIC report *California’s Water Market, By the Numbers*, with an expanded analysis of statewide water market trends from 1982-2011 and new information on groundwater banking in Kern County and Southern California.

Jump-started by a prolonged drought in the late 1980s and early 1990s, the water market now accounts for roughly 5 percent of all water used annually by California’s businesses and residents (about 2 million acre-feet of water trades are committed annually, with around 1.4 million acre-feet in actual flows exchanging hands). Over time, the market has shifted from primarily short-term (single-year) contracts to one dominated by longer-term and permanent trades. Farmers are the primary source of water, and the destinations include other farmers, cities, and the environment. Market growth has slowed since the early 2000s, reflecting a variety of infrastructure and institutional constraints, including new pumping restrictions in the Sacramento-San Joaquin Delta (a major conveyance hub) and more complicated approval procedures.

Although water agencies in several parts of the state have engaged in active groundwater storage for local water users for some decades, the practice accelerated in the mid-1990s with a new form of banking involving storage for offsite parties. These water banks—located in Kern County and Southern California—had built up reserves of nearly 3.4 million acre-feet by 2006. During the drought of the late 2000s, they made nearly 1.9 million acre-feet available to their depositors, considerably more than the drought-related water market sales. In Kern County, where basin management is still voluntary, these withdrawals have sparked controversies because they occurred during a time when overall groundwater levels were falling.

The report offers a number of recommendations for strengthening these tools and fostering their responsible development, including the following:

- Address infrastructure weaknesses in the Delta, which have already limited the market’s ability to furnish dry-year water supplies, and which have begun to limit the availability of wet-year water supplies to replenish groundwater banks.
- Clarify and simplify the institutional review process for transfers, while continuing to prevent harm to the environment and adverse effects for other legal users of the state’s waters.
Strengthen local groundwater management to support both marketing and groundwater banking. Outside pressure—with a credible threat that the state would step in if local agencies fail to do so—might be the best way to proceed, ideally accompanied by positive financial incentives to improve basin management.

Develop models for mitigating the economic effects of large-scale land fallowing deals. Economic shifts make it likely that some cropland will be permanently retired in the future, and alleviating the community-related effects of fallowing would help ease economic transitions.

California should continue to pursue—and find the funds to support—environmental water purchases, which can help reduce the conflicts associated with reallocating water to the environment while improving the efficiency of environmental water management.

Because routinizing marketing and banking transactions will require some risk-taking, high-level state and federal officials should be involved. One option might be to develop a coordinating committee from relevant agencies, with the authority to facilitate discussions and transactions.

Attending to these priorities will help ensure the success of two of the state’s most critical strategies in its efforts to efficiently manage its water resources—water marketing and groundwater banking.
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<table>
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<tr>
<td>Af</td>
<td>acre-foot</td>
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<td>CAA</td>
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<td>CALFED</td>
<td>State-federal program for the San Francisco Bay-Delta Estuary</td>
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<td>Imperial Irrigation District</td>
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<td>maf</td>
<td>Million acre-feet</td>
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<td>Metropolitan Water District of Southern California</td>
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<td>National Environmental Protection Act</td>
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<td>taf</td>
<td>Thousand acre-feet</td>
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<td>U.S. Bureau of Reclamation</td>
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Introduction

Two important tools for modern water management in California are water marketing and the related practice of groundwater banking. Water marketing involves the voluntary transfer of the right to use water from one party to another on a temporary, long-term, or permanent basis, in exchange for compensation. In California, water rights have generally been held for many decades under the state’s “first in time, first in right” legal system. Most of these rights have been allocated on the basis of seniority, and senior rights-holders (who have more reliable—and hence more valuable—supplies) often have relatively low-value uses for at least some of their water. The market provides incentives for water-rights-holders with more ample supplies and relatively lower-value uses to transfer some water to parties with less ample supplies and higher-value uses. The prices negotiated for these transfers provide useful information to all parties about the economic value of water, creating incentives to conserve water, to invest in local infrastructure to reduce conveyance losses from evaporation and leakage, and to coordinate infrastructure uses statewide. In this way, the market helps California’s overall water use become more economically efficient. Short-term transfers (within a given year) are especially useful for coping with droughts. Long-term and permanent transfers facilitate longer-term shifts in economic activity and the associated changes in the pattern of water demands. Given the physical, financial, and environmental limits on expanding overall water supplies in California—and the prospect of supply reductions caused by a warming climate—the water market will become an increasingly valuable tool for supporting a healthy economy, along with other tools that improve the economic efficiency of water use and water infrastructure (Medellín-Azuara et al., 2012; Hanak and Lund, 2012; Hanak et al., 2011, Joyce et al. 2009).

Groundwater banking is one such tool. It involves the deliberate storage of surface water in aquifers during relatively wet years. California has considerable capacity to engage in such banking, with suitable aquifers in many population and farming centers. In many of these aquifers, years of overdraw—when withdrawals exceed natural recharge—have made substantial storage space available. Groundwater banking is a relatively cost-effective way to augment California’s overall potential to store water, particularly for dry years (California Department of Water Resources, 2009; Hanak et al., 2011). Expanding this type of storage can also help California adapt to a warmer future, because groundwater basins can help make up for the loss of seasonal storage now provided by the Sierra Nevada snowpack (California Department of Water Resources, 2008; Pulido-Velazquez et al., 2004; Connell-Buck et al., 2011; Hanak and Lund, 2012).

For many water managers, groundwater banks and water markets are complementary tools for accessing and managing supplies. A well-functioning water market also facilitates groundwater banking, because it enables managers to purchase and bank additional water for later use. Likewise, well-functioning groundwater banking programs can augment the volume of water available for lease or sale by moving

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1 California has a dual system of surface water rights, consisting of riparian and appropriative rights. Riparian rights can only be used on lands adjacent to the surface water source from which the water is diverted; this restriction limits transferability to other users. Appropriative rights—the predominant form of surface water rights in California—can be used on non-adjacent lands. Before 1914, these rights were acquired through demonstrated use (“appropriation”); since the adoption of the state’s modern Water Code, they have been acquired through state permits. This report focuses on appropriative rights, which are transferable.

2 Groundwater storage is estimated to be one of the least expensive ways to make water available—with costs starting at $10 per acre-foot and ranging up to $600 per acre-foot in high-cost cases. Water transfers can cost between $50 and $550 per acre-foot; new surface storage ranges from $340 to $1,070 per acre-foot, and recycled municipal water ranges from $300 to $1,300 per acre-foot. Seawater desalination is still the most expensive source, ranging from $900 to $2,500 per acre-foot (Hanak et al., 2009, using various sources).
water from wetter to drier periods. Both the water market and groundwater banks help tie together California’s often fragmented water infrastructure, and they increase incentives for local water managers in different parts of the state to cooperate.

State and federal policies have supported water marketing and groundwater banking in California over the past several decades through a suite of actions, including legal changes to facilitate marketing, direct purchases of water, grants to help fund groundwater banking infrastructure, and other policy initiatives. But while state and federal agencies oversee most water transfers, no official publications track the evolution of the market as a whole. Similarly, no official repository exists that documents the evolution of groundwater banking in California.

Since the early 2000s, PPIC has tracked these trends in an effort to fill this information gap. In 2002, PPIC published California’s Water Market, By the Numbers, an overview of patterns and trends in the state’s nascent water market (Hanak, 2002). Here, we provide an updated and expanded look at the evolving water market, including an additional decade of data on water trades (1982-2011) and a new set of data on groundwater banking.3 As in earlier work, we focus on water trading that occurs between distinct management entities such as urban and agricultural water districts, not the trading that might occur between farmers or other businesses within the same irrigation or water district. We focus on volumes traded, not prices of transactions, because systematic information on prices is much less readily available in public data sources. For groundwater banking, we focus on projects that store water for off-site parties. This type of banking has grown in popularity since the mid-1990s in Kern County and in parts of Southern California. Many other entities throughout the state engage in active groundwater storage for their own use, but the lack of comprehensive reporting requirements on groundwater use in California makes it particularly difficult to track this activity.

In the following chapter, we provide a brief overview of the legal and policy context for water marketing and groundwater banking, as well as some basic information on the mechanics involved. We then present trends in the water market, discussing these trends in terms of duration (short-term, long-term, and permanent), geographic sources and destinations, and types of water users (agricultural, urban, and environmental). The fourth chapter provides similar information on trends related to groundwater banking. In the fifth and final chapter, we review our major findings and discuss their policy implications. The appendices contain information on sources and methods and detailed data tables.

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3 Several other PPIC reports also address water marketing and groundwater banking in some detail. Who Should Be Allowed to Sell Water in California? Third-Party Issues and the Water Market (Hanak, 2003) provides an in-depth discussion of water market trends through 2001 and policy challenges related to marketing and banking. Managing California’s Water, From Conflict to Reconciliation (Hanak et al., 2011) and Water and the California Economy (Hanak et al., 2012) provide brief updates on market and banking trends during the 2000s and discuss related policy issues.
Some Basics on Water Marketing and Groundwater Banking

Water marketing and groundwater banking are important—and little understood—components of California’s water management toolkit. The following sections describe how these tools work, including the evolving legal and policy context in which various types of deals are approved and implemented.

Who Can Sell Water and What Types Can They Sell?

California’s Water Code provides two basic guidelines on who can participate in the water market: Sellers must have the rights to use the water throughout the term of the proposed transfer, and the water they sell must be “wet”—i.e., physical water, not merely unused “paper” rights (as described below). From a practical standpoint, sellers and buyers must also be able to get the water from the source to the destination, thus making suitable infrastructure a key ingredient.

Water-Use Rights

Although the appropriation of water rights in the first few decades following California’s statehood generally involved individuals and private companies, most surface water rights today are held by local public agencies: special districts and some municipalities. Legally, some of these agencies actually hold long-term “contract entitlements” rather than “rights” to surface water; in these cases, the local parties have contracts with federal or state agencies that run large water projects and hold the associated water rights. The ultimate rights-holder for the federally-owned Central Valley Project (CVP) is the U.S. Bureau of Reclamation (USBR). The California Department of Water Resources (DWR) plays a similar role for the state-owned State Water Project (SWP).

Because most water is still used for irrigation in California, most water is leased or sold by farmers or irrigation districts, who market water to other farmers with scarce supplies and higher value crops, to growing cities, and to environmental programs. In some water districts, individual farmers have specific amounts of surface water (or “allocations”) assigned to them and are therefore in a position to sell or lease this water, whereas in others the district will make this determination and compensate farmers who agree to participate in the transaction. In rural areas, some water districts’ governing boards are elected by a weighted vote of property owners, while in others, a one-person-one-vote rule applies. It is often thought that districts with the property-weighted voting rules (which more heavily represent local farmers) are more likely to sell or lease water to other parties.

Groundwater is also an important source of water in California—constituting about a third of statewide use on average, and more in dry years and in some regions. In contrast to surface water, there are few places where groundwater rights are “quantified” (i.e., where users have rights to withdraw a specific quantity of water). Thus, the right to pump groundwater (and hence, potentially, to sell it) is generally available to all private individuals overlying the aquifer, as well as municipalities that have staked a claim to groundwater rights.

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4 In 2005, the most recent year for which statewide water-use estimates are available, agriculture used 77 percent of combined business and residential water use (Hanak et al., 2011, chapter 2, using data from DWR).
5 In practice, contract entitlements are often larger than the actual deliveries, depending on hydrologic and regulatory conditions. In the permanent sales of contracts, the buyer acquires the contract at face value and receives water deliveries in the same proportion as the original holder of the contract. Leases of contract allocations involve transfers of actual deliveries.
6 See Hanak et al., 2011, Chapter 2, for recent estimates of groundwater’s share in California’s overall water supply portfolio and in agricultural and urban uses by hydrologic region.
use as appropriators. Adjudicated basins—where groundwater rights are quantified—are located principally in urbanized areas of Southern California. Specialized local agencies that regulate access to aquifers are also found in urbanized areas—notably Orange County (the Orange County Water District) and Silicon Valley (the Santa Clara Valley Water District). These districts charge pumping fees and manage recharge programs with the proceeds. Although groundwater management is improving elsewhere in the state, it remains largely voluntary, without pumping restrictions or pumping fees (Nelson, 2011; Association of California Water Agencies, 2011).

Wet Water

“Wet water” is the term commonly used in contrast to “paper water”—water rights held on paper for which actual water is not available. Under the appropriative water rights doctrine governing most of California’s surface water, the “use it or lose it” requirement dictates that rights lapse for any water not used for five consecutive years (Water Code § 1241); this restriction is designed to prevent hoarding and speculation. It is generally acknowledged that there are many more claims on surface water than the physical water typically available in the system. This discrepancy arises from a combination of inactive claims that are still on the books and use rights that are only available in high flow years. In addition, some water is used more than once within the same season, because most active claimants return some of the water they divert after using it. Such “return flows” (e.g., from irrigation drainage and wastewater treatment plants) are then available for reuse by others.

Water-rights-holders must generally demonstrate that the water they propose to lease or sell is indeed “wet”—i.e., water they would have used otherwise in that season or legally stored for later use. Without this safeguard, the seller could end up transferring “paper” water that someone else is already legally using, causing harm to that user (or in legal parlance, “injury”).

There are four potential sources of wet water:

- excess water stored in surface reservoirs to which the seller has rights,
- other excess amounts of surface water that the seller has the right to use, but does not need and cannot store,
- “conserved” surface water that the seller saves by reducing his or her own use, and
- groundwater.

The first two sources of excess surface water are not widely available. Only a few water-rights-holders have identified surplus supplies that they have made available for transfer. The use-it-or-lose-it principle may be a significant deterrent in this context, despite the Legislature’s assurances that the offer of water for sale may not be used as evidence of non-use or unreasonable use. In contrast, many CVP and SWP contractors have

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7 For a map of these areas, see Hanak et al., 2011, Figure 4.1.
8 As noted above, California also has some surface water-rights-holders under the riparian doctrine, which authorizes diversions from rivers and streams for beneficial use on adjacent lands. These rights are not generally transferable.
9 For instance, the State Water Resources Control Board reported that the theoretical amount of claims on water-use rights within the Sacramento-San Joaquin Delta watershed (which supplies water to most agricultural and urban users in the state) was eight times higher than the amount of flows available in an average year (Governor’s Delta Vision Blue Ribbon Task Force, 2008).
10 This is the case, for instance, for SWP and CVP contracts, most of which only receive full deliveries in very wet years.
11 For discussions of “gross” or “applied” and “net” or “consumptive” water use (the difference between which is usable return flow), see Hanak et al., 2009, and Hanak et al., 2011, Box 2.1.
12 The Yuba County Water Agency is one of the main exceptions; it has regularly sold surplus water for drought mitigation and environmental programs.
transferred unstored excess surface supplies. The “use-it-or-lose-it” principle may be less of a deterrent for these users as they are contractors, rather than water-rights-holders, and the abandonment and forfeiture laws do not directly apply to them.\(^\text{13}\) Otherwise, rights-holders may sell the excess surface water generated in very wet years, when they are likely to have less need for irrigation water. However, these are times when overall market demand is often more limited as well.

The third source of wet water, conservation—or reduced “net” water use—is a more generally available option. Two principal ways to achieve conservation are land fallowing and switching to crops that use less water. In some cases, conservation savings can also be achieved through investments to improve the efficiency of the conveyance and use systems (e.g., canal lining, installation of drip irrigation, and water recycling), although such investments may be discounted when they reduce the amount of water returned to the system.\(^\text{14}\)

Groundwater, the fourth source of wet water, can be transferred directly or can be used on-site in lieu of surface water transferred to another party. The latter practice is known as “groundwater substitution” or “groundwater exchange.” Groundwater-related transfers are subject to less oversight from the state than surface water transfers because the state’s Water Code does not apply to most groundwater.\(^\text{15}\) In many counties, the ability to transfer groundwater, either directly or through groundwater substitution, depends on local ordinances, which have sought to prevent harm to local users by limiting groundwater exports.\(^\text{16}\) Because many groundwater basins have a hydrologic connection to surface waters, groundwater-related transfers can also be limited by the “wet water” principle. In particular, groundwater pumping can reduce surface flows in adjacent streams. For this reason, DWR has developed guidelines for Sacramento Valley groundwater transfers, restricting the location of wells that can be used for transfers and setting pumping ratios that deduct for the loss of surface water that occurs with pumping. These rules are described in the annual draft white papers on transfers, published by DWR in conjunction with the regional office of the USBR (California Department of Water Resources and U.S. Bureau of Reclamation, 2012). As discussed below, these rules are becoming increasingly strict, and are not without controversy.

**Infrastructure**

Of course, water marketing cannot happen without a hydrologic connection between sellers and buyers (Israel and Lund, 1995). Fortunately, California’s extensive water infrastructure network has enabled a comparably extensive ability to run a statewide market. Numerous large water projects developed in the early to mid-20th

\(^{13}\) An easing of the restrictions on such trades among CVP contractors is arguably one of the main effects on the water market of the 1992 Central Valley Project Improvement Act, described below. For SWP contractors, such trades take place through a “turnback” pool, introduced with the Monterey Agreement in the mid-1990s (described below). The remuneration for this water is quite low, but it helps defray costs contractors incur for their water whether or not they use it.

\(^{14}\) In principle, only net savings constitute wet water that can be available for trading. For instance, because shifts in irrigation technology (e.g., from flood irrigation to drip irrigation) primarily reduce gross or applied water use, not the net amount consumed by crops, such shifts are generally not considered a valid method of making water available for transfer. What constitutes conservation for purposes of water transfers does sometimes diverge from net water savings, however, if those using the return flow do not have legal rights to use that water. For instance, canal lining reduces surface water losses from seepage into the groundwater basin, thereby reducing water that was available for neighboring groundwater users. A large canal lining project was nevertheless authorized to support a long-term transfer from the agricultural users of the All American Canal (Colorado River water) to water users in urban Southern California. The case was disputed in court, but the losing groundwater pumpers (on the Mexican side of the border) were deemed to not have the rights to the displaced water under the treaty that apportions Colorado River waters between the United States and Mexico (Consejo de Desarrollo Economico de Mexicanos v. United States, 482 F.3d 1157, 9th Cir., 2007). Similarly, under the imported water doctrine, other users do not have the rights to use the return flow (including seepage from a canal) if the importer can show it intended to capture it all for reuse.

\(^{15}\) Legally, the Water Code requires permitting of groundwater found in “subterranean streams”—i.e., water that flows beneath the surface—which excludes most California groundwater (generally considered to “percolate” down from the surface). These distinctions are not technically correct by the standards of modern hydrology, which recognizes the interconnection between most bodies of groundwater and surface water.

\(^{16}\) See Hanak (2003) for a detailed discussion of county groundwater ordinances, which developed as the water market began to get under way in the 1980s and especially the 1990s.
century—including the CVP, the SWP, and investments to harvest water from the Colorado River and various local rivers—have forged hydrologic connections among most population and farming centers (Figure 1). Where the connections between transacting parties are indirect, the market works through a series of exchanges, where one or more intermediary agencies take the seller’s water and make an equivalent amount available to the buyer. Exchanges are also important in cases where the terms of water rights do not readily allow direct transfers, for instance between members of different water projects.

As described below, the market has recently experienced new frictions because of infrastructure constraints at a key conveyance hub in the Sacramento-San Joaquin Delta, limiting both north-to-south and east-to-west transfers.

FIGURE 1
California’s extensive infrastructure network facilitates water marketing

SOURCE: Hanak et al., 2011.
The How and Where of Groundwater Banking

Groundwater substitution transfers are one of several types of “conjunctive use” of groundwater and surface water. With conjunctive use, the aquifer serves as an underground reserve that can be drawn upon to a greater or lesser degree as the quantity of available surface water varies. Recharge methods depend on the state of the aquifer and the permeability of the soils. Large “spreading basins” are used in areas with good permeability, such as the Kern Fan in Kern County, while deeper “injection wells” are sometimes used to inject water into aquifers in areas where the soils are less permeable or where more precision and speed is required (e.g., to maintain a fresh water barrier along coastal Orange County). Groundwater substitution can enable “in lieu” recharge, where the basin is recharged naturally when local water users apply more surface water than usual and commensurately reduce their pumping in wetter years. This practice is especially useful in areas where the soils are less permeable (e.g., the Semitropic Water Storage District in Kern County), or where the aquifer is already quite full, as in much of the Sacramento Valley. In the latter case, the aquifer is drawn down first and then refills naturally in later years when local water users revert to a greater proportion of surface water use.17

Informal conjunctive-use programs have operated in many parts of California for as long as large water projects have made substitute surface water available. Thus, for decades farmers in irrigation districts along the east side of the San Joaquin Valley have used flood irrigation and spread water on fields in wetter years to recharge their groundwater basins; the districts adjust surface water prices to encourage this practice (Vaux, 1986; Jenkins, 1992).

“Groundwater banking” generally refers to a more formal type of conjunctive use in which groundwater managers keep track of the volumes of water recharged into the aquifer and the volumes withdrawn, as in a financial bank. Adjudicated basins and special groundwater districts with authority to regulate access to the aquifer have long engaged in these more formal banking operations. Since the 1990s, groundwater banking projects have become increasingly popular in other parts of the state as well, including places lacking a formal authority over who has the rights to the water. In such cases, it is necessary to set up monitoring procedures and rules to prevent harm to neighboring users, which could occur if withdrawals from the bank lower groundwater tables below the levels that would occur without banking. In normal and wet years, these neighbors tend to benefit from the recharging activities, which raise average groundwater levels for local bankers as well as neighboring properties. (The benefit is financial: Higher groundwater levels reduce pumping costs.) However, because these banks do not restrict access to neighboring pumpers, there are also potential risks to those storing water in the banks—for example, if local pumping compromises access to the volumes stored in the accounts.

This report focuses on projects in which banking is undertaken for distribution to off-site parties. These projects typically involve local public agencies or consortia of public and private agencies (for example, the Kern Water Bank). They could conceivably be run by a single private entity—such as a large farming operation—if it were sufficiently large to cover the banking area. Some of these banks also operate formal accounts for local pumpers, keeping track of what they use and what they pay for, while others operate more informal local conjunctive-use programs alongside the formal banks for off-site parties.

17 Groundwater substitution without compensating direct or in-lieu recharge of surface water can lead to long-term overdraft of the groundwater basin or increased infiltration from nearby bodies of surface water. In the latter case, the basin naturally recharges by reducing the flow in the adjacent river or stream, potentially causing harm to surface water users and the environment.
As with water marketing, infrastructure is key to making groundwater banking work. Locally, banking projects often need to augment their connections to larger conveyance facilities, in addition to creating recharge and pumping facilities. Statewide, the capacity of the infrastructure grid is also important. For instance, many banks count on storing Delta exports during wet years, a practice that recent pumping restrictions have made more difficult. Likewise, if Delta pumping is restricted, it can be more difficult for parties located upstream of the banks (e.g., Bay Area cities) to access banked water during dry years. To retrieve water they stored in the bank, these upstream depositors divert Delta exports that the banker would have otherwise used, and export restrictions can limit the amounts available for this purpose.

The Approval Process

The approval process for water transfers varies with the nature of the water right and the source of water. The State Water Resources Control Board (SWRCB) must approve transfers (i.e., changes in purpose, place of use, or point of diversion) involving any surface water rights established since 1914 (the year the state’s modern Water Code came into effect). Transfers of surface water among contractors within the CVP and SWP generally do not require SWRCB approval because they do not involve a change in the purpose, place of use, or point of diversion assigned to the overall water right, but the projects themselves must authorize these transfers. Transfers of groundwater and surface water held in pre-1914 appropriative rights do not require SWRCB approval because the board does not have direct regulatory jurisdiction over these types of water rights. However, transfers of these rights do require public notice and review under the California Environmental Quality Act (CEQA), and also the National Environmental Protection Act (NEPA) when federal water rights are involved.\(^\text{18}\) Such transfers also come under state or federal jurisdiction if government-owned conveyance facilities are involved, which is likely to be the case in many areas of the state. In particular, transfers conveyed through the Sacramento-San Joaquin Delta typically need to use the state-owned Harvey O. Banks Pumping Plant, requiring DWR approval. And, as noted above, groundwater-related transfers from many rural counties require a county permit demonstrating no injury to local groundwater users.\(^\text{19}\) Transfers of surface water held under riparian rights—available only to those whose land is directly adjacent to rivers and streams—are generally not permitted because such water is attached to the land.\(^\text{20}\)

The approval process for groundwater banking is evolving. Use of injection wells for recharging requires approval by the relevant regional water quality control board (RWQCB), which is responsible for preventing contamination of the native groundwater with imported water. Rules have varied across the state, with Southern California regional boards generally more flexible than the Central Valley RWQCB, which has blocked injection of treated drinking water by the municipal water departments in Roseville and Tracy over concerns about the effects of the chemicals used in treatment.\(^\text{21}\) There is also growing pressure for water banking and conjunctive use projects outside of fully managed basins to shore up permits with the SWRCB before expanding their operations. The logic is that groundwater banking involves the storage of excess

\(^{18}\) Transfers of post-1914 rights that are considered temporary (one year or less) are exempted from CEQA, on the grounds that they must go through SWRCB review.

\(^{19}\) In several counties (San Diego, Mendocino, Monterey, and Napa), the permitting process involves incorporation of a groundwater review or overlay in a regular ministerial process, rather than application for a discretionary permit with CEQA review.

\(^{20}\) In 1991, when the state ran a program of drought purchases, it established a work-around to this constraint, by paying some Delta farmers with riparian rights for not irrigating their lands (Gray, 1994a). Although this did not technically involve paying for the water, it made water available for other users.

\(^{21}\) In September 2012, the SWRCB adopted an order that proposes general waste discharge requirements for projects that recharge groundwater with treated drinking water, with the goal of streamlining the permitting process and ensuring consistent requirements for these projects (http://www.waterboards.ca.gov/water_issues/programs/asr/index.shtml).
surface water—making the standard no-injury rules that apply to surface water transfers relevant. This process can be complicated, because many local entities draw on a variety of existing surface rights, including both pre- and post-1914 diversions, which they will need to show they are putting to “beneficial use” (i.e., not wasting). (Although regular reporting of appropriative surface water diversions is required in California, the practice has been spotty at best.) There are also questions over whether a permit is needed to bank flood flows that are not currently appropriated by anyone.22 Finally, SWP and CVP contractors wishing to store their water in off-site banking projects need to get permission from the state and federal projects, just as they would for a water transfer.

The Evolving Policy Context

For much of the past several decades, state and federal policies have supported the development of marketing and banking through a suite of actions, including legal revisions to facilitate marketing, direct purchases of water, and grants to help fund groundwater banking infrastructure. At the same time, local resistance to transfers has arisen in some regions over concerns that transfers could harm local economies—as evidenced by the rise of county ordinances restricting groundwater exports and other objections. In recent years, various state and federal authorities have also placed new restrictions on water transfers.

State and Federal Support Initiatives

State initiatives to support the market began in 1977, a year of severe drought. Two reports commissioned at that time, one by the governor and one by the legislature, strongly endorsed water marketing as an element in the state’s strategy for handling its future water needs (Governor’s Commission to Review California Water Rights Law, 1978; Phelps et al., 1978). The governor’s commission also advocated various changes in the Water Code to facilitate transfers, notably provisions to ensure the security of water rights for parties leasing water to others and to ensure access to the use of conveyance facilities owned by other parties. Although many of the recommendations were accomplished in the years that followed, the 1980s saw little uptake in market activity.

In the early 1990s, several events significantly changed the trading climate. First, natural conditions provided the occasion for a large-scale experiment in water trading when a multiyear drought prompted the state to initiate an emergency water bank in 1991. The following year, in response to findings that the federally run CVP was harming the indigenous wildlife of the San Francisco Bay-Delta estuary, Congress passed the Central Valley Project Improvement Act (CVPIA). The Act mandated that 800,000 acre-feet (af) of project water (of a total of about 7 million af) be returned to instream uses to regenerate salmon runs, and that another 400,000 af be allocated to wildlife refuges. The CVPIA also contained provisions to facilitate water marketing and introduced a mechanism for the project to purchase additional water for environmental purposes.

In 1994, the SWP contractors concluded negotiations for the Monterey Agreement, a revision of project operating rules that facilitated water marketing and groundwater banking by the contractors. It authorized the first permanent transfer of contract entitlements from some agricultural contractors to smaller urban contractors and established other measures to make it easier for contractors to transfer water to one another. This agreement also led to the transfer from state to local ownership of a part of the Kern Fan, near Bakersfield, where the state had unsuccessfully attempted to launch a groundwater bank. This area, now

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22 Appropriate rights to divert surface water are allocated on the basis of seniority, and some junior rights are only available in wetter years. However, in very high flow years, some rivers that are considered fully appropriated have excess water, and banking projects could potentially capture some of this flow.
known as the Kern Water Bank, has become one of the leading examples of groundwater banking. (A similar federal attempt to launch a groundwater bank in Madera County failed; USBR is negotiating with the managers of this new bank, now in local hands, to develop an offsite storage agreement for CVP water.) The Monterey Agreement also encouraged other water banking partnerships in Kern County by giving SWP contractors the express right to store water outside their service areas.

Two other significant activities were undertaken by the state and federal governments in the late 1990s and in 2000. Under instructions from the U.S. Secretary of the Interior in 1996 and 1997, California began to devise a plan to reduce its use of Colorado River water to the contractually allocated amount of 4.4 million af over a 15-year period. This 4.4 Plan created strong incentives for water transfers between agricultural and urban users of Colorado River water within California, leading to a suite of long-term agreements that were finalized by 2003. In 2000, state and federal authorities launched the Environmental Water Account (EWA), a program of environmental water purchases under CALFED—a multiagency state and federal program with the goal of restoring health to native fishes in the San Francisco Bay-Delta Estuary while securing water supplies to agricultural and urban users. Although the CALFED program was superseded by new governance arrangements under legislation passed in late 2009, the EWA continues to operate on a diminished scale as part of a long-term transfer of water from Yuba County (described below).

During the 2000s, the state also ran smaller drought water-purchase programs in two dry years (2001 and 2009), and the federal government sought to further ease transfer restrictions for CVP contractors and others wishing to use CVP-owned transfer facilities. Federal-state cooperation also increased, as the CVP and SWP were granted temporary “joint place of use” south of the Delta during the drought of the late 2000s. Under this arrangement, water allocations for the two projects were treated as though they derived from the same water right, making it possible for contractors from the two projects to transfer water to each other without seeking SWRCB approval for each transfer—a time-consuming step in the normal approval process. Since 2000, the state has also offered numerous grants and low-interest loans (totaling roughly $350 million) to local agencies to support the development of groundwater storage, reflecting the emphasis in recent updates of the California Water Plan on conjunctive use as a water supply diversification tool.23

Local Concerns in Source Regions

In tandem with state and federal efforts to expand the market in the 1990s, concerns over the prospect of damage to local economies led to an increase in county groundwater ordinances in many rural counties (Hanak, 2003, Hanak and Dyckman, 2003). These ordinances all restrict direct groundwater exports; most also restrict groundwater substitution transfers, and some aim to restrict groundwater banking with non-local parties (Figure 2).24 The absence of state-level no-injury protections for groundwater derives from incomplete state groundwater regulation; county ordinances have been deemed legal because this type of injury needs to be prevented to avoid harm to other legal water users.25 (In economic terms, transfers that reduce other users’

23 For a discussion of conjunctive use in the state water plan, see California Department of Water Resources (2005, 2009). The grants and low-interest loans have been provided under three bond acts (Propositions 13, 50, and 84). Data were provided by DWR; for details on Proposition 13 see http://www.grantsloans.water.ca.gov/docs/prop13/Prop_13_Final_Report.pdf.

24 Groundwater banking restrictions are included in the ordinance of San Joaquin County, where there were concerns about a joint banking project with the East Bay Municipal Water District (Hanak, 2003; Thomas, 2001).

25 The state Water Code does contain some restrictions on groundwater-related transfers. In particular, Water Code § 1220(a) states that no groundwater can be pumped for export from within the Sacramento and Delta-Central Sierra basins unless there is a groundwater management plan in place, and Water Code § 1745.10 limits groundwater substitution transfers to those that will not result in long-term overdraft. However, in 1994 an appellate court ruled that the state did not “preempt the field” in this area, and it granted counties the authority to exercise their police powers to protect public health and safety with groundwater ordinances (Baldwin v. County of Tehama, 31 Cal. App. 4th 166, 173–74 (1994, 3rd Dist.);
access to water generate negative “physical externalities” and must be mitigated to avoid economically inefficient transfers). However, rather than encourage a process of review and proper mitigation of transfers, the ordinances appear to have worked principally to discourage groundwater-related transfers altogether from these counties.26

FIGURE 2
County ordinances restrict groundwater export from many rural counties

NOTE: Figure shows ordinance status as of 2002. To our knowledge, no additional county groundwater ordinances have been adopted since then. Kern County’s ordinance is limited to the southeast portion of the county within the South Lahontan hydrologic region. (Figure 12 shows this regional breakdown.) Glenn County’s ordinance was updated in 2000 and now relies on basin management objectives that do not automatically restrict groundwater exports.

Some groups are also concerned about the potential for fallowing-based transfers to cause local economic harm. Transfers compensate farmers who fallow fields for the crop revenues they forego; but local businesses, workers, and governments do not automatically receive compensation for any economic harm they might suffer when the crop activity declines. Fallowing-related damages (or “pecuniary externalities”) are not proscribed under state law, which generally views them as a natural consequence of a shifting economy, much like the opening or closing of a manufacturing plant may affect neighboring businesses and property values.


26 Hanak (2003) conducted a detailed review and found few permit applications through 2002, suggesting that the ordinances were having a chilling effect. Anecdotal information from local agencies suggests that there has been little change in subsequent years.
for better or worse. Studies of actual and projected fallowing operations suggest that the aggregate local losses are likely to be limited, because farmers tend to fallow their least profitable fields.\(^{27}\) State law does require public hearings if a local agency wishes to transfer water available through fallowing and the volume exceeds 20 percent of the agency’s water supplies (Water Code § 1745.05). When transfers use a public entity’s conveyance facilities, that entity is also required to ensure that they do not cause significant economic harm (Water Code § 1810). Transacting parties have voluntarily developed community mitigation programs for two large, long-term fallowing-based transfers of Colorado River water; these may serve as useful models for similar transfers in the future.\(^{28}\)

**New State and Federal Restrictions**

In the late 2000s, some state and federal policies also increased restrictions on marketing. Over time, DWR has progressively increased its scrutiny of transfers between points north and south of the Delta over concerns of potential injury to the SWP. The SWP holds relatively junior water rights to Sacramento Valley water, which it ships to most of its contractors through pumps in the south Delta. Concerns that transfers are impinging on these flows have led to increased restrictions on acceptable locations and ratios for groundwater substitution transfers and tighter restrictions on acceptable fallowing arrangements.\(^{29}\)

Since 2007, the ability to move water through the Delta has also become more limited as a result of concern for endangered fish species, whose populations plummeted in the preceding years. Although the new pumping restrictions have not specifically targeted water marketing, they limit the physical infrastructure available for transfers, which have lower priority than the CVP and the SWP when it comes to using the project-owned pumps in the south Delta. (Most such transfers use the SWP-owned pumps, which more often have unused capacity than the CVP-owned pumps).

Finally, new environmental restrictions have been imposed on transfers for reasons other than protection of instream flows, the traditional focus of no-injury protections. Fallowing of fields to make water available for transfers has been severely restricted in rice-growing areas (primarily in the Sacramento Valley) to prevent harm to habitat of the endangered giant garter snake, a listed species that now depends on artificial wetlands created by irrigation water.\(^{30}\) Groundwater-related transfers have also become subject to Clean Air Act restrictions against the use of diesel pumps—a regulation farmers are normally exempt from when they pump water for their own use. As we discuss in the following chapter, it is likely that these assorted restrictions have dampened market activity in recent years.

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\(^{27}\) See Hanak (2003) for a summary of these studies.

\(^{28}\) The transfer from the Imperial Irrigation District to the San Diego County Water Authority has set aside $40 million for socioeconomic mitigation, and the transfer from the Palo Verde Irrigation District to the Metropolitan Water District of Southern California has set aside $6 million (now over $7 million with accumulated interest); see Hanak et al., 2011.

\(^{29}\) These conditions are presented in a draft white paper on water transfers prepared by DWR and USBR, which is updated annually (California Department of Water Resources and U.S. Bureau of Reclamation, 2012).

\(^{30}\) Under current rules, farmers wishing to fallow land for transfers must limit each fallowed field to 320 acres and surround these fields with cropped land (California Department of Water Resources and U.S. Bureau of Reclamation, 2012). This practice, intended to provide corridors for safe passage of the snake, effectively limits the potential fallowed area to 20 percent at any given time, in highly specified patterns.
Water Market Trends

This chapter presents trends in the water market through a variety of lenses: duration (short-term, long-term, and permanent), geographic sources and destinations, and types of water users (agricultural, urban, and environmental).

Phases in Market Development

Water marketing has grown significantly in California over the past three decades. Figure 3 shows actual flows under short-and long-term lease contracts (yellow and dark blue bars), estimated flows under permanent sale contracts (light blue bars), and the additional volumes committed under long-term and permanent contracts that were not transferred in those years (orange bars). Annual trades in the early 1980s averaged just over 100,000 acre-feet (af). The market took off during a multiyear drought in the late 1980s and early 1990s, spurred by direct state purchases and the development of an emergency drought water bank. The market continued to grow when the rains returned; and by the early 2000s, the annual volume of water committed for sale or lease was over 2 million acre-feet (maf), with roughly 1.3 maf actually moving between parties in any given year. These volumes increased slightly by the end of the decade, and trades now represent about 5 percent of all water used by businesses and residents in the state.31

FIGURE 3
California’s water market has grown substantially since the early 1980s

SOURCE: Data collected by the authors (for details, see Technical Appendices Table B1).

NOTES: The figure shows actual flows under short-and long-term lease contracts (yellow and dark blue bars), estimated flows under permanent sale contracts (light blue bars), and the additional volumes committed under long-term and permanent contracts that were not transferred in those years (orange bars). The database includes transactions between water districts, federal and state agencies, and private parties that are not members of the same water district or wholesale agency. (See Technical Appendix A for a detailed description of methods). “Dry years” are those classified as critical or dry for the Sacramento Valley based on the California Cooperative Snow Survey (see Technical Appendices Table B1).

31 From 1998 to 2005, Californians used an average of 41.7 maf of water (33 maf in agriculture, 8.7 maf in urban uses). This total includes roughly 8 percent in conveyance losses. (Data from DWR; for details see Hanak et al., 2011, Chapter 2).
It is useful to consider market development in three phases, characterized and shaped by different forces: 1) the early drought years (1988-1994); 2) an intermediate phase, when environmental concerns drove continued growth (1995-2002); and 3) the most recent period, marked by two distinct trends: a shift toward long-term and permanent trades and a slowing of overall growth in trades (2003-2011).


During the eight-year period from 1987 to 1994, California experienced only one “normal” precipitation year (1993); five of the remaining seven dry years were deemed “critically dry.” These hydrologic conditions provided the opportunity for the state to help jump-start the market. DWR began making dry-year purchases to offset lower deliveries to SWP contractors and wildlife refuges in 1987. These early operations, which involved only a handful of Sacramento Valley water districts (most notably the Yuba County Water Agency), quickly brought the total volumes traded in the state to over 500,000 af. In 1991, when the dry-year market was opened up to any willing buyers and sellers, DWR purchased 821,000 af for resale, bringing the overall market volume to over 1,100,000 af.**32** Water banks and other dry-year purchases were also operated in 1992 and 1994. From 1987 to 1994, state and federal dry-year purchases for resale and environmental uses accounted for nearly half of a market that had increased more than five-fold from pre-drought levels (Figure 4).

**FIGURE 4**

Direct government purchases spurred early market development

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**Continued Growth Driven by Environmental Concerns (1995–2002)**

Although the second half of the 1990s saw a succession of wet years, market activity remained strong, with volumes typically exceeding the drought-year levels, especially by the end of the decade. The only dips in a generally upward trend in purchases occurred in the exceptionally wet years of 1995 and 1998, when many

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**32** Wet conditions late in the 1991 rainy season (the “March Miracle”) resulted in lower-than-anticipated purchases from the bank, so DWR was only able to sell about half of the water. The rest was melded into SWP supplies and paid for by all the project contractors.
areas of the state experienced flooding. Market growth in this period was largely driven by environmental concerns. The influence of environmental policy is most readily seen by comparing the patterns of water purchases during the drought years (1987-1994) to those in the subsequent eight years, when rainfall was generally above normal (Figures 5a and 5b).

FIGURES 5A AND 5B
Environmental concerns shifted the composition of purchases in the 1990s

The most obvious element of the new role for the environment is the rise in direct purchases for instream uses and for wildlife refuges through federal and state programs, including USBR’s new Water Acquisition Program (introduced under the CVPIA) and CALFED’s new Environmental Water Account. As a beneficiary of DWR’s drought purchases, the environment already accounted for 8 percent of purchases during 1987–1994.
Between 1995 and 2002, this share rose to 21 percent. On an average yearly basis, environmental purchases increased more than six-fold, nearly three times faster than the market as a whole.

The less obvious component of demand related to environmental policy changes is the increase in water purchases by San Joaquin Valley farmers. Although this group’s change in market share is less dramatic (growing from 31 to 41 percent between the first and second period), its increase in average volumes—by over 320,000 af per year—accounts for nearly half of total market growth. Much of this growth can be linked to the changes introduced under the CVPIA in 1992, which mandated that a portion of project water be returned to instream uses and wildlife refuges. Since then, CVP agricultural service contractors located south of the Delta have received full project deliveries in only three very wet years (1995, 1998, and 2006). One outcome has been an active water market, as some contractors (most notably Westlands Water District) sought to offset reductions in deliveries through market purchases.

These two components of the environmentally-related water market were not without tension. On the one hand, the environmental water purchase program could be viewed as a benefit to other water users, because it avoided additional uncompensated regulatory cutbacks to protect fish and other wildlife. On the other hand, the sheer size of these relatively well-funded programs meant that some farmers wishing to purchase make-up water viewed them as a source of tough competition.

The corollary of growth in environmentally-related demand was a decline in the relative importance of municipal and industrial users following the drought years. Whereas cities were the main recipients of traded water during the drought, accounting for 45 percent of all purchases from 1987–1994, their share in the following eight years fell to 28 percent. With the exception of 1991, when urban purchases reached nearly 500,000 af, volumes remained relatively flat throughout the 1990s, averaging around 230,000 af (see Technical Appendices Tables B3a and b). This began to change by 2000, as some cities successfully negotiated long-term and permanent deals to purchase water.

**Long-Term Transactions Have Risen (2003–2011)**

The most recent phase of market development began in 2003, the first year of a package of long-term transfers among agricultural and urban Colorado River water-rights-holders, included as part of California’s plan to reduce its overall use of this river. These contracts commit over 500,000 af of annual transfers over a 75-year period, and volumes flowing under these deals have increased steadily. These and numerous other long-term and permanent deals made between parties around the state have shifted the character of California’s water market. Whereas short-term trades accounted for roughly three-quarters of all transfers in the 1980s and 1990s, they now account for less than half of all flows and only a quarter of total volumes committed (Figure 6).

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33 Technical Appendices Table B1 provides information on runoff conditions in the Sacramento Valley and water-year type.

34 For details, see Technical Appendices Table B9. The new transfer agreements under the QSA include the movement of 303,000 af/year of water from the Imperial Irrigation District (IID) to the San Diego County Water Authority and the Coachella Valley Water District, two canal lining projects that will move nearly 96,000 af of conserved water from IID and Coachella to San Diego and the San Luis Rey Indians, and the movement of up to 111,000 af/year from the Palo Verde Irrigation District (PVID) to the Metropolitan Water District of Southern California. (Metropolitan has contracted with the San Luis Rey Indians to use their water until the tribe can put it all to beneficial use). The QSA also recognizes an existing transfer of 110,000 af/year from IID to Metropolitan, in place since 1987. In addition to these long-term agreements, some temporary transfers have taken place between PVID and Metropolitan during the recent drought.
These transfers have been supplied by a combination of system improvements (e.g., canal lining and operational efficiencies), agricultural land retirement, on-farm irrigation efficiency improvements (where improved efficiency generates net water savings, such as in the Imperial Irrigation District), and releases of water from surface and groundwater storage (e.g., Yuba County). As with temporary transfers, agricultural water districts are the principal suppliers, originating roughly 80 percent of all long-term and permanent contracts and 95 percent of all committed flows. (They supply 85 percent of all short-term transfer flows). Cities are the leading purchasers, with the largest overall volumes, average deal sizes, and average contract durations (Table 1). However, this market is also serving other demands, including the environment and—increasingly—farmers, who are actively involved as buyers in mixed-use contracts as well as those destined purely for agricultural uses (Table 1).

Nevertheless, farmers have declined in importance in overall market demand, accounting for only a quarter of all contractual commitments and 36 percent of actual flows from 2003–2011, with average purchases remaining virtually the same as in the prior period (Figure 5). Water purchases for the environment have remained important, increasing in absolute terms, and declining only slightly as a share of the overall market to 19 percent of commitments and 20 percent of flows. The real demand growth has come from cities, with over three times more commitments and 2.4 times more actual flows acquired than in 1995–2002. As during the early drought years, urban agencies again account for over 40 percent of market demand, and this time most of this water is available to support longer-term growth, not just to compensate for shortages during droughts.
The growth of long-term and permanent transfers is a sign that the water market is maturing. These transfers generally involve more complex negotiations and more in-depth environmental documentation. They are particularly important for supporting economic transitions. By law, urban water agencies need to demonstrate long-term supplies to support new development, and transfers can provide this assurance. Long-term commitments for environmental flows provide flexibility for environmental managers and can reduce the conflicts associated with regulatory alternatives to market-based transactions. Long-term commitments to make temporary supplies available during droughts are also an important way to enhance operational flexibility. A case in point is the recent 17-year transfer agreement between the Yuba County Water Agency and DWR, the so-called “Yuba Accord.” In addition to making available some supplies for environmental uses, this transfer offers supplies to a pool of SWP and CVP contractors during dry and critically dry years. By working out all of the approval issues well in advance, such deals make it possible to act quickly during a drought or other supply emergency.

35 Senate Bills 221 and 610, passed and signed into law in 2001, require large development projects (for larger agencies, >500 new residential units or the equivalent in combined residential and non-residential demand, and for smaller agencies at least 10 percent growth in local water demand) to demonstrate at least 20 years of available supplies. For a discussion of how these laws are working, see Hanak, 2005b and 2010.

36 In 1995 and again in 2003 and 2005, single-year “dry-year purchase” options trades were introduced for fallowing-based transfers. The idea of an options market is to make commitments between buyers and sellers early in the season (sometime in the fall), before the character of the water year is known, with sellers paid in installments to maintain the commitment at successive call dates. The last call date was in the late spring—the latest point at which growers could plant if they did not part with the water. In 1995, DWR (which was buying the water for the drought water bank) did not exercise the options because it ultimately proved to be a very wet year (growers thus received only the up-front installment). In 2003, the Metropolitan Water District of Southern California (MWDSC) initiated a similar deal with Sacramento Valley rice growers, and it exercised most of those options, purchasing 124,000 af, while not exercising 20,000 af of options (Howitt and Hanak, 2005; Hacking, 2005). In 2005, under a similar deal, MWDSC did not exercise the options to purchase nearly 130,000 af because there was ample rain, and growers again received just the installment ($10 per af, versus a final purchase price for the water of $125 per af). Options have become less attractive in recent years, given the new operational restrictions on Delta pumping, which limits the attractiveness of fallowing-based transfers from growers using water stored in Lake Shasta. Springtime releases of cold water from Lake Shasta are required to protect salmon, and this same water can also be used by Sacramento Valley rice growers. With new Delta pumping restrictions, the water rice farmers would have used on their fields between April and June cannot be sent to users south of the Delta instead. Yet these farmers would still need to be compensated for this water in order to fallow their fields. As a result, the new pumping restrictions create an effective surcharge on water acquired through fallowing of about 40 percent. These constraints do not apply to some...
But Overall Market Growth Has Slowed (2003–2011)

In spite of these positive market developments, there is also evident evidence that market momentum is weakening. There has been little growth in overall trading volumes since 2003; and if the new package of Colorado River transfers is excluded, both committed and actual flows have actually declined since 2001. This weakening is particularly worrisome because drought conditions in the late 2000s might have been expected to boost trading.

A variety of impediments—some longstanding and some new—appear to be at work. One new problem relates to conveyance infrastructure. Historically, California’s sophisticated supply infrastructure has made it possible to transfer water either directly or through exchanges across most demand and supply centers. However, in the case of the Delta, a critical conveyance hub, new pumping restrictions since 2007—introduced to mitigate conditions for endangered fish species—have impeded movements of both north-to-south and east-to-west transfers.

In addition, a variety of impediments associated with the approval process—some long-standing and some more recent—are raising the transaction costs for parties wishing to engage in trading. For example, county groundwater ordinances, most of which have been adopted since 1996, tend to broadly restrict groundwater-related exports. Although these ordinances were a useful stop-gap measure designed to prevent harm to local water users in the absence of state-level protections, they are not an ideal long-term solution for managing groundwater. Local basin management would be better served by more comprehensive plans and objectives that address locally generated overdraft as well as problems related to exports. Such programs could better manage local groundwater resources for all users without discriminating against potentially beneficial groundwater-related transfers.

The progressive tightening of DWR’s approval process for north-to-south transfers represents another constraint. In addition to limiting “paper” transfers that might harm SWP contractors, the process—which involves frequent updates in its rules—creates uncertainties that are likely to create a chilling effect against legitimate transfers of wet water (Lund, 1993).

A third constraint, noted earlier, is that transfers are now subject to environmental restrictions beyond the requirement of no injury to environmental flow conditions, such as falling limitations to protect habitat for the giant garter snake and Clean Air Act restrictions on the use of diesel pumps for groundwater-related transfers. In 2009, uncertainties over these new restrictions, combined with the inability to move water through the Delta, depressed drought water bank activity. Fewer than 80,000 af were transferred, whereas DWR’s goal was to acquire several hundred thousand acre-feet.

growers on the east side of the Sacramento Valley who use water stored in Lake Oroville, but infrastructure problems at this reservoir have made water deliveries more uncertain, and less amenable to options contracts.

37 See Technical Appendices Tables B2a and b. This calculation was made by subtracting all additional Colorado River transfers besides the 110,000 af transfer from IID to the Metropolitan Water District of Southern California, which dates back to 1987 (Technical Appendices Table B9).

38 Hanak (2005a) found that drought years between 1990 and 2001 were associated with significantly higher transfers after controlling for water allocations, crop prices, and other factors.

39 Some east-to-west transfers among south-of-Delta water users rely on sending water north (through the San Joaquin River and other eastside rivers) to the Delta pumps and then back south again to water users on the west side of the San Joaquin Valley. See note 36 for a description of some consequences of Delta pumping restrictions.

40 Hanak (2005a) showed that between 1996 and 2001, the ordinances reduced total county exports by roughly 20 percent, while increasing within-county trades by an even larger proportion (65%) but from a smaller base. On net, the ordinances reduced overall market sales by 11 percent. Interviews with water managers in the Sacramento Valley suggest that these ordinances remain important obstacles to groundwater-related transfers in some counties where there is significant potential, such as Butte.
Many observers have also pointed to high commodity prices—and particularly the price of rice, a crop that has often been fallowed to make water available for transfers—as a major reason for the recent slowing of the water market. As Figure 7 shows, real farm-gate prices of rice (like other field crops) have indeed been high in recent years, and particularly during 2009, the third year of the latest drought. This may have depressed some farmers’ interest in water sales. However, the contrast is starkest with the early 2000s. During most of the 1990s, real crop prices were not much lower than in recent years, while real prices for drought water purchases have increased over time, with the potential to increase further to accommodate dry-year water demands.41

FIGURE 7
High rice prices may have reduced farmers’ incentives to transfer water during the recent drought

And finally, water market development has been hindered by the fragmentation of water management, with different types of water rights and contracts subject to different types of approval. These differences tend to limit market activity even when it would be economically and environmentally beneficial to engage in trading.42 As a result, trades among agencies that have rights to use water within the same large projects (CVP, SWP, and Colorado River) continue to dominate the market, accounting for over 60 percent of all

41 For example, Sacramento Valley rice farmers were offered $275/af during the 2009 drought water bank, 1.4 times higher in real terms than the price offered during the 1991 bank; the ratio of real farm-gate rice prices in those two years was 1.6. (South of the Delta, some farmers were reportedly paying much higher prices for water to sustain their perennial and vegetable crops.) Over the entire 1982–2011 period, we find no evidence of a statistical correlation between rice prices and water trading. (Various regression analyses did not find a significant association between rice prices and either short or longer-term transfers.) Some local observers have suggested that increasing vertical integration within the rice industry—with more rice farmers now owning processing and marketing facilities—may have reduced some farmers’ incentives to lease water, irrespective of fluctuations in farm-gate prices.

42 For two years during the drought, an emergency measure to create a joint place of use between the CVP and SWP south of the Delta provided a temporary reprieve for some such transfers.
trades since the mid-1990s, and 80 percent of trades not involving direct state or federal government purchases (Figure 8). The “open market”—trades between agencies within different projects or not belonging to projects at all—still accounts for less than a fifth of all transactions.

**FIGURE 8**
Sales within the major projects dominate the market

![Diagram showing the distribution of sales within and between major projects and the open market.]

SOURCE: Data collected by the authors (For details, see Technical Appendices Table B2b).

NOTE: The figure shows actual flows under all contracts and volumes committed but not transferred under long-term leases and permanent sales.

**Geographic Trends**

California’s water market now involves water users in most of the state’s counties, including all major population and farming centers (Figure 9). Although recent environmental problems in the Delta have weakened the infrastructure linkages between points around that hub, most water users remain connected to the statewide grid, as well as to other water users within the same county and same region. These interconnections can facilitate both temporary and longer term shifts in water across the state in response to droughts and long-term demand shifts, but they also raise concerns about potential economic harm in water-exporting regions.
Most counties now have water market activity

In general, these regions correspond fairly well to the boundaries of the state’s major hydrologic regions or, in the case of Southern California, to a heavily integrated regional management network.44 (We provide

43 In contrast to earlier computations that reported total commitments, we examine actual flows here, because it is easier to assign regions of origin and destination to flows under some more general long-term contracts. For instance, the Yuba Accord can ship water to buyers in three regions, and a long-term deal between the San Joaquin River Exchange Contractors and the San Luis Delta Mendota Water Authority can ship water to buyers in two regions. (For information on these trades, see Technical Appendices Table B9.)
information below on the breakdown of flows within the San Joaquin Valley and Southern California, which have some large intra-regional disparities in trading patterns.)

Across all three phases of water market development discussed above (1987–1994, 1995–2002, and 2003–2011), three regions have played the most significant roles: the Sacramento Valley, the San Joaquin Valley, and Southern California. These regions lead the state in supplying water for trades, and the San Joaquin Valley and Southern California are also the largest demand centers, principally for farm and urban uses, respectively.

The relative roles of these regions have shifted over time. With lower internal demand and relatively abundant water availability, the Sacramento Valley has consistently been a net exporter. But total sales by Sacramento Valley water users were no higher in the most recent period than during 1987–1994, when the market was 40 percent as large as it is today. This stagnation, along with growth in local demand, has meant that exports are now about a third as large as they once were—averaging only 82,000 af/year. The various new impediments to transfers discussed above, which place particular constraints on exports from the Sacramento Valley, are a likely explanation for this trend.

44 Southern California contains the Los Angeles, Santa Ana, and San Diego hydrologic regions along the coast, and the Colorado River and South Lahontan regions further inland. In practice, many urban agencies in all but one county (Imperial) are affiliated with one large water wholesaler, the Metropolitan Water District of Southern California, and water users in all seven counties use Colorado River water. The two counties in the Far North lie within the larger North Coast hydrologic region.
TABLE 2
Regional market flows

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<th>1987–94 (taf/yr)</th>
<th>1995–02 (taf/yr)</th>
<th>2003–11 (taf/yr)</th>
<th>Total (taf)</th>
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</table>

SOURCE: Data collected by the authors (For details, including region-to-region patterns of trade for each period, see Technical Appendices Tables B6a–c. For details within the San Joaquin Valley, see Technical Appendices Tables B7a–c).

NOTES: The table reports actual flows, and excludes additional volumes committed but not transferred under permanent and long-term transfers. The table also excludes a small share of transfers for which region of origin or destination could not be determined and 4,400 af of environmental transfers in the Far North in 2010–2011 (see Technical Appendices Table B5). The non-zero balance of net imports/exports results because of these omissions, the presence of surplus drought purchases by DWR, and some smaller discrepancies in user pools in some years. For the Sacramento Valley, total sales are slightly lower than those reported in Technical Appendices Table B4a because of user pool discrepancies, particularly in the first period (see notes to Technical Appendices Table B6).

Another major shift has occurred in the San Joaquin Valley, which is now by far the market’s largest water supplier, in addition to its largest demand center. San Joaquin Valley water users have been providing over half of total market supplies since the mid-1990s. Although local demand in this region has continued to grow, supplies have grown faster, making the region as large a net exporter as the Sacramento Valley. These exports are principally the result of long-term and permanent deals with urban agencies in Southern
California, where net imports have grown despite increases in within-region transfers of Colorado River water. The San Joaquin Valley has also become the leading supplier of environmental water, thanks principally to the growth in purchases by the CVPIA’s Water Acquisition Program on the valley’s east side (discussed below).

A final shift worth noting is the overall trend toward “regional self-sufficiency,” with a higher proportion of total sales serving local demand. From 1987–94, less than half of total sales were sold within the region of origin. In the most recent period, nearly two-thirds of all transfers (and 80 percent of non-environmental water trades) took place within the same region. This shift reflects the reduction of exports from the Sacramento Valley and the increase in within-region transfers in Southern California and the San Joaquin Valley as a share of total purchases (see Technical Appendices Table B6a–c). In the Southern California area, where within-region transfers now account for two-thirds of all purchases, this is almost entirely due to the long-term transfers of Colorado River water from agricultural districts in Imperial County to urban areas closer to the coast. The San Joaquin Valley — where intra-regional trades now represent 93 percent of all purchases — has witnessed substantial growth in transfers from parties located on the east side of the Valley (which has had fewer supply constraints) to those facing greater scarcity on the west side.

A closer examination reveals that sales are also becoming more localized within regions (Figure 10). Over time, the share of non-environmental transfers to parties within the same county has progressively increased — climbing from 18 percent in 1987–94 to 50 percent in 2003–11. This shift reflects an increase in long-term transfers of water from nearby agricultural areas to urban areas within the San Joaquin Valley, as well as more localized farm-to-farm trading within both the San Joaquin and Sacramento Valleys. Such farm-to-farm trades typically move water from farmers with more senior (and relatively abundant) supplies to those whose access to supplies is more constrained, such as contractors on the CVP’s Tehama Colusa Canal in the western Sacramento Valley and the Delta-Mendota Canal on the San Joaquin Valley’s west side. In the western San Joaquin Valley, local farm-to-farm sales have also occurred when some lands have become too saline for profitable farming.

Trades tend to be less contentious within regions, and especially within counties, than sales across longer distances, because the water stays in the local economy. When there is strong local pressure against exports, sellers may have fewer options to ship water to outside buyers, even if the outside buyer can offer a higher price. A recent controversy along these lines occurred in Modesto County, where the Modesto Irrigation District sought to conclude a long-term transfer to the San Francisco Public Utilities Commission (which supplies San Francisco and many peninsula communities) that would help fund costly infrastructure upgrades. The City of Modesto and other local groups raised strong objections to the water...
leaving the county, even though San Francisco would have paid $700/af for the water, roughly 70 times more than local farmers now pay (Holland, 2012).

**FIGURE 10**
Local water transfers are increasing

![Diagram showing water transfers]

**SOURCE:** Data collected by the authors.

**NOTES:** The figure reports the destination of non-environmental water transfers (actual flows plus volumes committed but not tracked under long-term and permanent contracts). "Unspecified (bank/pool)" transfers go directly to a bank or pool, which may subsequently sell the water within a different region. For multicity agencies, transactions are considered to be within the same county if the buyers and sellers share at least one county.

### Environmental Water Acquisitions

Given the significant portion of the water market that involves acquisitions to support the environment, it is useful to consider these transactions in more detail. In all, over 4.5 maf of water was acquired for environmental purposes from 1982–2011, accounting for 14 percent of total commitments and 18 percent of total market flows. The environmental share of the market was highest during the early to mid-2000s, accounting for 30 percent or more of total flows in most years. Since 2008 total volumes have fallen, with the share of environmental acquisitions averaging around 15 percent (Technical Appendices Tables B3a and b).

Over time, the purpose and nature of these acquisitions has changed (Figure 11). Early purchases by the state and federal governments supported wildlife refuges and fish hatcheries; state efforts, overseen by the Department of Fish and Game (DFG), were substantial during the late 1980s–early 1990s drought. In the mid-1990s, the CVPIA’s Water Acquisition Program (WAP) created a systematic federal program for environmental water purchases, both for Central Valley wildlife refuges and for instream flows to support salmon runs in the San Joaquin River system. The WAP’s instream flow program was a multiyear flow experiment (the Vernalis Adaptive Management Program) and included a 12-year lease agreement, now expiring, with a consortium of eastside irrigation districts.
The next significant environmental acquisitions, beginning in 1999, involved the Environmental Water Account (EWA) of the CALFED program—a joint state-federal initiative focusing on the Bay-Delta region. The EWA was created to provide environmental managers with supplemental flows to support the Delta’s threatened and endangered native fish species (delta smelt and Chinook salmon). The EWA accounted for half of all environmental water purchases between 2001 and 2007, with annual acquisitions from a variety of parties averaging nearly 180,000 af. In 2008, this program was converted to a multiyear lease agreement (for 8 years) with the Yuba County Water Agency as part of the multipurpose Yuba Accord, and it was scaled back to a mere 60,000 af/year.50

As EWA and WAP purchases have declined, two new types of environmental water purchases have emerged: acquisitions of water to mitigate the impacts of Colorado River water transfers from the Imperial Irrigation District to San Diego, and a variety of smaller transfers to instream flows under § 1707 of the Water Code. The Colorado River mitigation water aims to offset the reduction in irrigation drainage to the Salton Sea, which involves land fallowing. Irrigation drainage is the main source of water in this terminal saline lake, and fallowing reduces that drainage. The mitigation water was required under the terms of the transfer permit and is intended to prevent the acceleration of salt accumulation, which will eventually (even without the transfer) make the Salton Sea too saline to support food sources for migratory waterfowl. Under the current terms of the transfer, this mitigation water is to be provided through 2017.

50 In 2011, a very wet year, the EWA water was not needed and was stored for future use. Figure 11 reports the acquisition as taking place in that year, since payment occurred.
The other new thrust in environmental acquisitions was prompted by § 1707 of the Water Code, enacted in 1991. This statute authorizes the dedication or transfer of water to instream flows by protecting it legally from inconsistent upstream uses by junior water-rights-holders. Many of the environmental water transfer programs noted above operate with § 1707 permits. The additional transfers labeled explicitly as § 1707 flows in Figure 11 are a collection of local watershed support measures in the Far North (Scott and Trinity Rivers), the San Francisco Bay Area (Tomales Bay, San Pablo Bay), and the Sacramento Valley (Butte Creek). Most involve relatively small volumes of water, are essentially permanent in duration, and are associated with non-profit organizations participating in watershed management (e.g., the Scott River Trust). In contrast to all of the other environmental water trades shown in the figure, the § 1707 acquisitions are generally made as donations rather than for monetary compensation (though some policy discussions are under way about making these donations eligible for tax deductions to create financial incentives to increase instream flows).

Because the bulk of the environmental market requires funding, an important question is: Where does the money come from? Roughly $547 million (2011 dollars) were spent on the 4.5 maf acquired between 1982 and 2011—costing an average of $122 per acre-foot. When these purchases have been made in the short-term market (as with the EWA prior to the Yuba Accord), the average prices paid have been higher than in the longer-term agreements, such as WAP purchases for instream flows. (As noted earlier, farmers wishing to buy water have at times been frustrated by the competition). To date, the tab has principally been picked up by state and federal taxpayers, with the state paying the lion’s share (52% state, 19% federal), mostly using general obligation bond funds. Water users have paid for the remainder: 24 percent through an ecosystem restoration surcharge levied on CVP contractors under the CVPIA (now roughly $9/af for agricultural water districts and $18/af for urban districts and power providers) and 5 percent by participants in the Colorado River water transfer.

Given general state and federal budget difficulties, the future of environmental water purchases is uncertain. Diminishing funds have already reduced volumes of environmental water acquisitions in recent years. Looking ahead, there is little money left from approved state bonds to fund these (or other) environmental programs, and federal budgets are equally constrained. The CVPIA restoration fund—supported by a surcharge on water users—is a more reliable funding source than taxes, but this fund has many potential uses, and now that the experimental instream flow program is winding down, the reduced budget for water acquisitions is concentrating on wildlife refuges. (The CVPIA set a quantitative goal for water deliveries to the refuges, through a combination of regulatory reallocations and purchases, but this goal has yet to be met.)

51 This protection is necessary because the environment does not have explicit water rights for instream flows under California law. Information on § 1707 and a list of permits is available at www.waterboards.ca.gov/waterrights/water_issues/programs/applications/instream_flow_dedication/index.shtml. See Technical Appendices Tables B8 and B9 for a list of permanent and long-term transfers included in Figure 11.

52 For a list of these transfers, see Technical Appendices Table B8. Unlike other permanent transfers, the rights to use the water under § 1707 transfers do not change hands. But to resume using it for its original purpose, the rights-holder would have to go through a new review process and demonstrate that the change would not cause negative environmental impacts. To protect instream flows, some reallocations of environmental flows determined through quasi-regulatory proceedings, such as the settlement to restore flows on the lower San Joaquin River, also acquire § 1707 permits. We have not included such agreements as part of the environmental water market because they are more akin to regulatory reallocation of flows than voluntary acquisitions.

53 See the report by the CVPIA Independent Review Panel (2009). The panel found that the water the refuges have been acquiring is being managed well. It also noted Delta conveyance constraints as an impediment to adequate water acquisition.
Apart from the general difficulties of raising taxes or introducing new surcharges on water users, it may be particularly hard to generate public support to expand environmental water purchases as a matter of policy. Environmental water acquisitions are an alternative to uncompensated regulatory reallocations of flows. Both occur when allocations to other sectors have left the ecosystem with too little water to function well. In some places, such as Australia, public policy has opted to principally use the market to buy back needed environmental flows. California has operated with a hybrid policy, combining regulations and the market. Several state and federal statutes and the California constitution authorize the uncompensated cutback of water diversions when they cause environmental harm, and some water has been reallocated in this way in California watersheds. The market was introduced as a way to generate environmental benefits while reducing the conflict associated with uncompensated cutbacks. Some have suggested that this market provides an added advantage of giving regulators the incentive to use environmental water more efficiently. But environmental water markets also have many detractors. Although an independent review team found the EWA—the largest taxpayer-funded program—to be moderately effective (meaning things could have been even worse without it), many observers view it as ineffective because it coincided with the collapse of native fish populations in the Delta.

In our view, a hybrid policy is likely to be more beneficial from a practical perspective than a policy that relies solely on uncompensated reallocations to the environment. To maintain public support for these programs, it will be important for California to evaluate and improve the effectiveness of all environmental water allocations—whether acquired through regulatory means or purchases.

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54 These policies can be complementary. One purpose of § 1707 is to allow water-rights-holders to augment streamflows above the minimum regulatory requirements (Gray, 1994b).
55 See Garrick et al., 2009, and Australian Department of Sustainability, Environment, Water, Population and Communities, 2010.
56 For a discussion of the legal issues, see Hanak et al., 2011, Chapters 5 and 7. Examples of large regulatory cutbacks include CVPIA reductions (which reduced CVP diversions to support salmon), recent Delta pumping restrictions (which more generally reduced Delta exporters’ access to water), and the Mono Lake and Owens Valley decisions (which reduced Los Angeles’s ability to draw water from its land holdings in the eastern Sierras).
57 An independent scientific assessment (Brown, Kimmerer, and Brown 2009) considered the EWA’s effectiveness to be modest at best: In the first five years, it likely increased the survival of winter-run Chinook salmon by 0 to 6 percent, adult delta smelt by 0 to 1 percent, and juvenile delta smelt by 2 to 4 percent. The gains could have been greater if the EWA water were allocated in a more focused way, so as to concentrate benefits on a single life stage of one species. For instance, concentrating on the spring season during dry years could have increased abundance of juvenile delta smelt by up to 7 percent and adult delta smelt by up to 4 percent. Chinook salmon runs could have been increased by 20 percent if water volumes were applied during the entire outmigration period.
Groundwater Banking Trends

The infrastructural and institutional constraints on California’s water market in recent years have made it more difficult for the market to serve one of its intended purposes—mitigating the economic costs of droughts. Groundwater banking, now expanding in some parts of the state, is a management strategy that has helped fill this gap.

Soon after the water market expansion in the late 1980s and early 1990s, many local agencies began looking to groundwater storage to improve supply reliability during future shortages through informal conjunctive use programs and more formal banking programs. Here, we highlight successful efforts in two regions where groundwater banks began storing water for off-site parties in the 1990s: Kern County, where numerous local agencies developed banks; and Southern California, where the Metropolitan Water District of Southern California (MWDSC) began storing water with agencies located within its service area and with the Mojave Water Agency, located to the east of MWDSC. These two programs augmented an existing banking arrangement MWDSC had with two agencies in the Colorado River basin (the Coachella Valley Water District and Desert Water Agency). In contrast to Kern, where the banks are managed using semiformal arrangements, the banking in Southern California takes place in basins where the rights to store and withdraw water are formalized through adjudications or special management districts.

During this time, many other local agencies launched or expanded groundwater storage programs for their own use. DWR records indicate that at least 89 agencies within the state are currently engaging in conjunctive use programs, including 32 in the South Coast, 37 in the lower San Joaquin Valley (the Tulare Basin hydrologic region), and a handful each in several other hydrological regions (Department of Water Resources, 2012). However, the department’s own attempts to collect data on these operations for the 2013 update of the California Water Plan through written and phone surveys has met with limited success. DWR sought information on location, year developed, capital cost, annual cost, administrator, project capacity, source water, put/take capacity, recharge method, goals/objectives, and constraints. At best, only 52 agencies provided some of the information requested; fewer than half responded to the items requesting quantitative data. In some regions, the responses were provided on condition that the identifying information not be disclosed. As a result, the next update of the California Water Plan will be able to offer only broad estimates of banking operations, with incomplete information on key questions relating to the capacity and actual storage levels of the agencies.

This reluctance to report such information reflects the climate of local distrust regarding state oversight of groundwater. Since the passage of Senate Bill X7-6 in late 2009, local entities are required to report groundwater levels (though not volumes withdrawn) to DWR, and many local officials reportedly fear that further state efforts to manage groundwater are in the offing. As noted above, these concerns include the initiation of surface water permit reviews by the SWRCB for all new banking operations, because banking can involve storage of surface water falling under the board’s jurisdiction.

For these reasons, we limited our data collection efforts to the subset of banking operations that are storing water for off-site parties, focusing specifically on these third-party storage operations. Although the bank managers are usually also operating either formal banking programs or informal conjunctive use programs with water users within their service areas, we do not include data on these programs in the following discussions.
Banking Trends in Kern County

Figure 12 shows the locations of 11 groundwater banks in Kern County. Figure 13 presents the storage balances for eight of these banks that work with over 40 off-site parties, including 26 mostly agriculturally-oriented local entities, 10 non-local urban agencies (five in Southern California, three in the Bay Area, and two elsewhere in the San Joaquin Valley), four non-local agricultural agencies, and the state of California. These banks are all concentrated within the Tulare Lake hydrologic region, where most of Kern County’s farming activity also occurs. The largest (in terms of volumes stored) is the Kern Water Bank, a joint powers authority formed by a group of public and private water agencies within Kern County. It stores water primarily for these members, along with one agricultural agency in Kings County. (This is the only bank for which we have all groundwater balance information.) The oldest – the Semitropic Water Storage District— is also the largest bank storing water for entities located outside of the county. It operates an informal conjunctive use program for farmers within its service area, using the proceeds from the banking operation to lower the costs of imported surface water to make this water more attractive to farmers who would otherwise pump groundwater. Semitropic recently formed a joint powers authority with the Rosamund Community Services District and a private company to bank water in the Antelope Valley within the South Lahontan hydrologic region near the eastern border of Kern and Los Angeles counties.

FIGURE 12
Groundwater banks in Kern County are concentrated in the Tulare Lake hydrologic region

SOURCE: Mapping data on agency boundaries provided by the Kern County Water Agency.

58 Detailed information from the Buena Vista Water Storage District was not available, but this groundwater bank appears to be relatively small, storing only about 30,000 af per year overall (for local users and third parties) (http://www.wakc.com/index.php/whos-who?pid=2&sid=63:Buena-Vista-Water-Storage-District)
Between 1990 and 2006, these banks accumulated balances of nearly 3 million acre-feet. Although these reserves were drawn down in the late 2000s to address shortages caused by the drought and Delta pumping restrictions, balances were quickly and fully restored following the very wet conditions in 2011, which also allowed unusually high Delta exports (Figure 13). As shown in Table 3, roughly half of the present balances are held for urban agencies and half for agricultural agencies. Likewise, roughly half of the balances are held for parties in Kern County, with the remainder split between Southern California (28%), the Bay Area (18%), and elsewhere within the San Joaquin Valley (8%).

**FIGURE 13**  
Groundwater bank balances in Kern County have recovered since the recent drought

![Graph showing groundwater bank balances in Kern County from 1989 to 2011](attachment:10)

**TABLE 3**  
Groundwater banking balances and activity by region and end use (acre-feet)

<table>
<thead>
<tr>
<th>Region</th>
<th>Agriculture</th>
<th>Urban</th>
<th>Mixed use</th>
<th>Total balance</th>
<th>Total withdrawals</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.F. Bay Area</td>
<td>–</td>
<td>551,277</td>
<td>–</td>
<td>551,277</td>
<td>130,343</td>
</tr>
<tr>
<td>Kern County</td>
<td>1,140,803</td>
<td>17,743</td>
<td>241,679</td>
<td>1,400,225</td>
<td>1,226,805</td>
</tr>
<tr>
<td>Other San Joaquin Valley</td>
<td>202,045</td>
<td>1,875</td>
<td>–</td>
<td>203,920</td>
<td>93,467</td>
</tr>
<tr>
<td>Southern California</td>
<td>–</td>
<td>826,378</td>
<td>–</td>
<td>826,378</td>
<td>752,181</td>
</tr>
<tr>
<td>Unspecified Region</td>
<td>–</td>
<td>–</td>
<td>10,032</td>
<td>10,032</td>
<td>81,631</td>
</tr>
<tr>
<td>Total Balance</td>
<td>1,342,848</td>
<td>1,397,273</td>
<td>251,711</td>
<td>2,991,832</td>
<td></td>
</tr>
<tr>
<td>Total Withdrawals</td>
<td>1,101,055</td>
<td>284,523</td>
<td>898,849</td>
<td>2,284,427</td>
<td></td>
</tr>
</tbody>
</table>

**SOURCE:** Data collected by the authors from local agencies.  
**NOTES:** The figure reports storage for offsite parties. For entities other than the Kern Water Bank, some additional storage may be occurring for the entities themselves. The figure excludes storage for offsite parties by the Buena Vista Water Storage District, for which detailed information was not available.
The ability of these banks to recharge so quickly after the first sustained drawdown since their inception was a stroke of good fortune, particularly given the overall hydrologic context in which they operate. The Tulare Basin is in a state of chronic overdraft, losing an estimated 1 million acre-feet annually, and more during dry years (Faunt, 2009). According to local operators, banking operations have generally helped to alleviate this problem and helped to stabilize groundwater levels within Kern County since the mid-1990s. However, the late 2000s drought led to greater pumping overall, and the bank withdrawals did not occur without controversy, given falling water tables. Several local parties are currently in discussions to resolve a legal dispute over whether bank pumping injured other users. Recent preliminary estimates from DWR find that groundwater levels declined during the latest drought (2007–2009) in all three Central Valley hydrologic regions (Sacramento River, San Joaquin River, and Tulare Basin), but that only the Tulare Basin did not see a rebound in 2010, the last year of the study (Brewster, 2012). This situation may have significantly improved in 2011, if local recharge efforts were as successful as the banking operations for offsite parties.59

The recent controversy highlights the difficulties of groundwater banking in basins that lack fully formalized management regimes, which account for all withdrawals and recharge. The Kern banks do have protocols to protect local users from injury associated with withdrawals for offsite parties, but these protocols generally do not account for the impacts that local users have on the basin. Given the generally positive levels of net reserves, the banks have likely benefitted local users overall and in most individual years. Of course, local pumping has also contributed to net drawdowns of the basin in dry years. Hopefully, the recent controversy will motivate and inform more comprehensive basin management efforts that involve all parties, not just bankers. One positive step is the recent launching of a countywide groundwater management committee, which will examine additional management options.60 Preliminary undertakings also include a multiparty effort to improve basin modeling.

Groundwater Banking in Southern California

The Metropolitan Water District of Southern California (MWDSC) has withdrawn over 720,000 af from Kern County water banks since 2001; and at the end of 2011, the district still held a balance of 550,000 af (Technical Appendices Table C3). The agency has also engaged in groundwater storage programs in several locations within Southern California. The first of these is a partnership with the Coachella Valley Water District and the Desert Water Agency, which was borne out of an infrastructure opportunity. These agencies are both contractors with the SWP but do not have direct access to SWP deliveries. MWDSC delivers an equivalent amount of Colorado River water to them through its Colorado River Aqueduct, and in exchange takes their allotment of SWP water. Through the “advanced delivery” program, MWDSC is able to pre-deliver the water for this exchange and bank it in Coachella’s managed groundwater basin, subsequently drawing down on these reserves during dry years. (The Coachella basin is managed by the Coachella Valley Water District, a special groundwater management district that regulates the basin through pumping fees and managed recharge operations).

MWDSC began another storage program in the late 1990s, initiating and coordinating banking operations within adjudicated basins and special groundwater management districts within its service area. In these

59 Semitropic Water Storage District data show that average groundwater levels within the agency’s service area nearly recovered to pre-drought levels, but that groundwater levels net of banking operations have continued to decline since the early 1990s, despite the availability of SWP surface water for recharge (Semitropic Water Storage District, 2012).

60 This effort is seen by some local entities as a preventive measure to avoid state intervention in the basin.
cases, the water is stored within these basins (in all, ten have participated to date), and the local agencies then pump groundwater instead of using SWP surface water. MWDSC funds the additional infrastructure needed to run the program (notably, additional pumps), and the agencies are free to use these facilities for their own operations when they are not needed for MWDSC pumping.

A third storage program, launched by MWDSC in the early 2000s, involves exchanges with the Mojave Water Agency, which stores groundwater for MWDSC in the adjudicated Mojave Basin. Because the Mojave Water Agency is also an SWP contractor, MWDSC is able to draw on Mojave’s SWP allocation when it wishes to call up reserves.

Figure 14 shows the net groundwater balances from these three operations. At its peak in 2005, the combined storage totaled over 435,000 af. By 2009, 272,000 af of these reserves had been withdrawn, leaving a total of just 164,000 af. Although recharge has not been as rapid as in Kern County, storage balances by the end of 2011 had risen to 295,000 taf, two-thirds of the maximum before the last drought.

**FIGURE 14**

Groundwater banking has also expanded within Southern California

![Groundwater banking graph](attachment:10)

SOURCE: Data collected by the authors from local agencies (for details, see Technical Appendices Table C3).

NOTES: The figure shows storage for the Metropolitan Water District of Southern California in the Mojave Basin, in the Coachella Valley (Colorado River Banking), and with member agencies within its own service area. Storage at the Mojave Water Agency and within the MWDSC service area is recorded in fiscal years (July 1 through June 30), and the Colorado River banking is recorded in calendar years.

In contrast to Kern County, these Southern California banking operations are occurring in special groundwater basins that regulate pumping (e.g., Orange County Water District) or in adjudicated basins where there are established pumping rights for all parties, including local landowners and pumpers. Such arrangements help limit conflict when supplies are constrained. However, just as in Kern County, finding excess surface water to store underground is a growing challenge. Many agencies located south of the Delta now express frustration over the growing competition for limited wet-year supplies, given the expansion of groundwater banking and the growing restrictions on Delta exports.
Policy Implications

Water marketing and groundwater banking are essential tools for helping California manage its scarce water resources more efficiently and sustainably over the long term. Both tools augment the state’s ability to cope with periodic droughts. Water markets also facilitate the longer-term shift of some supplies to activities and regions with strong demand and insufficient water rights. Given the anticipated reduction in seasonal storage in the Sierra Nevada snowpack and the prospect of more frequent droughts due to climate warming, these tools are likely to become even more important in the future.

The state’s water market is evolving in both expected and unexpected ways. Given agriculture’s major share of total human water use in California (77 percent in 2005) and the relatively low value of some agricultural water uses, it is not surprising that agriculture is the primary source of market supplies. Market demands have been quite diverse, with significant purchases by all three water-use sectors—farms, cities, and the environment. The market first grew in response to a major drought, spurred by direct state purchases. Subsequent growth was driven by changes in environmental policies rather than weather, with an increase in direct purchases of water for the environment and growing demand from farmers who lost supplies because of new instream flow requirements.

Most recently, urban demand has grown, as expected, with cities seeking to firm up supplies to support population growth and diminishing sources such as the Colorado River. This shifting demand has transitioned the market to one in which long-term and permanent trades predominate, rather than transactions negotiated annually. Perhaps surprisingly, the market has also become more localized, with half of all sales now occurring between parties within the same county—three times more than when the market was launched. This shift likely reflects local pressures to sell locally, as well as growing infrastructure and institutional constraints on more distant sales. In particular, the ability to move water through a key conveyance hub in the Sacramento-San Joaquin Delta has been constrained in order to reduce harm to the Delta’s compromised native fish populations, and hurdles to transfer approvals appear to be increasing. Finally, environmental water purchases, which were intended to reduce the conflicts associated with reallocations of water to the environment, are still a significant but now diminishing share of the market, confronted by declining revenues and a lack of public consensus that taxpayer dollars should be used to support such efforts.

In recent years, infrastructural and institutional constraints have diminished the market’s ability to mitigate the costs of drought. Groundwater banking—now expanding in some parts of the state—is a management alternative that may help fill this gap. Banking operations in Kern County and Southern California are demonstrating their ability to help California water users weather droughts. In combination, these operations made nearly 1.9 million acre-feet of dry-year water available between 2007 and 2010—considerably more than the entire statewide water market was able to provide in extra dry-year supplies.

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61 See Hanak et al., 2012 for information on the marginal value of agricultural water uses and comparisons of gross state product per acre-foot in the agricultural and urban sectors.

62 In all, the market probably provided between 500,000 and 600,000 af in dry-year supplies over a three-year period, above and beyond transfers that would likely have occurred anyway. This included direct purchases from northern California growers by the State Water Contractors in 2008 (39,000 af), supplies from the state-run drought water bank in 2009 (74,000 af), temporary drought-sales from the Palo Verde Irrigation District to MWDSC in 2009 (45,000 af), and the Yuba Accord sales in 2008, 2009, and 2010 (307,000 af). Some additional sales within the San Joaquin Valley probably also occurred in direct mitigation of the drought.
Banking will need to continue expanding to help secure water supply reliability for California, particularly as the Sierra snowpack diminishes with a warming climate. This will require more coordination in the management of surface and groundwater reservoirs, so that more over-year storage is held in groundwater basins, freeing up surface reservoirs to concentrate more on seasonal storage for the irrigation season (Tanaka et al., 2006; Connell-Buck et al., 2011). It will also depend on the availability of conveyance infrastructure, including the key hub of the Delta, both to enable wet-year supplies to reach groundwater banking locations and to enable those who are storing water in distant banks to retrieve their water in dry years. (Repayment from the banks often relies on exchanges of water supplies traveling through the Delta).

Both the progress to date and the constraints experienced by marketing and banking operations suggest a number of policy implications that merit consideration by state, federal, and local entities:

1. **Infrastructure matters, for both marketing and banking.** California’s statewide infrastructure network has been a boon to these operations, and recent local investments have helped to further the ability to bank water underground. However, problems in the Delta have limited the market’s prospects for furnishing dry-year supplies, and new Delta pumping constraints may limit the ability to operate groundwater banks for this purpose as well. These are two reasons to improve the reliability of Delta pumping capabilities and, with a changing climate, they are likely to become more critical for statewide water management in the future.

2. **Transfers must prevent injury to the environment and other legal users of the state’s waters, but the institutional review process is unnecessarily complicated and cumbersome.** Currently, some of the biggest problems seem to be those associated with temporary drought-related transfers, which need to happen quickly if they are to happen at all. Options worth considering include creating a permanent “joint place of use” for CVP and SWP transfers south of the Delta (as was the case temporarily during the last drought) and forging more long-term contracts that enable dry-year transfers (using deals such as the Yuba Accord as a model). There also needs to be greater clarity and consistency in establishing conditions for exports from Sacramento Valley farmers to parties south of the Delta (fallowing rules, groundwater withdrawal ratios, etc.). Under current practice, DWR and USBR alter conditions each year, often quite late in the process. Transparency and the perception of fairness is important, because DWR controls the conveyance infrastructure and also runs the SWP—a junior rights-holder in the region. At present, there is the potential for conflict of interest in approving such transfers, because DWR has an interest in erring on the side of caution in limiting potential injury to the SWP.

3. **To improve transfers as well as banking, California needs to strengthen local groundwater management.** Local management of groundwater basins is likely to be more effective than state-led management, but local officials need more incentives to get this right. As recent reports have highlighted, local groundwater management is improving in California, but it needs even further improvement in order to sustain this resource (Nelson, 2011; Association of California Water Agencies, 2011). One option would be for the state to use its authority under Article 2, § 10 of the constitution (requiring reasonable use of all water) to start requiring non-discriminatory protection of groundwater basins. This would be an improvement over the current, discriminatory county export ordinances, which are limiting transfers without instilling better local basin management. The state could also assert “no injury” protections for all groundwater-related transfers, thereby providing a more level playing field than the county ordinances currently provide for permit applications for export-related transfers. In areas such as Kern County, which have begun groundwater banking, the incentives are

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63 For additional discussions of some of these issues, see Hanak et al. (2011), Chapters 6 and 7, and Hanak et al. (2012).
naturally growing for more comprehensive basin management that oversees withdrawals by all users. However, it is still difficult to get all parties to agree. Outside pressure—with a credible threat that the state would step in if local officials do not—may be the best way to proceed. Ideally, this would be accompanied by positive financial incentives to improve basin management. Local officials can look to solutions that have been successful elsewhere in California, including special districts with pumping authority and fees and adjudications. In this context, it is worth noting that many recent adjudications in Southern California have been relatively swift—accomplished within two to three years (sometimes less)—unlike the multidecade legal battles of the past that those in other parts of the state understandably wish to avoid.64

4. **Models need to be developed for mitigating the economic impacts of large-scale land fallowing deals.** Over the long term, economic shifts make it likely that some cropland will be permanently retired, with its water supply becoming available for growing demand centers in other sectors and regions. In these cases, mitigation of community-related impacts of fallowing is likely to be important to ease economic transitions. California could learn from mitigation models currently under way in the Palo Verde Irrigation District and the Imperial Irrigation District, as well as other cases such as the Northwest Forest Plan (which provided economic support to displaced workers and affected communities in areas where forestry lands were being converted to protected habitat).65

5. **Environmental water purchases offer the prospect of reducing the conflicts associated with reallocating water to the environment.** There is merit in pursuing water purchases alongside regulatory policies that reallocate some water, as California has done since the early 1990s. These transfers can also help improve the efficiency of environmental water management, by giving environmental water managers a budget that they can manage flexibly. Funding will be difficult, given the disappearance of state bond funds (responsible for half of all acquisitions to date) and ongoing state and federal budget constraints. The CVPIA ecosystem restoration surcharge—funded by water users—is a potentially good model, although given the currently austere fiscal climate it will be difficult to extend such a model to other water users. Support from the public and water users will be much easier to muster if they can be presented with systematic evaluations demonstrating the effectiveness of environmental water allocations, whether acquired through purchases or regulatory reallocations.

6. **High-level leadership is needed to routinize water marketing and groundwater banking transactions.** If the market has floundered in recent years, it has been partly due to the lack of priority attention and/or understanding of the centrality of these tools in effective statewide water management. Moreover, some innovations—such as reoperating surface reservoirs to enable more groundwater banking—require risk-taking, and only high-level state and federal leaders have the position and authority to undertake such risks. State and federal leadership played a key role in developing drought waterbanking in the early 1990s and in concluding the large package of transfers of Colorado River water as part of the QSA. One option might be to assemble a high-level coordinating committee from relevant agencies, with the ability to break through barriers.

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64 See California Department of Water Resources (2011) for a list of adjudicated basins through mid-2011 and the years in which the adjudication was filed with the court and finalized. (In some cases, there has been additional litigation to resolve issues with entities that are not party to the agreement following the finalization of the agreement). It is also worth noting that some recent adjudications have been voluntary (e.g., the Beaumont Basin adjudication, concluded in 2004). Blomquist (1992) describes the early southern California adjudications, some of which took 15 years or more to be resolved.

65 See Hanak et al., 2011, Chapter 9.
References


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Attachment L 10

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San Francisco, CA
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

AGREEMENT FOR THE SUPPLY AND CONVEYANCE OF WATER
BY THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF CALIFORNIA
TO THE SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
UNDER
THE DRY YEAR WATER PURCHASE PROGRAM

THIS AGREEMENT is entered into as of the 21st day of December, 2007,
pursuant to the provisions of the California Water Resources Development Bond Act,
the State Central Valley Project Act, and other applicable laws of the State of California,
between the Department of Water Resources of the State of California, herein referred
to as “DWR,” and the San Luis & Delta-Mendota Water Authority, a public agency in the
State of California, herein referred to as the “Authority.” DWR and the Authority are
herein referred to separately as the “Party” and collectively as the “Parties.”

RECITALS

A. In 2008 and probably for several years to come, because of hydrologic conditions
and/or regulatory constraints, the operation of the State Water Project (“SWP”)
by DWR and the operation of the Central Valley Project (“CVP”) by the United
States Bureau of Reclamation (“Reclamation”) may result in less water being
made available to the south-of-Delta CVP water service contractors and the SWP
contractors. In anticipation of such potential conditions, DWR is initiating a
dry year water purchase program to acquire water from voluntary sellers to
augment the water supplies.
B. The Yuba County Water Agency ("Yuba") is engaged in the Yuba River Accord initiative ("Yuba River Accord") to resolve issues associated with operation of the Yuba Project in a way that protects lower Yuba River fisheries and local water-supply reliability, while providing revenues for local flood control projects, water to use for protection and restoration of Delta fisheries, and improvements in state-wide water supply management.

C. The Yuba River Accord includes three major elements, all of which must be in place for the Yuba River Accord to become effective: (1) the Fisheries Agreement (dated November 3, 2007) to provide higher flows for fish in the lower Yuba River under certain conditions, (2) Conjunctive Use Agreements between Yuba and water districts within Yuba County for implementing a conjunctive use and water use efficiency program; and (3) the "Agreement for the Long-Term Purchase of Water from Yuba County Water Agency by the Department of Water Resources" (dated December 4, 2007) ("Yuba Water Purchase Agreement").

D. DWR and Yuba entered into the Yuba Water Purchase Agreement as part of the Yuba River Accord to purchase specified Components of water for the benefit of the EWA, the SWP contractors, and the Authority's member agencies to resolve potential conflicts concerning the accounting for water that Yuba will release pursuant to the Fisheries Agreement.

E. Reclamation determined to not be a party to the Yuba Water Purchase Agreement. Yuba and DWR will amend the Yuba Water Purchase Agreement at such time as Reclamation is willing to become a party thereto, subject to
Reclamation and DWR entering into a separate agreement for the allocation of, and payment for water under the Yuba Water Purchase Agreement.

F. Consistent with the Yuba Water Purchase Agreement, when Yuba makes water available to DWR under the Yuba River Accord for benefit of the SWP contractors and the Authority, DWR intends to offer the water under the dry year water purchase program to the Authority and to the Participating SWP Contractors as set forth herein.

G. The Authority and the SWP contractors invested significant resources to assist DWR and Yuba with the development of the Yuba River Accord, the Yuba Water Purchase Agreement, and supporting documentation.

H. The Parties desire to enter into this water supply and conveyance agreement whereby DWR will purchase water under the Yuba River Accord for the dry year water purchase program to make available for purchase by the Authority and the SWP contractors.

AGREEMENT

Now Therefore, in accordance with the Recitals and in consideration of the terms and conditions herein, the Parties agree to the following:

1. DEFINITIONS

When used in this Agreement, the following definitions will apply:
"Balanced Conditions" means the hydrologic condition of the Delta as defined in the November 24, 1986 "Agreement between the United States of America and the State of California for Coordinated Operations of the Central Valley Project and the State Water Project."

"Banks Pumping Plant" means a SWP facility in the south Delta owned and operated by DWR.

"CALFED" means the joint federal and California program intended to develop and implement a long-term comprehensive plan that will, among other purposes, restore ecological health of the Bay-Delta System and improve water project management.

"Carriage Water" means the water losses due to increased Delta outflow necessary to maintain baseline Delta salinity conditions as determined by DWR, that are associated with Delivered Transfer Water or Stored Released Transfer Water that is exported by CVP or SWP Delta pumping facilities.

"Component 1 Water" means the water supplies available to DWR pursuant to Section 5 of the Yuba Water Purchase Agreement.

"Component 2 Water" means the water supplies available to DWR pursuant to Section 6 of the Yuba Water Purchase Agreement.
"Component 3 Water" means the water supplies available to DWR pursuant to Section 7 of the Yuba Water Purchase Agreement.

"Component 4 Water" means the water supplies available to DWR pursuant to Section 8 of the Yuba Water Purchase Agreement.

"Conference Year" means a Water Year for which the North Yuba Index is less than 500,000 acre-feet, calculated according to the procedures and formulas set forth in Exhibits 4 and 5 of the Fisheries Agreement, and using the latest available forecasts for the Water Year.

"Delivered Transfer Water" means Released Transfer Water from Yuba that is accounted as being exported by the SWP and the CVP, or contributing to exports, as described in Section 5 of Exhibit 1 of the Yuba Water Purchase Agreement.

"EWA" means the Environmental Water Account program described in the CALFED Record of Decision and the EWA Operating Principles Agreement (August 28, 2000, as extended in September 2004), as extended by amendment and supplemental approvals, or a long-term environmental water account program.
"Fisheries Agreement" means the agreement among Yuba, the California Department of Fish and Game, and other parties, which is part of the Yuba River Accord, and under which Yuba operates the Yuba Project to provide higher flows in the lower Yuba River under certain conditions to improve fisheries protection.

"Final Classification" means the year-type classification for the Sacramento River region in the May issue of DWR's Bulletin 120.

"Management Committee" means the committee, consisting of one representative each from Yuba, DWR, Reclamation, the CALFED fishery agencies on behalf of EWA, SWP contractors, and the Authority, established under Section 14 ("Technical Committee and Management Committee") of the Yuba Water Purchase Agreement.

"Participating SWP Contractors" means all SWP contractors that have executed an "Agreement for the Supply and Conveyance of Water By the Department of Water Resources of the State of California to the Participating SWP Contractors Under the Dry Year Water Purchase Program" on or before April 1, 2008.

"Purchased Water" means the supply of Component 1 Water that is not used by the EWA as provided in Section 3.B.1.a, Component 2 Water, Component 3
Water, and Component 4 Water that has been delivered by Yuba to DWR that is accounted for as Delivered Transfer Water in the manner set forth in Exhibit 1 ("Scheduling and Accounting Principles") of the Yuba Water Purchase Agreement and made available for the dry year water purchase program. Purchased Water includes Carriage Water or water used as Delta outflow when the Export/Inflow ratio is controlling in the time period of July 1 to January 31.

"Technical Committee" means the committee, consisting of technical representatives from Yuba, DWR, Reclamation, the CALFED fishery agencies on behalf of EWA, SWP contractors, and the San Luis & Delta-Mendota Water Authority, established under Section 14 ("Technical Committee and Management Committee") of the Yuba Water Purchase Agreement.

"Water Accounting Year" means the twelve-month period commencing January 1 through December 31.

"Water Year" means the twelve-month period from October 1 of one year through September 30 of the following year. For this Agreement, each Water Year will be classified: (1) as "Wet," "Above-Normal," "Below-Normal," "Dry" or "Critical," based on the Sacramento Valley Water Year Hydrologic Classification in Figure 1 on page 188 of the State Water Resources Control Board's
March 15, 2000, Revised Water-Right Decision 1641; or (2) as a "Conference Year."

"Yuba Project" means the Yuba River Development Project, including New Bullards Bar Dam and Reservoir on the North Yuba River.

"Yuba River Accord" means Yuba's initiative as described in Recitals B and C of this Agreement.

"Yuba Water Purchase Agreement" means the Agreement for the Long-Term Purchase of Water from Yuba County Water Agency by the Department of Water Resources, which is attached hereto as Exhibit A.

2. **TERM OF AGREEMENT**

A. This Agreement will become effective upon execution by the Parties and will terminate on December 31, 2025, provided, however, the Parties may terminate this Agreement on December 31, 2015, if the Parties fail to amend this Agreement pursuant to Section 3.B.5 below and as necessary to address amendments made to the Yuba Water Purchase Agreement regarding the quantity and pricing of water pursuant to Section 15 thereof; provided further that the Agreement shall remain in effect beyond the termination dates set
forth above to the extent required to enable the parties to satisfy all
obligations then existing or outstanding.

B. Notwithstanding Section 2.A, above, this Agreement will terminate upon the
effective date of: (1) an amendment to the Yuba Water Purchase Agreement
that makes Reclamation a party thereto, (2) an agreement between DWR and
Reclamation that provides the terms and conditions by which water available
to and costs incurred by DWR and Reclamation under the Yuba Water
Purchase Agreement will be allocated, and (3) an agreement between
Reclamation and the Authority, or its member agencies, that provides the
terms and conditions by which water available to and costs incurred by
Reclamation under the Yuba Water Purchase Agreement will be allocated.

3. PURCHASED WATER

A. METHODS FOR ESTABLISHING ALLOCATIONS AND SHARING OF
WATER

1. DWR will make available to the Authority fifty percent of the following
types of water: Component 1 Water that is not used by the EWA as
provided in Section 3.B.1.a, Component 2 Water, Component 3 Water,
and Component 4 Water.

2. The Authority may elect to not take some or all of the water made
available to it pursuant to Section 3.A.1, in which event DWR will make the
water not taken by the Authority available to the Participating SWP
Contractors; provided, that the Authority will purchase all Delivered Transfer Water DWR is required to purchase from Yuba and that is made available to the Authority pursuant to Section 3.A.1. if said water is not purchased by one or more of the Participating SWP Contractors. 

3. DWR will make available to the Authority and the Authority may accept and purchase Component 1 Water that is not used by EWA as provided in Section 3.B.1.a, Component 2 Water, Component 3 Water, and Component 4 Water that is made available to the Participating SWP Contractors, if the Participating SWP Contractors elect to not take said water.

B. TYPES AND PRICES OF PURCHASED WATER

The Authority shall pay for Delivered Transfer Water made available to and accepted by the Authority under section 3.A above in accordance with the following sections:

1. COMPONENT 1 WATER
   
   a) While the EWA is in effect, if the EWA does not use all of the Component 1 Water, Component 1 Water unused by the EWA will be made available by DWR to the Authority pursuant to Section 3.A above. The Authority will pay for Component 1 Water that is made available to it and accounted for as Purchased Water at the same price per acre-foot as Component 4 Water.
b) If EWA terminates and Yuba remains obligated to provide Component 1 Water, the Parties agree that Component 1 Water remaining to be delivered under the Yuba Water Purchase Agreement will be managed annually, as follows: (1) Component 1 Water in any year will be used to enhance water supply reliability of the Delta export facilities by off-setting new mandatory restrictions imposed on the CVP and SWP, including those being imposed by the federal court order in NRDC v. Kempthorne, or through a subsequent biological opinion for the conservation or protection of fish, and (2) if any Component 1 Water remains after off-setting the restrictions set forth in subsection (1) above, then the remaining Component 1 Water will be used as determined by DWR in close coordination with the California Department of Fish and Game consistent with the water supply reliability project requirements of the funding source from which this water was purchased (Chapter 7(d) of Proposition 50, California Water Code Section 79550(d)).

2. COMPONENT 2 WATER

a) For Component 2 Water that is accounted for as Purchased Water and made available in a Water Year that has a Final Classification as Dry, the Authority will pay $75.00 per acre-foot.

b) For Component 2 Water that is accounted for as Purchased Water and made available in a Water Year that has a Final
Classification as Critical, the Authority will pay $93.75 per acre-foot.

3. COMPONENT 3 WATER

For Component 3 Water that is accounted for as Purchased Water and made available to the Authority, the Authority will pay:

a. $25.00 per acre-foot in a Wet Year;

b. $50.00 per acre-foot in an Above-Normal Year;

c. $75.00 per acre-foot in a Below-Normal Year;

d. $100.00 per acre-foot in a Dry Year;

e. $125.00 per acre-foot in a Critical Year.

4. COMPONENT 4 WATER

For Component 4 Water that is accounted for as Purchased Water and made available to the Authority, the Authority will pay:

a. $25.00 per acre-foot in a Wet Year;

b. $50.00 per acre-foot in an Above-Normal Year;

c. $75.00 per acre-foot in a Below-Normal Year;

d. $100.00 per acre-foot in a Dry Year;

e. $125.00 per acre-foot in a Critical Year.

5. POSSIBLE FUTURE ADJUSTMENTS TO QUANTITIES AND PRICES.

If the provisions of Section 15 of the Yuba Water Purchase Agreement require changes to the quantity or pricing of water
available therein, the Parties agree that amendment of this Agreement for such purposes will be a condition precedent of any amendment of the Yuba Water Purchase Agreement pursuant to Section 15 thereof. The Parties agree to meet and confer and negotiate in good faith potential changes to this Agreement.

6. **UNCOMMITTED WATER**

   a. If Yuba notifies DWR of the availability of uncommitted Delivered Transfer Water prior to accounting for the water in the Holding Account, as set forth in Section 7.4 of Exhibit 1 ("Scheduling and Accounting Principles") of the Yuba Water Purchase Agreement, DWR will notify the Authority of the availability of such water by September 30 of that year. Such water will be offered to the Participating SWP Contractors, as a group, and to the Authority consistent with Section 3.A.

   i. Within 30 days of such notice, the Authority will notify DWR of its request for an amount of the uncommitted water that it will purchase, if any.

   ii. The amount of this water actually purchased by the Authority will be based on requests for this water by the Participating SWP Contractors and the Authority, and will not exceed the amount of water made available by Yuba. The Purchased Water that DWR will allocate to the Authority will be the
lessen of the amount of water requested by the Authority or
the amount allocated to the Authority in the manner set forth
in section 3.A above.

iii. The Authority will pay DWR the applicable purchase price for
the water determined by the Water Year in which the water
is accounted for as Delivered Transfer Water at prices set
forth in Section 3.B above.

b. If Yuba has credited uncommitted Delivered Transfer Water to
the Holding Account as set forth in Section 7.4 of Exhibit 1
("Scheduling and Accounting Principles") of the Yuba Water
Purchase Agreement and the water remains in storage until the
subsequent Water Accounting Year, then DWR will offer the
water in the Holding Account to the Participating SWP
Contractors, as a group, and the Authority consistent with
Section 3.A.

i. In the year that the Authority elects to take water from the
Holding Account, that water will be credited toward the
Authority's share of the Component 3 Water with any
additional deliveries credited as Component 4 Water that is
accounted for as Purchased Water for the Authority.

ii. The Authority will pay DWR the applicable purchase price for
the water determined by the Water Year in which the water
was accounted for as Delivered Transfer Water as set forth in Exhibit 1 of the Yuba Water Purchase Agreement and at prices set forth in Section 3.B above.

4. REQUESTS, SCHEDULING AND CONVEYANCE

Scheduling and conveyance is subject to DWR's determination of conveyance capacity in SWP facilities. Scheduling and conveyance will be dependent on releases by Yuba, including the flow schedule for the lower Yuba River as provided for in the Fisheries Agreement, the North Yuba Index or the Yuba River Index, capacity of CVP and SWP facilities, and Bay-Delta conditions. In order to meet the goals of Section 6, the Parties may modify in writing the dates established in this Section 4 without amending this Agreement.

A. Requests and Scheduling

1. On or before April 11 of each Water Accounting Year, DWR will inform the Authority of the potential quantity of Component 1 Water if not used by the EWA as provided in Section 3.B.1.a, Component 2 Water, Component 3 Water, and Component 4 Water that is available to the Authority.

2. On or about April 11 of each Water Accounting Year, or as soon thereafter as practicable, the Authority will submit an initial request to DWR for delivery of Component 1 Water if not used by the EWA as provided in Section 3.B.1.a, Component 2 Water, Component 3
Water, and Component 4 Water and an initial monthly schedule for delivery of the requested water. That initial monthly schedule will include:

a. The quantity of each component of water the Authority would like to purchase from DWR;

b. The amount of said water the Authority requests that DWR convey through the Harvey O. Banks Pumping Plant and the proposed point(s) of delivery to Reaches 3 through 7 of the California Aqueduct.

3. DWR and the Authority will, between April 11 and May 19, confer on the allocation of water under Section 3.A.

4. Within 5 business days of notice from DWR that there has been a change in the amount of water available, but no later than May 19, the Authority will provide DWR with its modified request for each component of water.

5. No later than May 19, DWR will notify the Authority of the quantity of Component 1 Water if not used by the EWA as provided in Section 3.B.1.a, Component 2 Water, Component 3 Water, and Component 4 Water that the Authority will schedule pursuant to Section 4.A.7 below.
6. The Parties recognize that no later than May 15 DWR must notify Yuba of the quantity of Component 4 Water that DWR will purchase from Yuba.

7. On or about May 20 of each Water Accounting Year, or as soon thereafter as practicable, the Authority and DWR will agree upon a final monthly schedule for delivery of Component 1 Water if not used by the EWA as provided in Section 3.B.1a, Component 2 Water, Component 3 Water, and Component 4 Water. The final schedule will be updated to accommodate any changes that affect the delivery of water as provided in Section 9 ("Scheduling of Water") of the Yuba Water Purchase Agreement. The final monthly schedule will include:
   a. Pursuant to Section 3.A above, the quantity of each component of Purchased Water the Authority will purchase and that the Authority requests be delivered through the SWP and CVP facilities each month of the Water Accounting Year;
   b. The quantity of each Component of Purchased Water that the Authority requests DWR convey through the Harvey O. Banks Pumping Plant and SWP facilities each month of the Water Accounting Year; and
   c. The quantity of water to be delivered at the point(s) of delivery in each month of the Water Accounting Year.
8. The final monthly schedule may be modified by mutual agreement. The Authority will submit copies of any proposed modifications to the final monthly schedule to DWR's State Water Project Analysis Office (SWPAO) Chief of Water Supply and Transfers Branch, and Chief of Water Deliveries Section, both at FAX number (916) 653-9628. SWPAO will coordinate with the DWR Operations Control Office in determining whether the proposed modifications to the final monthly schedule can be accommodated by DWR.

9. After DWR approves the final monthly schedule, during any week when DWR is conveying water for the Authority, it will submit weekly schedules to the DWR Operations Control Office: one to the Chief, Pre-Scheduling Section, FAX (916) 574-2782, and one to the Chief, Operations Scheduling Section, FAX (916) 574-2785. The weekly schedules will be consistent with the final monthly schedule.

10. The scheduling of Purchased Water, and any adjustments to the schedule, will be in accordance with the Exhibit 1 ("Scheduling and Accounting Principles") of the Yuba Water Purchase Agreement.

11. DWR's approval of the schedule will be subject to Section 4.B, below.

B. Conveyance

1. If requested by the Authority, DWR will convey for the Authority water under this Agreement through the Harvey O. Banks Pumping Plant; provided that DWR will convey such water only when DWR determines
that DWR has capacity in SWP facilities available in excess of capacity
needed for: a) all SWP operations and services to long-term SWP
contractors; b) delivery of SWP water for regulatory, water rights and
contractual obligations; and c) delivery of water for existing non-SWP
contractual obligations.

2. DWR will not convey water under this Agreement through the Harvey
O. Banks Pumping Plant at times or in a manner that would adversely
affect the quantity or unreasonably affect the quality of SWP water
delivered to all SWP contractors.

3. DWR will deliver water under this Agreement that it conveys through
the Harvey O. Banks Pumping Plant to point(s) of delivery, as
determined by the Authority, on the California Aqueduct within
Reaches 3 through 7. Delivery within other reaches of the California
Aqueduct will be subject to a separate agreement or an amendment of
this Agreement.

4. The Authority will provide all power required to convey water under this
Agreement through the Harvey O. Banks Pumping Plant and to the
point(s) of delivery. The power will be provided during on-peak hours
or as otherwise agreed to with the SWP Operation's Control Office.

5. Any water under this Agreement conveyed by DWR through the
California Aqueduct will be reduced by: (a) two percent (2%) if the
5. **INVOICING AND PAYMENTS**

DWR will invoice the Authority and the Authority will submit payment to DWR based on each invoice as provided below.

A. **INVOICING AND PAYMENT OF PURCHASED WATER**

1. On or after June 10 (or within 9 days of the date that DWR receives an invoice from Yuba), DWR will invoice the Authority for fifty percent of the payment for the estimated amount of water that the Authority scheduled as Purchased Water for that calendar year minus fifty percent of any credits due to the Authority as provided in Section 5.C below.

2. On January 17 of the next calendar year (or within 9 days of the date that DWR receives an invoice from Yuba), DWR will invoice the Authority for the remaining unpaid cost for Purchased Water, including Purchased Water available pursuant to Section 3.B.6, above, purchased by the Authority minus the remaining credits due to the Authority as provided in Section 6.C below.

3. Invoices will itemize any prior payments and credits, the total due, less any additional credits.
B. **INVOICE FOR CONVEYANCE, DELIVERY, ADMINISTRATIVE COSTS**

1. DWR will invoice the Authority quarterly for the conveyance charges and fees described below. Each invoice will include itemization of monthly charges, as appropriate.

2. The Authority will pay to DWR the following charges for conveyance:

   a) A monthly administration fee of $500 for each month DWR conveys Purchased Water for the Authority to cover DWR's cost to administer this Agreement, maintain records, and prepare conveyance schedules and invoices.

   b) A use-of-facilities charge for each acre-foot of Purchased Water DWR conveys for the Authority through the California Aqueduct to turnouts at Reaches 3 through 7. DWR will notify the Authority, in writing, prior to January 1 of each calendar year, of the use-of-facility charge per acre-foot for the following year. That charge will be calculated in the manner in which it has historically been calculated, and will be calculated consistent with the use of facilities charge applied to other non-SWP contractors.

   c) The Authority will pay DWR for any demonstrable costs that the SWP contractors or DWR would otherwise bear as a result of DWR's activities under this Agreement; provided the costs are not addressed in this Agreement; provided further that DWR substantiates in writing to the Authority that such costs resulted solely from DWR's activities
under this Agreement.

d) DWR is not responsible for the use, effects, or disposal of the water beyond the points of delivery authorized by this Agreement.

3. Upon execution, DWR will invoice the Authority a one-time administrative fee of $3,000 for preparation of this Agreement.

C. PAYMENT FOR FIXED ANNUAL COSTS AND CREDIT AGAINST PURCHASED WATER.

1. On or before February 11, or within 10 days of DWR’s receipt of Yuba’s invoice, each year DWR will invoice the Authority up to $125,000, which is its share of Yuba’s fixed annual costs as provided in Section 12.B of the Yuba Water Purchase Agreement.

2. As provided in Section 5.A above, for all payments made by the Authority under this Subsection, DWR will provide to the Authority a credit against future payments due to DWR for Purchased Water, excluding Component 1 Water. If necessary, DWR will record and accrue these credits from year to year until DWR makes Purchased Water, excluding Component 1 Water, available to the Authority, at which time such credits will be applied toward payments due.

D. PAYMENTS FOR YUBA DIESEL CONVERSION OF GROUNDWATER PUMPS.

Within 30 days of DWR’s receipt of a reviewed and verified invoice from Yuba of its conversion of pumps from diesel as provided under Section 12.A of the
Yuba Water Purchase Agreement, DWR will invoice the Authority for up to one-half of the amount of the Yuba invoice. The Authority share of Yuba’s total costs for diesel conversion will not be more than $500,000.

**E. PAYMENTS FOR ADJUSTMENTS TO GROUNDWATER O&M COSTS.**

In accordance with the timing of invoices required by Section 5.A above, DWR will invoice the Authority for its share of Yuba’s costs for any annual increases above actual 2006 Groundwater O&M Costs, as provided in Section 12.C of the Yuba Water Purchase Agreement. The Authority’s share of Yuba’s costs will be based upon the proportion of the total amount of Purchased Water delivered to the Authority to the total amount of water delivered to the Authority and the Participating SWP Contractors in the year that the invoice covers. If no Purchased Water is delivered in the year that the invoice covers, the Authority and Participating SWP Contractors will share equally the costs invoiced by Yuba to DWR.

**F. PAYMENTS FOR COSTS ATTRIBUTABLE TO YUBA WATER PURCHASE AGREEMENT**

The Parties agree that costs that DWR is obligated to pay to Yuba pursuant to the Yuba Water Purchase Agreement as attached hereto and that have not been identified by this Agreement, will be an obligation of the Authority and the Participating SWP Contractors. If necessary, the Parties will amend this Agreement to provide for invoicing and payment of such costs if not provided for herein.
G. TIMING OF PAYMENTS.

1. The Authority will pay DWR within 32 days after the Authority's receipt of an invoice from DWR.

2. Payment made after 32 days of receipt of invoice will be considered delinquent and interest will accrue at a rate of one percent per month for all delinquencies from the due date until paid.

3. If the Authority disputes a cost on an invoice, the Authority will make payment based on the invoice received, but will submit a notice to DWR identifying the disputed cost within 60 days of receipt of the invoice. Within 21 days after DWR receives notice of the disputed cost, the Parties will meet and confer, and if appropriate, obtain assistance from the Technical Committee and Management Committee to resolve the error or discrepancy. If the Parties resolve the dispute in a manner that recognizes a payment by the Authority that exceeds what is required under this Agreement, the amount of the excessive payment will be reflected by DWR pursuant to Section 6.A as a credit against future payments due from the Authority. DWR will reflect the credit on the next subsequent invoice it provides to the Authority. If the Parties cannot resolve the dispute, they will follow the dispute resolution process described in Section 10 below.
6. **EFFORTS TO MAXIMIZE THE BENEFICIAL USE OF WATER**

DWR will use all reasonable efforts to maximize the amount of Purchased Water available to the Authority and the Participating SWP Contractors. Those efforts will include, but are not limited to fully exercising its rights and obligations under the Yuba Water Purchase Agreement, coordinating with Reclamation on the operations of the SWP and CVP, and storing water in SWP facilities when Delta pumping is constrained, as provided in Section 4.3 of Exhibit 1 to the Yuba Water Purchase Agreement.

7. **MEMBERSHIP ON COMMITTEES**

DWR agrees that a representative of the Authority will be a member of the Management Committee and Technical Committee.

8. **CONFERENCE YEAR PRINCIPLES**

During any Conference Year, the Parties will meet with Yuba and the other parties to the Fisheries Agreement and the Conjunctive Use Agreements to: (1) determine how to address the circumstances, and (2) discuss the operation of the Yuba Project during that Water Accounting Year. During a Conference Year, if Yuba reduces or does not deliver any Component 2, 3, or 4 Water, the Authority’s obligation to schedule or purchase any quantity of Purchased Water will be reduced or eliminated accordingly.
9. **LIABILITY**

A. DWR will not assert that the Authority, its directors, officers, agents or employees, are liable for damages of any nature whatsoever arising out of any actions or omissions by DWR, its Director, officers, agents or employees, related to DWR's performance of this Agreement, where such liability is caused by an act, error or omission of DWR, its Director, officers, agents or employees.

B. The Authority will not assert that DWR, its Director, officers, agents or employees, are liable for damages of any nature whatsoever arising out of any actions or omissions by the Authority, its directors, officers, agents or employees, related to the Authority's performance of this Agreement, where such liability is caused by an act, error or omission of the Authority, its director, officers, agents or employees.

C. To the extent permitted by California law, the Authority will indemnify, defend and hold DWR, its Director, officers, agents and its employees safe and harmless from any and all, claims, judgments, damages, penalties, costs, liabilities and losses (including without limitation, sums paid in settlement of claims, actual attorney's fees paralegal fees, consultant fees, engineering fees, expert fees, and any other professional fees) that arise from or are related in any way to the Authority's activities or performance under this Agreement that are under the exclusive control of the Authority, including but
not limited to the release, conveyance, use or distribution of water by the
Authority for purposes of this Agreement.

D. To the extent permitted by California law, DWR will indemnify, defend and
hold the Authority, its directors, officers, agents and its employees safe and
harmless from any and all, claims, judgments, damages, penalties, costs,
liabilities and losses (including without limitation, sums paid in settlement of
claims, actual attorney’s fees, paralegal fees, consultant fees, engineering
fees, expert fees, and any other professional fees) that arise from or are
related in any way to DWR’s activities or performance under this Agreement
that are under the exclusive control of DWR, including but not limited to the
release, conveyance, use or distribution of water by DWR for purposes of this
Agreement.

10. **DISPUTE RESOLUTION**

A. Should any material disputes arise concerning any provision of this
Agreement, or the rights and obligations of the Parties hereunder, including
those involving possible termination or those that might cause the initiation of
any administrative or judicial proceeding to enforce or interpret this
Agreement, the Party that believes a dispute exists will notify the other Party,
and the Parties will promptly meet and confer to attempt to resolve the
perceived dispute.
B. If the Process described in the preceding subsection fails to resolve the dispute within thirty days, the Parties will submit the dispute to a mediator who has experience in water-related disputes. The costs of any such mediation will be borne equally by the Parties. Initiation of this mediation process will be through written notice by one Party to the other Party. The Parties reserve all of their other remedies that may be provided by law or equity in the event that such mediation fails to resolve a dispute. The Parties, in consultation with the mediator, will use their best efforts to resolve the dispute within thirty days. Under no circumstances, however, will mediation under this Section result in a requirement that diminishes, limits or contravenes the discretion, authority or any delegated authority of the Director of DWR or the Authority under State law.

C. If mediation fails to resolve the dispute, and prior to commencing any legal action to resolve the dispute, the Party proposing to commence legal action will provide the other Party thirty days' written notice of such action, provided that such notice will not be required where a delay in commencing an action would prejudice the interests of the Party that intends to file suit. During the thirty-day notice period, the Parties will continue to attempt to resolve the dispute.
11. **NOT A PRECEDENT**

The terms and conditions set forth in this Agreement are not intended to set a precedent for any future contractual arrangements for conveying non-SWP water by DWR to the Authority.

12. **PAYMENTS, NOTICES OR OTHER COMMUNICATIONS**

The time for providing any payments, notices, or other communications specified in this Agreement may be extended within the term of this Agreement with the consent of the Parties, confirmed in writing, without requiring an amendment to this Agreement. All payments, notices, or other communications required under this Agreement will be in writing, and will be deemed to have been duly given upon the date of service, if: (a) served personally on the Party to whom notice is to be given; (b) sent by electronic mail, and the Party to whom notice is to be given confirms receipt; or (c) on the third day after mailing, if mailed to the Party to whom payment, notice or other communication is directed, by first-class mail, postage prepaid, and properly addressed to the designated representative(s) of the Party set forth below.

DWR: Mr. Carl A. Torgersen  
Chief of State Water Project Operations Office  
Department of Water Resources  
3310 El Camino Avenue  
Post Office Box 219000  
Sacramento, California 95821-9000

And
Mr. Robert Cook  
Chief of State Water Project Analysis Office  
Department of Water Resources  
1416 Ninth Street, Room 1620  
Post Office Box 942836  
Sacramento, California 94236-0001  

Authority: Executive Director  
San Luis & Delta-Mendota Water Authority  
Post Office Box 2157  
Los Banos, California 93635  

A Party may notify the other Party in writing of a change in its designated representatives, without requiring an amendment to this Agreement. Unless other timing is specified within this Agreement, DWR will provide to the Authority copies of any and all payments, notices or other communications it sends or receives pursuant to the terms of the Yuba Water Purchase Agreement as soon as possible, but no later than 14 days after DWR receives, or sends, such payments, notices or other communications to Yuba and/or the SWP Participating Contractors.  

13. SIGNATORIES' AGENCY  
The signatories to this Agreement represent that they have authority to execute this Agreement and to bind the Party on whose behalf they execute this Agreement.  

14. COUNTERPARTS OF THIS AGREEMENT  
This Agreement may be signed in any number of counterparts by the Parties, each of which will be deemed to be an original, and all of which together will be
deemed to one and the same instrument. This Agreement, if executed in counterparts, will be valid and binding on a Party as if fully executed all in one copy.

15. **BINDING ON SUCCESSORS/ASSIGNMENT**

This Agreement will bind and inure to the benefit of the respective successors and assigns of the Party, except that, none of the obligations of the Parties set forth in this Agreement will be assigned without the prior, written approval of the other Party, which approval will not unreasonably be withheld.

16. **NO THIRD-PARTY BENEFICIARIES**

This Agreement will not be construed to create any third-party beneficiaries, except as set forth in this section. This Agreement is for the sole benefit of the Parties, their respective successors and assigns, and no other person or entity will be entitled to rely on or receive any benefit from this Agreement or any of its terms.

17. **AMENDMENTS**

A. This Agreement may be amended only by written agreement approved and executed by the Parties.

B. Prior to any amendment of this Agreement, the Parties will meet and confer with the Participating SWP Contractors. The Parties will not agree to any
amendment to this Agreement that would adversely affect the rights and obligations of the Participating SWP Contractors under each of their respective “Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the Participating SWP Contractors Under the Dry Year Water Purchase Program.”

C. Prior to any amendment of any “Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the Participating SWP Contractors Under the Dry Year Water Purchase Program”, DWR will meet and confer with the Authority. DWR will not agree to any amendment to any “Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the Participating SWP Contractors Under the Dry Year Water Purchase Program” that would adversely affect the rights and obligations of the Authority under this Agreement.

D. DWR will meet and confer with the Participating SWP Contractors and the Authority before agreeing to any proposed changes, amendments, or supplements to the Yuba Water Purchase Agreement. DWR will not agree to any changes, amendments, or supplements to the Yuba Water Purchase Agreement or its Exhibits that would be inconsistent with or adversely affect the Parties’ rights and obligations under this Agreement or any other “Agreement for the Supply and Conveyance of Water by the Department of

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18. **OPINIONS AND DETERMINATIONS**

Where the terms of this Agreement provide for action to be based upon the opinion, determination, approval or review of either Party, such terms are not intended to be, and will not be construed as permitting such actions to be arbitrary, capricious or unreasonable. Any opinion, determination, approval or review required of a Party under this Agreement will be provided in a timely manner.

19. **REASONABLE COOPERATION**

The Parties will reasonably cooperate with each other, including the execution of all necessary documents and providing assistance in obtaining approvals and permits from regulatory agencies required to perform the obligations under this Agreement and to carry out the purpose and intent of this Agreement.

20. **CONSTRUCTION AND INTERPRETATION**

This Agreement is entered into freely and voluntarily. This Agreement has been arrived at through negotiation, and each Party has had a full and fair opportunity to revise the terms of this Agreement. Consequently, the normal rule of construction that any ambiguities are to be resolved against the drafting party will not apply in construing or interpreting this Agreement.
21. COMPLETE CONTRACT

This Agreement constitutes the sole, final, complete, exclusive and integrated expression and statement of the terms of this Agreement among the Parties concerning the subject matter, and supersedes all prior negotiations, representations or agreement, either oral or written, that may be related to the subject matter of this Agreement, except as to those other agreements that are expressly referred to in this Agreement.

22. DETERMINATION OF UNENFORCEABLE PROVISIONS

If any term or provision of this Agreement is deemed invalid or unenforceable by any court of final jurisdiction, the Parties will meet and attempt to address this situation pursuant to the provisions of Section 10 ("Remedies and Dispute Resolution") of this Agreement.

23. WAIVER

The waiver at any time by a Party of its rights with respect to a default or other matter arising in connection with this Agreement will not be deemed a waiver with respect to any other default or matter.

24. TIME

Time is of the essence in this Agreement. Any date specified in this Agreement may be changed with the written consent of the Parties.
25. **APPLICABLE LAW**
   
   This Agreement will be construed under and will be deemed to be governed by the laws of the State of California.

26. **VENUE**
   
   Any appropriate County under California law will be venue for any state court litigation concerning the enforcement or interpretation of this Agreement.

27. **REMEDIES NOT EXCLUSIVE**
   
   The remedies provided in this Agreement are cumulative and not exclusive, and are in addition to any other remedies that may be provided by law or equity. The exercise by the Party of any remedy under this Agreement will be without prejudice to the enforcement of any other remedy.

28. **OFFICIALS NOT TO BENEFIT**
   
   No member or delegate to Congress, Resident Commissioner, or Federal or State official will be admitted to any share or part of this Agreement or to any benefit that may arise therefrom.

29. **STANDARD CLAUSES**
   
   With respect to the mutual obligations of the Parties under this Agreement, the Parties will comply with the Standard Clauses as shown on Exhibit B ("State of California Standard Clauses") to this Agreement for the State of California, Contracts with Public Entities.
30. **EXHIBITS INCORPORATED**

Each exhibit to which reference is made is deemed incorporated in this Agreement, whether or not actually attached.

**IN WITNESS WHEREOF**, the Parties hereto, by their authorized representatives, have executed this Agreement on the last date set forth below.

Approved as to legal form and sufficiency:

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

David A. Sandino, Chief Counsel
Department of Water Resources

Date

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

Lester A. Snow, Director

Date

Approved as to legal form and sufficiency:

San Luis & Delta-Mendota Water Authority

Jon D. Rubin, Special Counsel
San Luis & Delta-Mendota Water Authority

Date

Daniel Nelson, Executive Director

Date

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AGREEMENT FOR THE SUPPLY AND CONVEYANCE OF WATER BY THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA TO THE SAN LUIS & DELTA-MENDOTA WATER AUTHORITY UNDER THE DRY YEAR WATER PURCHASE PROGRAM

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Approved as to legal form and sufficiency:

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

______________________________
David A. Sandino, Chief Counsel
Department of Water Resources

______________________________
Lester A. Snow, Director

Date

Approved as to legal form and sufficiency:

San Luis & Delta-Mendota Water Authority

______________________________
Jon D. Rubin, Special Counsel
San Luis & Delta-Mendota Water Authority

______________________________
Darrel Nelson, Executive Director

Date

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Attachment L 11

AGREEMENT FOR THE SUPPLY AND CONVEYANCE OF WATER BY THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA TO THE SAN LUIS & DELTA-MENDOTA WATER AUTHORITY UNDER THE DRY YEAR WATER PURCHASE PROGRAM

Attachments:

Exhibit A: Agreement for the Long-Term Purchase of Water from Yuba County Water Agency by the Department of Water Resources (December 4, 2007)

Exhibit B: DWR Standard Clauses
AGREEMENT FOR THE SUPPLY AND CONVEYANCE OF WATER BY THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA TO THE SAN LUIS & DELTA-MENDOTA WATER AUTHORITY UNDER THE DRY YEAR WATER PURCHASE PROGRAM

EXHIBIT A

AGREEMENT FOR THE LONG-TERM PURCHASE OF WATER FROM YUBA COUNTY WATER AGENCY BY THE DEPARTMENT OF WATER RESOURCES
BEFORE THE

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD


[PROPOSED] WRITTEN TESTIMONY OF FRANCES MIZUNO

I. QUALIFICATIONS

1. I am the Assistant Executive Director of the San Luis & Delta-Mendota Water Authority ("SLDMWA"). My responsibilities include management of operation and maintenance of certain Central Valley Project ("CVP") south of Delta facilities, representing the SLDMWA in multiple forums and taking a lead role in activities to assist Authority members, including...
coordinating purchase of transfers for supplemental water supply. I have been employed by the 
SLDMWA since August 1992. I worked for the United States Bureau of Reclamation 
(“Reclamation”) from March 1980 to February 1986, and for the East Bay Municipal Utility District 
(“EBMUD”) from February 1986 through July 1992. My duties at both Reclamation and EBMUD 
likewise included water project operations and maintenance. I hold a Bachelor of Science degree 
in Civil Engineering from the University of California, Davis. Through my prior positions and 
current position as Assistant Executive Director, I am familiar with the SLDMWA, its members 
agencies’ sources of water supply, the features and operations of the CVP, the history of CVP 
deliveries to member agencies, and the effects of shortages in CVP deliveries. As my written 
testimony for this proceeding, I adopt paragraphs 2 through 20 of the written testimony of Jason 
Peltier set forth in Exhibit SLDMWA-11. Paragraphs 2 through 20 are set forth below, the same 
as they appear in Mr. Peltier’s written testimony.

II. SUMMARY OF TESTIMONY

2. In this written testimony for Part 2 of the proceedings I provide an overview of the 
SLDMWA, its member agencies, the areas they serve, their loss of CVP supply over the past twenty-
five years, and the need for a new approach. SLDMWA members the Santa Clara Valley Water 
District, the Westlands Water District, and the Grassland Water District will each offer testimony 
describing their circumstances and positions in more detail. When I testify before the Hearing 
Officers, I intend to use the PowerPoint document marked as Exhibit SLDMWA-12 to illustrate 
and help summarize my testimony.

III. GENERAL BACKGROUND ON THE SAN LUIS & DELTA-MENDOTA WATER AUTHORITY

3. The SLDMWA’s principal office is located in Los Banos, California. The 
SLDMWA was formed in 1992 as a joint powers authority. The SLDMWA has twenty-eight 
member agencies. Twenty-six of these agencies contract with the United States Bureau of 
Reclamation (“Reclamation”) for the delivery of water from the CVP.

4. Among other purposes, the SLDMWA was formed to preserve and protect the rights 
and benefits of the member agencies in their contracts for water supply from the CVP, and to assume
responsibility for the maintenance and operation of certain CVP facilities. The SLDMWA is authorized to exercise the common powers of its members to participate in administrative and judicial proceedings, and to manage and protect surface and groundwater supplies within the boundaries of the SLDMWA.

5. Pursuant to an agreement with Reclamation, the SLDMWA is responsible for operation and maintenance of the Delta-Mendota Canal, the C.W. “Bill” Jones Pumping Plant, the O’Neill Pumping-Generating Plant, and operation of the Mendota Pool. The Jones Pumping Plant is located in the southern portion of the Sacramento-San Joaquin River Delta (“Delta”) near the City of Tracy. These large pumps have a combined capacity of over 5,000 cubic feet per second, and pump water that is conveyed through the Delta into the Delta-Mendota Canal for ultimate delivery to the SLDMWA’s member agencies and other South of the Delta CVP Water Contractors. Most of the CVP water available to the SLDMWA’s members is pumped through the Jones Pumping Plant.

6. Exhibit SLDMWA-13 is a list of the SLDMWA’s member agencies. A map that identifies the service areas of each of the SLDMWA members is included within the PowerPoint presentation, Exhibit SLDMWA-12

IV. THE SAN LUIS & DELTA-MENDOTA WATER AUTHORITY MEMBERS AGENCIES’ SOURCES OF WATER SUPPLY

7. Most of the SLDMWA’s member agencies depend upon the CVP as their principal source of water they provide to users within their service areas. The SLDMWA has four classes of CVP-contractor members: (1) agricultural water service contractors; (2) municipal and industrial water service contractors; (3) refuge contractors; and (4) the exchange/settlement contractors.

8. The SLDMWA’s member agencies hold total contractual entitlements from the CVP for approximately 3.3 million acre-feet of water per year. Approximately 2.8 million acre-feet per year are contracted for delivery to approximately 1.2 million acres of agricultural lands within areas of San Joaquin, Stanislaus, Merced, Fresno, Kings, San Benito and Santa Clara Counties. Within that total for agricultural uses, about 900,000 acre-feet is for the Exchange Contractors, who agree not to exercise of their rights to San Joaquin River water in exchange for substitute supplies,
typically CVP supplies pumped from the Delta.

9. Approximately 150,000 to 200,000 acre-feet per year are contracted for municipal and industrial uses by almost 2 million people within the service areas, including the City of Tracy and urban areas within Santa Clara County, such as Silicon Valley.

10. The remaining amount, approximately 350,000 acre-feet per year, is delivered to more than 90,000 acres of managed wetlands and wildlife refuges for habitat enhancement and restoration activities within the largest continuous wetland in the Western United States. As I explain below, the actual average annual CVP deliveries for most SLDMWA members are now much lower than full contractual entitlement. For many of the SLDMWA member agencies, because their annual deliveries of CVP water are typically less than the total contracted amounts, their demand exceeds their contract deliveries.

11. The SLDMWA’s member agencies also depend upon transfers of surface water, to supplement the supplies delivered under their CVP contracts. Particularly in times of drought and water shortages, member agencies rely on water transfers to temporarily move water from willing sellers to help serve existing demand. Transfers often include purchases of water from water users located north of the Delta, water that then must be conveyed across the Delta to the pumps in the south Delta for delivery to the SLDMWA’s member agencies. These types of transfers are however limited to years when there is excess pumping capacity at the Delta pumps during the July through September period. In addition, the SLDMWA has had water transfer agreements with the Exchange Contractors for transfers to SLDMWA member agencies. In some instances, the SLDMWA arranges for purchases on behalf of its member agencies, and in other instances member agencies purchase supplies directly themselves.

12. Transfers can form a significant portion of the supply available to the SLDMWA’s member agencies, especially in dry years. In the period from 2008 through 2016, the SLDMWA arranged for the transfer of over 1,000,000 acre-feet of water to its member agencies. During this period, transfers arranged by the SLDMWA ranged from a low of 29,667 acre-feet in 2011, to a high of 201,369 acre-feet in 2015. In addition to transfers arranged by the SLDMWA, member agencies and individual landowners may arrange for transfers.
13. Groundwater is a third important source of supply for some of the areas served by the SLDMWA member agencies. Many agricultural water users have historically relied upon increased groundwater pumping to compensate for years of low deliveries of CVP surface water supplies. However, not all service areas have access to groundwater of adequate quality, and some areas such as the lands within San Luis Water District have little or no available groundwater. Access to groundwater in future years will likely be more limited than it was in the past, with implementation of the Sustainable Groundwater Management Act. That will heighten dependence on surface water supplies.

V. THE RELIABILITY AND QUANTITY OF THE SLDMWA MEMBERS AGENCIES’ CVP WATER SUPPLY HAS DIMINISHED

14. The reliability and quantity of water supplies available to many of the SLDMWA’s member agencies have been significantly diminished over the past twenty-five years. There is an urgent need to restore these surface water supplies to improve the condition of the communities that exist within the areas served by the member agencies.

15. The chart immediately below, also contained in Exhibit SLDMWA-12, shows the steady decline in contract allocations for CVP agricultural water service contractors located south of the Delta beginning in the early 1990’s. This decline was primarily due to protective measures imposed under the Endangered Species Act (“ESA”), the Central Valley Project Improvement Act (“CVPIA”), and the Clean Water Act (“CWA”). Today, expected water deliveries in a year of “normal” precipitation have been reduced to 35 percent to 50 percent of contract entitlements for agricultural water service contractors. In addition, regulations have affected the water supply of all other SLDMWA member agencies although to a lesser extent than the agricultural water service contractors.

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16. Historically, total CVP storage was an important factor in determining the quantity of water Reclamation would allocate each year to its CVP contractors. The chart immediately below, also contained in Exhibit SLDMWA-12, depicts CVP storage in relation to allocation of CVP water supply for agricultural water service contractors located south of the Delta. In this chart, total storage in February of each year is shown by the blue bars; the left axis shows volume of storage; the red squares depict the initial percentage contract allocation each year; the green triangles depict the final percentage contract allocation each year; and the right axis shows percentage of full contract entitlement. This chart shows that since the advent of new regulations in 1991, for the same general hydrological conditions as indicated by CVP storage, agricultural water service contractors south of the Delta have received a much lower initial and final contract allocations. The low initial contract allocations constrain and limit beneficial uses south of the Delta, by affecting farmer’s planting decisions, which for many crops are made early in the calendar year, and inhibiting their access to financing. Municipal and industrial uses, refuges, and water rights settlement contractors, have likewise been affected by instability in their supplies.

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17. The impact of increased regulation on Reclamation’s CVP contract allocations has not fallen evenly on all CVP contractors. The agricultural water service contractors located south of the Delta have fared the worst. Exhibit SLDMWA-14 is a table prepared by Reclamation that shows historical CVP contract allocations for various groups of CVP contractors for the period from 1997 to 2017. These tables were downloaded from Reclamation’s website at https://www.usbr.gov/mp/cvo/vungvari/water_allocations_historical.pdf. As is shown in Reclamation’s tables, the allocations for water rights settlement contractors have remained at 100% except in periods of years of drought. Among like classes of CVP contractors, those located north of the Delta have received higher allocations than those south of the Delta. For example, in 2013 agricultural water contractors north of the Delta received a 75% allocation, while those south of the Delta received a 20% allocation. In 2013, urban contractors north of the Delta received a 100% allocation, while urban contractors south of the Delta received a 70% allocation. The same general pattern appears in multiple years. Prior to 1993, contractors north of the Delta and south of the Delta received the same allocation. Since 1992, initially with CVPIA and followed with other regulations,
the disparity in allocation began. Reclamation has explained that this disparity is due to difficulties in moving CVP water across the Delta while meeting various regulatory constraints including limitations on export pumping during times when pumping is believed to be more harmful to fish.

18. The harms that result from reduced CVP water allocations to the SLDMWA’s member agencies include, but are not limited to: increased groundwater pumping (with increased overdraft, subsidence, and lower crop yields due to poor water quality), land fallowing, public health and safety risks, increased costs for member agencies, reduced agricultural production and economic losses, impacts to local wildlife and waterfowl, unemployment, and resulting socio-economic harms.

VI. THE SLDMWA SUPPORTS IMPROVED CONVEYANCE

19. The experience of the past twenty-five years demonstrates the need to improve the manner in which water is conveyed across the Delta. The reliability and quantity of CVP water supplies for the SLDMWA’s member agencies has steadily declined. The fish populations that were intended to benefit from the regulations that caused those water supply declines have not shown any improvement as a result, and instead have declined as well. A new approach is needed.

20. The WaterFix is intended to move water in a way that will have much reduced environmental impacts. Whether the WaterFix will be a project that also improves water supply conditions for member agencies of the SLDMWA through new conveyance remains to be seen. At the time this testimony was submitted, Reclamation had not defined a role in the WaterFix for the CVP, and, as a result it is unclear how the SLDMWA member agencies can participate and benefit from WaterFix.
MANAGEMENT OF THE CALIFORNIA STATE WATER PROJECT

EDMUND G. BROWN JR.
Governor, State of California

JOHN LAIRD
Secretary for Natural Resources
California Natural Resources Agency

MARK W. COWIN
Director, Department of Water Resources
DWR was unable to release the transfer water during the 2012 transfer window. The transfer water was stored in Lake Oroville and is expected to be released during July through September of 2013. With projected conveyance losses, including Delta carriage water losses of 30 percent, a total of 46,955 af of transfer water will be delivered to the SWP buyers in 2013. See Table 9-4 for a list of the SWP buyers and the quantities delivered at the SWP buyer’s turnouts.

### Lower Yuba River Accord

The Lower Yuba River Accord (Yuba Accord) was announced in 2005 to settle long-standing litigation over instream flows in the Yuba River in relation to fisheries. The purpose of the Yuba Accord is to resolve instream flow issues associated with the operation of the Yuba River Development Project in a way that protects and enhances lower Yuba River fisheries and local water supply reliability. The Yuba River Development Project provides revenues for local flood control and water supply projects, water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions for the protection and restoration of Sacramento-San Joaquin Delta fisheries, and improvements in statewide water supply management, including dry year water supplies for participating SWP and CVP water contractors.

The Yuba Accord is based on three sets of agreements: a water purchase agreement with DWR, including water to help offset Delta export reductions and dry year water for participating SWP and CVP water contractors; conjunctive use agreements with Yuba County Water Agency (Yuba) member units; and a fisheries agreement resolving minimum flows. The Yuba Accord provides for higher releases into the Yuba River to benefit Chinook Salmon and steelhead, transfer water to help offset Delta export reductions annually, and dry year transfer water for SWP and CVP water contractors from both surface and groundwater substitution sources.

The required agreements were executed in late 2007 and early 2008, and the SWRCB approved the Yuba Accord on

---

### Table 9-3  2012 Dry Year Transfers Seller Activity (acre-feet)

<table>
<thead>
<tr>
<th>Sellers</th>
<th>SWPAO #</th>
<th>Transfer Action</th>
<th>Transfer Water Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biggs-West Gridley WD</td>
<td>12-100</td>
<td>Crop Idling</td>
<td>14,353</td>
</tr>
<tr>
<td>Butte WD</td>
<td>12-101</td>
<td>Crop Idling</td>
<td>10,286</td>
</tr>
<tr>
<td>Richvale ID</td>
<td>12-103</td>
<td>Crop Idling</td>
<td>16,974</td>
</tr>
<tr>
<td>Western Canal WD</td>
<td>12-104</td>
<td>Crop Idling</td>
<td>25,466</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>67,079</strong></td>
</tr>
</tbody>
</table>

---

### Table 9-4  2012 Dry Year Transfers Buyer Activity (acre-feet)

<table>
<thead>
<tr>
<th>Buyers</th>
<th>Water Available to Buyer</th>
<th>Estimated Losses</th>
<th>Net Water Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dudley Ridge</td>
<td>3,269</td>
<td>981</td>
<td>2,288</td>
</tr>
<tr>
<td>Kern</td>
<td>63,810</td>
<td>19,143</td>
<td>44,667</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>67,079</strong></td>
<td><strong>20,124</strong></td>
<td><strong>46,955</strong></td>
</tr>
</tbody>
</table>

*a Estimated conveyance losses assuming a Delta carriage water loss of 30 percent in 2013 for water conveyed through the Delta.

*b Due to operational issues at Oroville Dam, the 2012 transfer water was stored in Oroville. It is anticipated that it will be released in 2013.
March 25, 2008, setting the flow schedules for the river and authorizing accord-based water transfers through 2025. During that same period, DWR completed the execution of 22 agreements for dry year supplies for participating SWP and CVP water contractors under the accord. A total of 166,086 af was transferred to DWR and participating SWP and CVP water contractors under the accord in 2008, 180,000 af was transferred in 2009, and 141,856 af was transferred in 2010. In 2011, excess conditions in the Delta prevented accounting of Yuba releases as transfer water for the entire summer transfer season.

In 2012, Yuba delivered 60,000 af of Component 1 water to DWR to help offset Delta export pumping reductions to benefit fish, and 21,681 af of dry year water was provided to participating contractors. The dry year water was all accounted as Component 3 water. No groundwater substitution water was provided in 2012.

An additional 4,138 af of Yuba releases was backed into Lake Oroville during balanced conditions in February 2012, but was displaced (“spilled”) when flood control releases occurred in May. In October 2012, Yuba released 16,381 af of potentially transferable surface water that could not be backed into Lake Oroville due to facility restrictions at the Hyatt Powerplant and fish flow restrictions in the Feather River, and it was therefore lost as transfer water.

In April 2009, two amendments to the Yuba Accord’s water purchase agreement were executed. Amendment Number 1 resolved a technical issue related to refill accounting, and Amendment Number 2 addressed pricing issues for groundwater substitution water.

Amendment Number 3 was executed April 22, 2010, and addressed market pricing issues for groundwater substitution water.

On January 6, 2012, Amendment Number 4 to the Yuba Accord’s water purchase agreement was executed. Amendment Number 4 provides for annual negotiations of groundwater substitution water pricing, prioritizing SWP water contractors’ Delta export transfer supplies, and optionally suspending certain accounting rules to permit all groundwater substitution water to be classified as Component 4 water.

Under Amendment Number 4, all accrued groundwater substitution water is payable although it may not be exported. The single exception is that DWR and Yuba Accord water contractors will not be required to pay for the portion (if any) of groundwater substitution component water that is released in accordance with the provisions of the Yuba Accord Fisheries Agreement, Section 5.1.8, Supplemental Flows for Groundwater Substitution Programs. When New Bullards Bar Reservoir is releasing extra water due to a wet winter, Yuba may not reduce releases or accrue groundwater substitution water during the following irrigation season.

In 2012, DWR and Reclamation signed an agreement (SWPAO #12300) to share, equally, Component 1 water made available from 2012 through 2015. The letter agreement between the respective project operations offices replaces a 2008 letter agreement that shared the water differently—namely that the project that experienced the greater export reductions at the Delta pumps would receive the initial share of Component 1 water until the reductions were equally offset; then the water would be shared equally. In the past, the SWP has experienced export reductions greater than the CVP by more than 60,000 af. The SWP has therefore been the beneficiary of the Component 1 water.
The agreement provides that:

- Component 1 water is shared equally from 2012 through 2015; and
- as per the Yuba Accord, Component 1 water provided to Reclamation will be delivered at the Marysville Gauge on the Yuba River; and
- DWR will provide conveyance at Banks Pumping Plant pursuant to the Joint Point of Diversion Agreement with Reclamation.

Table 9-5 shows Lower Yuba River Accord water deliveries in 2012.

### Table 9-5  Lower Yuba River Accord Water Deliveries, 2012 (acre-feet)

<table>
<thead>
<tr>
<th>Participating Contractor</th>
<th>Allocated Component 3 Water</th>
<th>Carriage and Conveyance Losses</th>
<th>Water Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SWP Contractor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kern</td>
<td>6,993</td>
<td>2,098</td>
<td>4,895</td>
</tr>
<tr>
<td>Alameda-Zone 7</td>
<td>574</td>
<td>172</td>
<td>402</td>
</tr>
<tr>
<td>AVEK</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Castaic Lake</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yuba City</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coachella</td>
<td>985</td>
<td>295</td>
<td>690</td>
</tr>
<tr>
<td>Kings</td>
<td>66</td>
<td>20</td>
<td>46</td>
</tr>
<tr>
<td>Crestline</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Desert</td>
<td>397</td>
<td>119</td>
<td>278</td>
</tr>
<tr>
<td>Dudley Ridge</td>
<td>358</td>
<td>107</td>
<td>251</td>
</tr>
<tr>
<td>Empire</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Littlerock</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Napa</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Oak Flat</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Palmdale</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>San Gorgonio</td>
<td>123</td>
<td>37</td>
<td>86</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>712</td>
<td>214</td>
<td>498</td>
</tr>
<tr>
<td>Solano</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tulare</td>
<td>633</td>
<td>190</td>
<td>443</td>
</tr>
<tr>
<td><strong>SWP Contractor Total</strong></td>
<td><strong>10,841</strong></td>
<td><strong>3,252</strong></td>
<td><strong>7,589</strong></td>
</tr>
<tr>
<td><strong>Non-SWP Contractor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Luis &amp; Delta-Mendota</td>
<td>10,840</td>
<td>3,404</td>
<td>7,436</td>
</tr>
<tr>
<td><strong>Subtotal, Component 3 Water</strong></td>
<td><strong>21,681</strong></td>
<td><strong>6,656</strong></td>
<td><strong>15,025</strong></td>
</tr>
<tr>
<td>DWR Component 1 Water (EWA)</td>
<td>30,000</td>
<td>9,000</td>
<td>21,000</td>
</tr>
<tr>
<td>Reclamation Component 1 Water (EWA)</td>
<td>30,000</td>
<td>9,420</td>
<td>20,580</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>81,681</strong></td>
<td><strong>25,076</strong></td>
<td><strong>56,605</strong></td>
</tr>
</tbody>
</table>

\[a\] Previously, Environmental Water Account
2013 Dry Year Transfers

Due to the critically dry hydrologic conditions in 2013, a number of water supply agencies experienced significant water supply shortages. Two SWP contractors (Kern and Dudley Ridge) executed agreements with the State Water Contractors (SWC) to acquire transfer water to supplement their allocated SWP contract supplies. In addition to the SWC purchases, Alameda County Flood Control and Water Conservation District, Zone 7 (Alameda-Zone 7) received transfer water under a long-term transfer agreement with Byron Bethany Irrigation District (Byron Bethany). The SWP buyers executed water transfer conveyance agreements with DWR and seven agencies on the Feather, Yuba, and Sacramento rivers, the Sutter Bypass, and within the Delta.

San Luis & Delta-Mendota Water Authority (San Luis & Delta-Mendota) representing CVP contractors, purchased water for delivery to a number of its member agencies. In addition, Westlands purchased additional supplemental water supplies in 2013. DWR executed water transfer conveyance agreements with San Luis & Delta-Mendota and eight agencies on the Sacramento River to convey non-Project water through SWP facilities. DWR also executed three water transfer conveyance agreements with Westlands and agencies on the Feather, American, and Merced rivers.

A total of 86,497 af of water was made available to the SWP and CVP water transfer buyers in 2013. Transfer water was made available through crop idling, groundwater substitution, reservoir reoperation and a combination of reservoir release and groundwater substitution. See Table 9-4 for a list of sellers that provided water for transfer in 2013, and see Table 9-5 for a list of the SWP buyer activity. In addition to the water made available for transfer in 2013, a total of 67,079 af of transfer water made available to Kern and Dudley Ridge in 2012 that was stored in Lake Oroville due to SWP operational issues (see Bulletin 132-13, Chapter 9). The 2012 transfer water was released and exported to Kern and Dudley Ridge in 2013. A total of 109,941 af of 2012 and 2013 transfer water was conveyed for SWP and CVP contractors through the Delta after carriage water losses and aqueduct conveyance losses assessed to non-SWP contractors were deducted. Carriage water losses of 30 percent were assessed for all transfer water originating in the Sacramento River watershed. A carriage water loss of 10 percent was applied to the transfer from the Merced River. All the transfer water was exported from the Delta during July through September.

Lower Yuba River Accord

The Lower Yuba River Accord (Yuba Accord) was announced in 2005 to settle long-standing litigation over instream flows in the Yuba River in relation to fisheries. The purpose of the Yuba Accord is to resolve instream flow issues associated with the operation of the Yuba River Development Project in a way that protects and enhances lower Yuba River fisheries and local water supply reliability. The Yuba River Development Project provides revenues for local flood control and water supply projects, water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions for the protection and restoration of Sacramento-San Joaquin Delta fisheries, and improvements in statewide water supply management, including dry year water supplies for participating SWP and CVP water contractors.

The Yuba Accord is based on three sets of agreements: a water purchase agreement with DWR, including water to help offset Delta export reductions and dry year water for participating SWP and CVP water contractors; conjunctive use agreements with Yuba member units; and a fisheries agreement resolving minimum flows. The Yuba Accord provides for higher releases into the Yuba River to benefit Chinook Salmon and steelhead, transfer water to help offset Delta export reductions annually, and dry year transfer water for SWP and CVP
Table 9-4  Dry Year Transfers Seller Activity, 2013 (acre-feet)

<table>
<thead>
<tr>
<th>Sellers*</th>
<th>Buyers</th>
<th>SWPAO #</th>
<th>Transfer Action</th>
<th>Transfer Water Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butte WD</td>
<td>Kern</td>
<td>13-700</td>
<td>Groundwater</td>
<td>3,378</td>
</tr>
<tr>
<td>Cordua ID</td>
<td>Dudley Ridge</td>
<td>13-701</td>
<td>Groundwater</td>
<td>6,270</td>
</tr>
<tr>
<td>Garden Highway Mutual WC</td>
<td>Dudley Ridge</td>
<td>13-702</td>
<td>Groundwater</td>
<td>3,392</td>
</tr>
<tr>
<td>Sacramento Suburban WD</td>
<td>Dudley Ridge</td>
<td>13-703</td>
<td>Groundwater</td>
<td>2,823</td>
</tr>
<tr>
<td>Sutter Extension WD</td>
<td>Dudley Ridge</td>
<td>13-704</td>
<td>Groundwater</td>
<td>2,514</td>
</tr>
<tr>
<td>Tule Basin Farms, LLC</td>
<td>Dudley Ridge</td>
<td>13-705</td>
<td>Groundwater</td>
<td>2,626</td>
</tr>
<tr>
<td>Byron Bethany</td>
<td>Alameda-Zone 7</td>
<td>13-706</td>
<td>Crop Idling</td>
<td>2,238</td>
</tr>
<tr>
<td>Anderson Cottonwood ID</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-707</td>
<td>Groundwater</td>
<td>2,036</td>
</tr>
<tr>
<td>Conaway Preservation Group</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-708</td>
<td>Groundwater</td>
<td>5,049</td>
</tr>
<tr>
<td>Eastside Mutual WC</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-709</td>
<td>Groundwater</td>
<td>798</td>
</tr>
<tr>
<td>Glenn-Colusa ID</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-710</td>
<td>Groundwater</td>
<td>4,400</td>
</tr>
<tr>
<td>Pelger Mutual WC</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-711</td>
<td>Groundwater</td>
<td>1,522</td>
</tr>
<tr>
<td>Pleasant Grove-Verona Mutual WC</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-712</td>
<td>Groundwater</td>
<td>5,134</td>
</tr>
<tr>
<td>Reclamation District 1004</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-713</td>
<td>Groundwater</td>
<td>6,314</td>
</tr>
<tr>
<td>Te Velde Trust</td>
<td>San Luis &amp; Delta-Mendota</td>
<td>13-714</td>
<td>Groundwater</td>
<td>1,247</td>
</tr>
<tr>
<td>Placer County WA</td>
<td>Westlands</td>
<td>13-715</td>
<td>Reservoir Reoperation</td>
<td>20,000</td>
</tr>
<tr>
<td>Thermalito Water and Sewer District</td>
<td>Westlands</td>
<td>13-716</td>
<td>Reservoir Reoperation</td>
<td>1,754</td>
</tr>
<tr>
<td>Merced ID</td>
<td>Westlands</td>
<td>13-717</td>
<td>Reservoir Reoperation</td>
<td>15,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>86,497</strong></td>
</tr>
</tbody>
</table>

* WD= Water District; ID= Irrigation District; WC= Water Company; WA= Water Agency

Table 9-5  Dry Year Transfers Buyer Activity, 2013 (acre-feet)

<table>
<thead>
<tr>
<th>Buyers</th>
<th>Water Available to Buyer</th>
<th>Estimated Lossesab</th>
<th>Net Water Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dudley Ridge</td>
<td>1,024</td>
<td>307</td>
<td>717</td>
</tr>
<tr>
<td>Kern</td>
<td>19,980</td>
<td>5,994</td>
<td>13,986</td>
</tr>
<tr>
<td>San Luis &amp; Delta-Mendota</td>
<td>26,501</td>
<td>8,321</td>
<td>18,180</td>
</tr>
<tr>
<td>Alameda-Zone 7</td>
<td>2,238</td>
<td>-</td>
<td>2,238</td>
</tr>
<tr>
<td>Westlands</td>
<td>36,754</td>
<td>8,888</td>
<td>27,866</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86,497</strong></td>
<td><strong>23,510</strong></td>
<td><strong>62,987</strong></td>
</tr>
</tbody>
</table>

a Carriage water losses of 30 percent were applied to all transfers except the transfer from Merced Irrigation District in the San Joaquin River watershed which was assessed a 10 percent carriage water loss.

b Aqueduct conveyance losses of 2 percent or 3 percent was assessed on deliveries to non-SWP contractors based on the reach to which the water was delivered.

c Totals may not sum due to rounding.
water contractors from both surface and groundwater substitution sources.

The required agreements were executed in late 2007 and early 2008, and the SWRCB approved the Yuba Accord on March 25, 2008, setting the flow schedules for the river and authorizing accord-based water transfers through 2025. During that same period, DWR completed the execution of 22 agreements for dry year supplies for participating SWP and CVP water contractors under the accord.

In April 2009, two amendments to the Yuba Accord’s water purchase agreement were executed. Amendment Number 1 resolved a technical issue related to refill accounting, and Amendment Number 2 addressed pricing issues for groundwater substitution water.

Amendment Number 3 was executed April 22, 2010, and addressed market pricing issues for groundwater substitution water.

On January 6, 2012, Amendment Number 4 to the Yuba Accord’s water purchase agreement was executed. Amendment Number 4 provides for annual negotiations of groundwater substitution water pricing, prioritizing SWP water contractors’ Delta export transfer supplies, and optionally suspending certain accounting rules to permit all groundwater substitution water to be classified as Component 4 water.

Under Amendment Number 4, all accrued groundwater substitution water is payable although it may not be exported. The single exception is that DWR and Yuba Accord water contractors will not be required to pay for the portion (if any) of groundwater substitution component water that is released in accordance with the provisions of the Yuba Accord Fisheries Agreement, Section 5.1.8, Supplemental Flows for Groundwater Substitution Programs. When New Bullards Bar Reservoir is releasing extra water due to a wet winter, Yuba may not reduce releases or accrue groundwater substitution water during the following irrigation season.

A total of 166,086 af was transferred to DWR and participating SWP and CVP water contractors under the accord in 2008, 180,000 af was transferred in 2009, and 141,856 af was transferred in 2010. In 2011, excess conditions in the Delta prevented accounting of Yuba releases as transfer water for the entire summer transfer season.

In 2012, DWR and Reclamation signed an agreement (SWPAO #12300) to share, equally, Component 1 water made available from 2012 through 2015. The 2012 letter agreement between the respective project operations offices replaces a 2008 letter agreement that shared the water differently—namely that the project that experienced the greater export reductions at the Delta pumps would receive the initial share of Component 1 water until the reductions were equally offset; then the water would be shared equally. In the past, the SWP has experienced export reductions greater than the CVP by more than 60,000 af. The SWP has therefore been the beneficiary of the Component 1 water.

The 2012 letter agreement provides that:

• Component 1 water is shared equally from 2012 through 2015;
• as per the Yuba Accord, Component 1 water provided to Reclamation will be delivered at the Marysville gauge on the Yuba River; and
• DWR will provide conveyance at Banks Pumping Plant pursuant to the Joint Point of Diversion Agreement with Reclamation.

On April 17, 2013, DWR executed an annual letter agreement with Yuba setting a per-acre-foot price for Component 4 groundwater substitution water of $190.00 per af in 2013. Yuba subsequently offered, and DWR purchased, 64,730 af of Component 4 water as part of the total 2013 transfer quantity of 177,274 af.
In May 2013, DWR initiated negotiations with Yuba on Amendment 5, which will address the required repricing of any transfer water that would be moved after September 30, 2015.

In 2013, 177,274 af was transferred, with 60,000 af of Component 1 water shared equally between DWR and Reclamation to help offset Delta export reductions to benefit fish. The Component 2, 3, and 4 dry year water deliveries were 15,000 af, 37,544 af, and 64,730 af, respectively, with half shared among 12 of the 21 participating SWP contractors and the other half shared among certain CVP contractors that are members of San Luis & Delta-Mendota. A total of 81,271 af of 2013 Yuba transfer water was conveyed through the Delta after carriage water losses. Aqueduct conveyance losses assessed to non-SWP contractors were also deducted. Carriage water losses of 30 percent were assessed for all transfer water originating in the Sacramento River watershed. In addition, 17,518 af of Yuba releases was backed into Lake Oroville during balanced conditions from October 1 through November 16, 2013, and was being held for release in 2014, provided it can be exported.

Table 9-6 shows Lower Yuba River Accord water deliveries in 2013.

### Agreements with Non-SWP Agencies

In addition to negotiating agreements with long-term SWP water contractors to provide for specified water deliveries, DWR also enters into agreements with other agencies to provide water conveyance service.

#### Reclamation—Joint Point of Diversion

In 2012, DWR renewed the Joint Point of Diversion agreement (JPOD) with Reclamation. Under the JPOD, DWR makes excess SWP conveyance capacity available to Reclamation for the conveyance of water from the Delta at Banks Pumping Plant. This includes (1) make up for curtailed water exports from Jones Pumping Plant associated with improving conditions for fish in the Delta; (2) replacing water exports foregone during maintenance and repair of CVP facilities between the Delta and O’Neill Forebay; and (3) Reclamation’s share of Component 1 water provided under the Yuba Accord. As part of the JPOD, the first 21,000 af conveyed through Banks Pumping Plant for the months of July, August, and September of each year will include a charge for the temporary barriers in the Delta. This agreement is effective March 1, 2012, through February 29, 2016. (SWPAO #12300)

#### Reclamation and Byron Bethany Irrigation District—Musco Family Olive Company

A pending agreement among DWR, Byron Bethany and Reclamation provides for the conveyance of up to 800 af of Byron Bethany’s CVP water to repayment Reach 2A of the California Aqueduct for use by Musco Family Olive Company. DWR delivered a total of 516 af in 2013 under this pending agreement. (SWPAO #04300)

#### Reclamation and Cross Valley Canal Contractors

Through eight, three-party contracts and associated changes in points of delivery (CVC Contracts) with Reclamation and Cross Valley Canal (CVC) water contractors, DWR conveys CVP water for CVC water contractors. The following eight CVP water contractors are defined as CVC water contractors: County of Fresno (Fresno), County of Tulare, Hills Valley Irrigation District (Hills Valley), Kern-Tulare Water District (Kern-Tulare), Lower Tule River Irrigation District (Lower Tule), Pixley Irrigation District (Pixley), Rag Gulch Water District (Rag Gulch), and the Tri-Valley Water District (Tri-Valley). Effective January 1, 2009,
MANAGEMENT OF THE
CALIFORNIA
STATE WATER
PROJECT

EDMUND G. BROWN Jr.
Governor, State of California

JOHN LAIRD
Secretary for Natural Resources
California Natural Resources Agency

MARK W. COWIN
Director, Department of Water Resources
purchased from CVP contractors upstream of the Delta. Transfer water was made available through crop idling, groundwater substitution, reservoir reoperation and a combination of reservoir release and groundwater substitution. See Table 9-3 for a list of sellers that provided water for transfer in 2014, and see Table 9-4 for a list of the SWP buyer activity.

Carriage water losses of 20 percent were assessed for all transfer water originating in the Sacramento River watershed, except for the transfer water exported at Banks for Westlands Water District, which was assessed a carriage water loss of 35 percent. A carriage water loss of 10 percent was applied to the transfer from the Merced River. All the transfer water was exported from the Delta from July through September, with the exception of the transfer water made available from Garden Highway to San Luis & Delta Mendota, which was exported by Reclamation at Jones in October.

Lower Yuba River Accord

The Lower Yuba River Accord (Yuba Accord) was announced in 2005 to settle long-standing litigation over instream flows in the Yuba River in relation to fisheries. The purpose of the Yuba Accord is to resolve instream flow issues associated with the operation of the Yuba River Development Project in a way that protects and enhances lower Yuba River fisheries and local water supply reliability. The Yuba River Development Project provides revenues for local flood control and water supply projects, water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions for the protection and restoration of Sacramento-San Joaquin Delta fisheries, and improvements in statewide water supply management, including dry year water supplies for participating SWP and CVP water contractors.

The Yuba Accord is based on three sets of agreements: a water purchase agreement between Yuba County Water Agency (Yuba) and DWR, including water to help offset Delta export reductions and dry year water for participating SWP and CVP water contractors; conjunctive use agreements with Yuba member units; and a fisheries agreement resolving minimum flows. The Yuba Accord provides for higher releases into the Yuba River to benefit Chinook Salmon and steelhead, transfer water to help offset Delta export reductions annually, and dry year transfer water for SWP and CVP water contractors from both surface and groundwater substitution sources.

The required agreements were executed in late 2007 and early 2008, and the SWRCB approved the Yuba Accord on March 25, 2008, setting the flow schedules for the river and authorizing accord-based water transfers through 2025. During that same period, DWR completed the execution of 22 agreements for dry year supplies for participating SWP and CVP water contractors under the accord.

In April 2009, two amendments to the Yuba Accord’s water purchase agreement were executed. Amendment Number 1 resolved a technical issue related to refill accounting, and Amendment Number 2 addressed pricing issues for groundwater substitution water.

Amendment Number 3 was executed April 22, 2010, and addressed market pricing issues for groundwater substitution water.

On January 6, 2012, Amendment Number 4 was executed between DWR and Yuba, with conforming amendments between DWR and 22 participating contractors. Amendment Number 4 provides for annual negotiations of groundwater substitution water pricing, prioritizing SWP water contractors’ Delta export transfer supplies, and optionally suspending certain accounting rules to permit all groundwater substitution water to be classified as Component 4 water.
### Table 9-3 Transfer Program Seller Activity, 2014 (acre-feet)

<table>
<thead>
<tr>
<th>Sellers#</th>
<th>Buyers</th>
<th>SWPAO #</th>
<th>Transfer Action</th>
<th>Transfer Water Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butte WD</td>
<td>Kern</td>
<td>14-700</td>
<td>Crop Idling</td>
<td>10,780</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Groundwater Substitution</td>
<td>4,708</td>
</tr>
<tr>
<td>Sutter Extension WD</td>
<td>Kern</td>
<td>14-704</td>
<td>Crop Idling</td>
<td>11,341</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Groundwater Substitution</td>
<td>3,612</td>
</tr>
<tr>
<td>Richvale ID</td>
<td>Kern</td>
<td>14-718</td>
<td>Crop Idling</td>
<td>21,033</td>
</tr>
<tr>
<td>Western Canal WD</td>
<td>Kings Dudley Ridge Kern Oak Flat</td>
<td>14-719</td>
<td>Crop Idling</td>
<td>35,442</td>
</tr>
<tr>
<td>Biggs-West Gridley WD</td>
<td>Santa Barbara</td>
<td>14-721</td>
<td>Crop Idling</td>
<td>3,679</td>
</tr>
<tr>
<td>Biggs-West Gridley WD</td>
<td>Westlands</td>
<td>14-722</td>
<td>Crop Idling</td>
<td>15,225</td>
</tr>
<tr>
<td>Garden Highway Mutual WC</td>
<td>San Luis &amp; Delta Mendota</td>
<td>14-702</td>
<td>Groundwater Substitution</td>
<td>3,494</td>
</tr>
<tr>
<td>Plumas Mutual WC</td>
<td>Dudley Ridge</td>
<td>14-724</td>
<td>Groundwater Substitution</td>
<td>2,000</td>
</tr>
<tr>
<td>South Sutter WD</td>
<td>Kern</td>
<td>14-725</td>
<td>Groundwater Substitution</td>
<td>9,400</td>
</tr>
<tr>
<td>Plumas Mutual WC</td>
<td>Napa</td>
<td>14-726</td>
<td>Groundwater</td>
<td>1,200</td>
</tr>
<tr>
<td>Cordura ID</td>
<td>County of Kings Dudley Ridge Kern</td>
<td>14-701</td>
<td>Reservoir Release with Groundwater Substitution</td>
<td>1,857</td>
</tr>
<tr>
<td>Merced ID</td>
<td>Santa Clara</td>
<td>14-717</td>
<td>Reservoir Release</td>
<td>4,500</td>
</tr>
<tr>
<td>Contra Costa WD</td>
<td>Alameda County</td>
<td>14-720</td>
<td>Reservoir Release</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>133,271</strong></td>
</tr>
</tbody>
</table>

# WD= Water District; ID= Irrigation District; WC= Water Company; WA= Water Agency

### Table 9-4 Transfer Program Buyer Activity, 2014 (acre-feet)

<table>
<thead>
<tr>
<th>Buyers</th>
<th>Water Available to Buyer</th>
<th>Actual Losses#b</th>
<th>Net Water Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda County</td>
<td>5,000</td>
<td>-</td>
<td>5,000</td>
</tr>
<tr>
<td>Kings</td>
<td>875</td>
<td>175</td>
<td>700</td>
</tr>
<tr>
<td>Dudley Ridge</td>
<td>6,541</td>
<td>1,308</td>
<td>5,233</td>
</tr>
<tr>
<td>Kern</td>
<td>92,232</td>
<td>18,446</td>
<td>73,786</td>
</tr>
<tr>
<td>Napa</td>
<td>1,200</td>
<td>-</td>
<td>1,200</td>
</tr>
<tr>
<td>Oak Flat</td>
<td>525</td>
<td>105</td>
<td>420</td>
</tr>
<tr>
<td>San Luis &amp; Delta-Mendota</td>
<td>3,494</td>
<td>783</td>
<td>2,711</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>3,679</td>
<td>736</td>
<td>2,943</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>4,500</td>
<td>-</td>
<td>4,500</td>
</tr>
<tr>
<td>Westlands</td>
<td>15,225</td>
<td>5,626</td>
<td>9,599</td>
</tr>
<tr>
<td><strong>Total</strong>#c</td>
<td><strong>133,271</strong></td>
<td><strong>27,179</strong></td>
<td><strong>106,092</strong></td>
</tr>
</tbody>
</table>

# Carriage water losses of 20 percent were applied to all transfers except the transfer to Westlands, which was assessed a 35 percent carriage water loss.
# Aqueduct conveyance losses of 3 percent were assessed on deliveries to non-SWP contractors based on the reach to which the water was delivered.
# Totals may not sum as expected due to rounding.
Under Amendment Number 4, all accrued groundwater substitution water is payable although it may not be exported. The single exception is that DWR and Yuba Accord water contractors will not be required to pay for the portion (if any) of groundwater substitution component water that is released in accordance with the provisions of the Yuba Accord Fisheries Agreement, Section 5.1.8, Supplemental Flows for Groundwater Substitution Programs. When New Bullards Bar Reservoir is releasing extra water due to a wet winter, Yuba may not reduce releases or accrue groundwater substitution water during the following irrigation season.

A total of 166,086 af was transferred to DWR and participating SWP and CVP water contractors under the accord in 2008, 180,000 af was transferred in 2009, and 141,856 af was transferred in 2010. In 2011, excess conditions in the Delta prevented accounting of Yuba releases as transfer water for the entire summer transfer season.

In 2012, Yuba delivered 60,000 af of Component 1 water to DWR to help offset Delta export pumping reductions to benefit fish, and 21,681 af of dry year water was provided to participating contractors. The dry year water was all accounted as Component 3 water. No groundwater substitution water was provided in 2012.

In 2012, DWR and Reclamation signed an agreement (SWPAO #12300) to share equally, Component 1 water made available from 2012 through 2015. The 2012 letter agreement between the respective project operations offices replaces a 2008 letter agreement that shared the water differently—namely that the project that experienced the greater export reductions at the Delta pumps would receive the initial share of Component 1 water until the reductions were equally offset; then the water would be shared equally. In the past, the SWP has experienced export reductions greater than the CVP by more than 60,000 af. The SWP has therefore been the beneficiary of the Component 1 water.

The 2012 letter agreement provides that:

- Component 1 water is shared equally from 2012 through 2015;
- as per the Yuba Accord, Component 1 water provided to Reclamation will be delivered at the Marysville gauge on the Yuba River; and
- DWR will provide conveyance at Banks Pumping Plant pursuant to the Joint Point of Diversion (JPOD) Agreement with Reclamation.

On April 17, 2013, DWR executed an annual letter agreement with Yuba setting a per-acre-foot price for Component 4 groundwater substitution water of $190.00 per af in 2013. Yuba subsequently offered, and DWR purchased, 64,730 af of Component 4 water as part of the total 2013 transfer quantity of 177,274 af.

In May 2013 and December 2014, DWR initiated negotiations with Yuba on Amendment Number 5 to address the required repricing of any transfer water that would be moved after September 30, 2015.

In 2013, 177,274 af was transferred to DWR and participating SWP and CVP water contractors under the Yuba Accord.

On May 1, 2014, a letter agreement between DWR and Yuba was executed, which set forth the negotiated price $475.00 per af that the parties agreed on for the 2014 groundwater substitution water accounted for as Component 4 water.

In 2014, 161,647 af of Yuba water was transferred, with 60,000 af of Component 1 water shared equally between DWR and Reclamation to help offset Delta export reductions to benefit fish.
The Component 2, 3, and 4 dry year water made available were 30,000 af, 14,663 af, and 56,984 af, respectively, with half shared among 20 of the 21 participating SWP contractors and the other half shared among certain CVP contractors that are members of San Luis & Delta-Mendota. Half of the Component 4 water was shared among 12 of the SWP contractors and the other half among certain CVP contractors that are members of San Luis & Delta-Mendota.

Carriage water losses of 20 percent were assessed for all transfer water originating in the Sacramento River watershed. In addition, 5,403 af of Yuba releases was backed into Lake Oroville during balanced conditions from September 29 through October 14, 2014, and is being held for release in 2015, provided it can be exported.

On December 5, 2014, DWR executed Amendment Number 5 to the Yuba Accord Water Purchase Agreement with Yuba, extending delivery of Yuba water for 2016–2020 with new pricing and other changes to the agreements.

All 22 participating contractors agreed to continue their participation in the Yuba Accord from 2016 through 2020 by executing the conforming Amendment Number 5 to their participation agreements. The new terms provide for, among other changes, the following:

- increased pricing;
- purchase of Component 1 water on an annual basis (Component 1 was prepaid in 2008 by DWR for the 2008 through 2015 period); and
- deposit of $20 million to be paid to Yuba to lock in new pricing for 5 years.

The $20 million deposit will be credited to surface water purchases under the agreements. The 10 participating contractors who contributed to the $20 million will receive interest on the deposit until it is fully credited (paid by all contractors based on their rights to Yuba water).

Yuba now has the option to sell water to third parties under certain conditions. The annual negotiation of groundwater substitution pricing will continue under Amendment Number 5. The new pricing extends through 2020, and additional negotiations will be required to address the remaining term of the Water Purchase Agreement through 2025.

DWR expects to execute Amendment Number 1, and Amendment Number 5 with two new contractors, Mojave Water Agency and Santa Barbara County Flood Control and Water Conservation District. The amendments will be executed once their California Environmental Quality Act process for the Participation Agreement is complete.

Table 9-5 shows Lower Yuba River Accord water deliveries in 2014.

**Agreements with Non-SWP Agencies**

In addition to negotiating agreements with long-term SWP water contractors to provide for specified water deliveries, DWR also enters into agreements with other agencies to provide water conveyance service.

**Reclamation—Joint Point of Diversion**

In 2012, DWR renewed the JPOD with Reclamation. Under the JPOD, DWR makes excess SWP conveyance capacity available to Reclamation for the conveyance of water from the Delta at Banks Pumping Plant. This includes: (1) make up for curtailed water exports from Jones Pumping Plant associated with improving conditions for fish in the Delta; (2) replacing water exports foregone during maintenance and repair of CVP facilities between the Delta and O’Neill Forebay; and (3) Reclamation’s share of Component 1 water provided under the Yuba Accord. As part of the JPOD, the first 21,000 af conveyed through Banks Pumping
### Table 9-5 Lower Yuba River Accord Water Deliveries, 2014 (acre-feet)

<table>
<thead>
<tr>
<th>Participating Contractor</th>
<th>Portion of Table At</th>
<th>Percentage</th>
<th>Allocated Component 2 Water</th>
<th>Allocated Component 3 Water</th>
<th>Allocated Component 4 Water</th>
<th>Total</th>
<th>Component 2 Water Delivered</th>
<th>Component 3 Water Delivered</th>
<th>Component 4 Water Delivered</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SWP Contractor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yuba*</td>
<td>9,600</td>
<td>0.12</td>
<td>37</td>
<td>19</td>
<td>0</td>
<td>56</td>
<td>37</td>
<td>19</td>
<td>-</td>
<td>56</td>
</tr>
<tr>
<td>Napa*</td>
<td>29,025</td>
<td>0.37</td>
<td>112</td>
<td>58</td>
<td>578</td>
<td>748</td>
<td>112</td>
<td>58</td>
<td>578</td>
<td>748</td>
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<tr>
<td>Solano*</td>
<td>47,706</td>
<td>0.61</td>
<td>184</td>
<td>95</td>
<td>0</td>
<td>279</td>
<td>184</td>
<td>95</td>
<td>-</td>
<td>279</td>
</tr>
<tr>
<td>Alameda-Zone 7</td>
<td>80,619</td>
<td>1.03</td>
<td>311</td>
<td>160</td>
<td>0</td>
<td>471</td>
<td>249</td>
<td>128</td>
<td>-</td>
<td>377</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>100,000</td>
<td>1.28</td>
<td>385</td>
<td>199</td>
<td>1,991</td>
<td>2,575</td>
<td>308</td>
<td>159</td>
<td>1,593</td>
<td>2,060</td>
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<td>Oak Flat</td>
<td>5,700</td>
<td>0.07</td>
<td>22</td>
<td>11</td>
<td>113</td>
<td>146</td>
<td>18</td>
<td>9</td>
<td>90</td>
<td>117</td>
</tr>
<tr>
<td>Kings</td>
<td>9,305</td>
<td>0.12</td>
<td>36</td>
<td>19</td>
<td>185</td>
<td>240</td>
<td>29</td>
<td>15</td>
<td>148</td>
<td>192</td>
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<tr>
<td>Dudley Ridge</td>
<td>48,350</td>
<td>0.62</td>
<td>186</td>
<td>96</td>
<td>963</td>
<td>1,245</td>
<td>149</td>
<td>77</td>
<td>770</td>
<td>996</td>
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<tr>
<td>Empire</td>
<td>3,000</td>
<td>0.04</td>
<td>12</td>
<td>6</td>
<td>60</td>
<td>78</td>
<td>10</td>
<td>5</td>
<td>48</td>
<td>62</td>
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<td>Kern</td>
<td>982,730</td>
<td>12.60</td>
<td>3,787</td>
<td>1,848</td>
<td>19,569</td>
<td>25,204</td>
<td>3,030</td>
<td>1,478</td>
<td>15,655</td>
<td>20,163</td>
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<td>Tulare</td>
<td>87,471</td>
<td>1.12</td>
<td>337</td>
<td>174</td>
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<td>139</td>
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<td>1,802</td>
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<td>AVEK</td>
<td>144,844</td>
<td>1.86</td>
<td>558</td>
<td>288</td>
<td>0</td>
<td>846</td>
<td>446</td>
<td>230</td>
<td>-</td>
<td>677</td>
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<tr>
<td>Castaic Lake</td>
<td>95,200</td>
<td>1.22</td>
<td>367</td>
<td>189</td>
<td>0</td>
<td>556</td>
<td>294</td>
<td>151</td>
<td>-</td>
<td>445</td>
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<tr>
<td>Coachella</td>
<td>138,350</td>
<td>1.77</td>
<td>532</td>
<td>177</td>
<td>480</td>
<td>1,189</td>
<td>426</td>
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<td>951</td>
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<td>Crestline</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>0</td>
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<tr>
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<td>0.72</td>
<td>215</td>
<td>111</td>
<td>0</td>
<td>326</td>
<td>172</td>
<td>89</td>
<td>-</td>
<td>261</td>
</tr>
<tr>
<td>Littlerock</td>
<td>2,300</td>
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<td>9</td>
<td>5</td>
<td>0</td>
<td>14</td>
<td>7</td>
<td>4</td>
<td>-</td>
<td>11</td>
</tr>
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<td>Metropolitan</td>
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<td>-</td>
<td>8,770</td>
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<td>Palmdale</td>
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<td>424</td>
<td>548</td>
<td>66</td>
<td>34</td>
<td>339</td>
<td>438</td>
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<td>San Bernardino</td>
<td>102,600</td>
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<td>204</td>
<td>2,043</td>
<td>2,642</td>
<td>316</td>
<td>163</td>
<td>1,634</td>
<td>2,114</td>
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<tr>
<td>San Gorgonio</td>
<td>17,300</td>
<td>0.22</td>
<td>67</td>
<td>34</td>
<td>344</td>
<td>445</td>
<td>54</td>
<td>27</td>
<td>275</td>
<td>356</td>
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<td><strong>SWP Contractor Total</strong></td>
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<td>28,492</td>
<td>50,823</td>
<td>12,067</td>
<td>5,899</td>
<td>22,909</td>
<td>40,875</td>
</tr>
<tr>
<td>San Luis &amp; Delta-Mendota</td>
<td>50.00</td>
<td></td>
<td>15,000</td>
<td>7,331</td>
<td>28,492</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
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<td>14,663</td>
<td>56,984</td>
<td>101,647</td>
<td>12,067</td>
<td>5,899</td>
<td>22,909</td>
<td>40,875</td>
</tr>
</tbody>
</table>

---

*a Carriage loss does not apply to Napa, Solano, and Yuba, due to the contractor being north of the Delta.

*b San Luis & Delta-Mendota’s water was pumped through Jones Pumping Plant by CVP.
MANAGEMENT OF THE CALIFORNIA STATE WATER PROJECT

BULLETIN 132-16 | JUNE 2017

EDMUND G. BROWN Jr., Governor, State of California

JOHN LAIRD
Secretary for Natural Resources
California Natural Resources Agency

WILLIAM A. CROYLE
Acting Director
Department of Water Resources
Ventura, and Castaic. These contractors are allowed to withdraw up to a maximum of 153,940 af, 1,377 af, and 4,683 af, respectively. Metropolitan is the only SWP water contractor allowed to withdraw water from Lake Perris, up to a maximum of 65,000 af.

In 2015, Metropolitan started with a balance of -218,940 af in flexible storage. Metropolitan did not withdraw flexible storage water, leaving them with an end-of-year balance of -218,940 af. Castaic started the year with a balance of -4,424 af in flexible storage. Castaic did not withdraw flexible storage water, but replaced 4,339 af of withdrawn storage water using their water bank recovery water, leaving them with an end-of-year balance of -85 af.

**Extended Carryover Program**

Pursuant to Article 56 of the Monterey Amendments, SWP water contractors can elect to store SWP water outside of their service areas and carry it over to the following year for use within their service areas. Qualified SWP water contractors can request the carryover of Table A water for delivery in the following year to the extent that such deliveries do not adversely affect current or future project operations. Factors that influence how much extended carryover water can be delivered include operational constraints of project facilities, filling of SWP conservation storage facilities, flood control releases, and water quality restrictions.

If storage requests exceed the available storage capacity, the amount available is allocated among the SWP water contractors requesting storage in proportion to their annual Table A amount for that year.

Twenty SWP water contractors took delivery of Article 56(c) water in the amount of 131,990 af of previously approved Table A water carried over into 2015. A total of 265 af of SWP water contractors’ carryover water was delivered to non-SWP contractors for a total of 132,255 af of water delivered.

**2015 Water Transfers**

Due to the critically dry hydrologic conditions in 2015, a number of SWP water contractors experienced significant water supply shortages. Nine SWP water contractors executed water transfer conveyance agreements with DWR and six non-SWP agencies on the Feather, Yuba, Sacramento, and American rivers, and within the Delta.

A total of 21,586 af of water was made available to the SWP buyers from a combination of reservoir releases and groundwater substitution. See Table 9-3 for a list of sellers that provided water for transfer in 2015. A total of 17,286 af of transfer water was delivered to the SWP buyers after conveyance losses, including Delta carriage water losses of 20 percent, except to Napa, which was assessed a zero percent carriage water loss. See Table 9-4 for a list of the SWP buyers and the quantities delivered.

**Lower Yuba River Accord**

The Lower Yuba River Accord (Yuba Accord) was announced in 2005 to settle long-standing litigation over instream flows in the Yuba River in relation to fisheries. The purpose of the Yuba Accord is to resolve instream flow issues associated with the operation of the Yuba River Development Project in a way that protects and enhances lower Yuba River fisheries and local water supply reliability. The Yuba River Development Project provides revenues for local flood control and water supply projects, water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions for the protection and restoration of Delta fisheries, and improvements in statewide water supply management, including dry year water
### Table 9-3 2015 Water Transfers Seller Activities (acre-feet)

<table>
<thead>
<tr>
<th>Sellers</th>
<th>Buyers</th>
<th>SWPAO #</th>
<th>Transfer Action</th>
<th>Transfer Water Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garden Highway Mutual Water Company</td>
<td>Dudley Ridge</td>
<td></td>
<td>Groundwater Substitution</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>Kern</td>
<td>15702</td>
<td>Groundwater Substitution</td>
<td>241</td>
</tr>
<tr>
<td></td>
<td>Oak Flat</td>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Metropolitan</td>
<td></td>
<td></td>
<td>468</td>
</tr>
<tr>
<td>Sutter Extension Water District</td>
<td>Kern</td>
<td></td>
<td>Groundwater Substitution</td>
<td>510</td>
</tr>
<tr>
<td></td>
<td>Metropolitan</td>
<td>15704</td>
<td>Groundwater Substitution</td>
<td>990</td>
</tr>
<tr>
<td>Plumas Mutual Water Company</td>
<td>Kern</td>
<td></td>
<td>Groundwater Substitution</td>
<td>591</td>
</tr>
<tr>
<td></td>
<td>Metropolitan</td>
<td>15724</td>
<td>Groundwater Substitution</td>
<td>1,149</td>
</tr>
<tr>
<td>Sutter South Water District</td>
<td>Kern</td>
<td></td>
<td>Reservoir Releases</td>
<td>1,679</td>
</tr>
<tr>
<td></td>
<td>Kings</td>
<td></td>
<td></td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Metropolitan</td>
<td></td>
<td></td>
<td>3,269</td>
</tr>
<tr>
<td>Foresthill Public Utility District</td>
<td>Santa Clara</td>
<td></td>
<td>Reservoir Releases</td>
<td>1,000</td>
</tr>
<tr>
<td>South Feather Water and Power Agency</td>
<td>Dudley Ridge</td>
<td></td>
<td>Reservoir Releases</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>Kings</td>
<td></td>
<td></td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Kern</td>
<td>15750</td>
<td>Reservoir Releases</td>
<td>3,333</td>
</tr>
<tr>
<td></td>
<td>Metropolitan</td>
<td></td>
<td></td>
<td>6,481</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>21,586</strong></td>
</tr>
</tbody>
</table>

### Table 9-4 2015 Water Transfers Buyer Activities (acre-feet)

<table>
<thead>
<tr>
<th>Buyers</th>
<th>Water Available to Buyer</th>
<th>Carriage Water Losses a</th>
<th>Net Water Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dudley Ridge</td>
<td>294</td>
<td>59</td>
<td>235</td>
</tr>
<tr>
<td>Kern</td>
<td>6,354</td>
<td>1,271</td>
<td>5,083</td>
</tr>
<tr>
<td>Kings</td>
<td>61</td>
<td>12</td>
<td>49</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>12,357</td>
<td>2,472</td>
<td>9,885</td>
</tr>
<tr>
<td>Napa</td>
<td>89</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Oak Flat</td>
<td>17</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Palmdale</td>
<td>66</td>
<td>13</td>
<td>53</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>140</td>
<td>28</td>
<td>112</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>2,208</td>
<td>442</td>
<td>1,766</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21,586</strong></td>
<td><strong>4,300</strong></td>
<td><strong>17,286</strong></td>
</tr>
</tbody>
</table>

* Carriage water losses of 20 percent were applied to all transfers except to Napa. Napa (located north of the Delta) was assigned with zero carriage water loss.

* Totals may not sum as expected due to rounding.
supplies for participating SWP and CVP water contractors.

**Agreements**

The Yuba Accord is based on three sets of agreements: a water purchase agreement with DWR, that includes water to help offset Delta export reductions and dry year water for participating SWP and CVP water contractors; conjunctive use agreements with Yuba County Water Agency (Yuba) member units; and a fisheries agreement resolving minimum flows. The Yuba Accord provides for higher releases into the Yuba River to benefit Chinook Salmon and steelhead, transfer water to help offset Delta export reductions annually, and provide dry year transfer water for SWP and CVP water contractors from both surface and groundwater substitution sources.

The required agreements were executed in late 2007 and early 2008, and the SWRCB approved the Yuba Accord on March 25, 2008, setting the flow schedules for the river and authorizing accord-based water transfers through 2025. During that same period, DWR completed executing 22 agreements for dry year supplies for participating SWP and CVP water contractors under the accord.

**Amendments**

In April 2009, two amendments to the Yuba Accord’s water purchase agreement were executed. Amendment Number 1 resolved a technical issue related to refill accounting, and Amendment Number 2 addressed pricing issues for groundwater substitution water.

Amendment Number 3 was executed April 22, 2010, and addressed market pricing issues for groundwater substitution water.

Amendment Number 4 was executed between DWR and Yuba, and between DWR and 22 participating contractors. Amendment Number 4 provides for annual negotiations of groundwater substitution water pricing, prioritizing SWP water contractors’ Delta export transfer supplies, and optionally suspending certain accounting rules to permit all groundwater substitution water to be classified as Component 4 water.

Under Amendment Number 4, all accrued groundwater substitution water is payable even if it cannot be exported. The single exception is that DWR and Yuba Accord water contractors will not be required to pay for the portion (if any) of groundwater substitution component water that is released in accordance with the provisions of the Yuba Accord Fisheries Agreement, Section 5.1.8, Supplemental Flows for Groundwater Substitution Programs, unless it can be exported.

On December 5, 2014, DWR executed Amendment Number 5 to the Yuba Accord Water Purchase Agreement with Yuba. The key new terms included: increased pricing for the four components of transfer water to be delivered by Yuba from 2016 through 2020; a $20 million deposit to be paid to Yuba to lock in the new pricing for 5 years and will be credited to surface water purchases; an allowance for third-party sales by Yuba to nonparticipants in the program under certain circumstances; and continued annual negotiations of groundwater substitution pricing when available. All 22 participating contractors agreed to continue their participation in the Yuba Accord from 2016 through 2020 by executing the conforming Amendment Number 5 to their participation agreements. On January 8, 2015, DWR executed a Participation Agreement, Amendment 1, and Amendment 5 with Mojave and Santa Barbara, increasing the number of participating contractors to from 22 to 24.
**Component 1 and Component 4 Water Deliveries**

In 2015, Yuba delivered 59,131 af of Component 1 water from surface releases, shared equally between DWR and Reclamation. Because 60,000 af of Component 1 water was due to be delivered in 2015, Yuba owes the remaining 869 af in a future year. There were no water deliveries for Component 2 or Component 3 water.

A letter agreement was executed between DWR and Yuba on March 26, 2015. The agreement provided for 30,000 af of Component 4 groundwater substitution water at an effective price of $665 per af.

The 59,131 af of Component 1 water was used to offset Delta pumping curtailments equally at the Banks Pumping Plant and Jones Pumping Plant. The curtailments were made pursuant to the biological opinions on Delta Smelt and salmonids issued by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service as modified by subsequent court orders. Yuba delivered 30,000 af of Component 4 groundwater substitutions water.

Component 4 water was shared 50 percent among 13 participating SWP water contractors, and 50 percent among CVP contractor members of the San Luis & Delta-Mendota Water Authority, a federal CVP water contractor. The 2015 transfers by Yuba pursuant to the 2007 DWR/Yuba Water Purchase Agreement totaled 89,131 af. The 30,000 af of Component 4 water was used by the 14 State and federal participating contractors to help offset low water allocations.

**Carriage Water Losses**

The 13 SWP water contractors shared the Yuba River water based on their relative requests for the various components in proportion to their Table A contract amounts. The SWP water contractors that purchased the water are responsible for applicable carriage water costs and conveyance charges based on Article 55 of their long-term water supply contracts. Carriage costs reduced actual deliveries of Yuba River water through Banks Pumping Plant and Jones Pumping for all participating contractors in 2015. The Yuba water for DWR and the SWP water contractors was exported through the Banks Pumping Plant, and the Yuba water for Reclamation and the San Luis & Delta-Mendota Water Authority was exported through the Jones Pumping Plant in 2015 with applicable carriage water costs.

Table 9-5 shows Lower Yuba River Accord Component 4 water deliveries.

**Agreements with Non-SWP Agencies**

In addition to negotiating agreements with SWP water contractors to provide for specified water deliveries, DWR also enters into agreements with non-SWP agencies to provide water conveyance service.

**San Luis & Delta-Mendota Water Authority**

An agreement among DWR, San Luis & Delta-Mendota Water Authority, Oakdale Irrigation District, and South San Joaquin Irrigation District was executed on September 29, 2015. DWR and San Luis & Delta-Mendota Water Authority purchased 23,000 af of pulse flow releases from Oakdale Irrigation District and South San Joaquin Irrigation District to benefit migratory fish on the Stanislaus River below Goodwin Dam during October and November 2015. The pulse flow releases provided water supply benefits in the Delta that were shared equally between the SWP and the CVP. DWR paid $500 per af for the pulse flow water. (SWPAO #15022)
Table 9-5  Lower Yuba River Accord Component 4 Water Deliveries, 2015 (acre-feet)

<table>
<thead>
<tr>
<th>Participating Contractor</th>
<th>Component 4</th>
<th>Carriage Water Losses (20%)</th>
<th>Water Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SWP Contractor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alameda-Zone 7</td>
<td>345</td>
<td>69</td>
<td>276</td>
</tr>
<tr>
<td>Coachella</td>
<td>533</td>
<td>107</td>
<td>426</td>
</tr>
<tr>
<td>Crestline</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Dudley Ridge</td>
<td>194</td>
<td>39</td>
<td>155</td>
</tr>
<tr>
<td>Kern</td>
<td>4,211</td>
<td>843</td>
<td>3,368</td>
</tr>
<tr>
<td>Kings</td>
<td>40</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>8,192</td>
<td>1,639</td>
<td>6,553</td>
</tr>
<tr>
<td>Napa*</td>
<td>124</td>
<td>0</td>
<td>124</td>
</tr>
<tr>
<td>Oak Flat</td>
<td>24</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>Palmdale</td>
<td>91</td>
<td>19</td>
<td>72</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>440</td>
<td>88</td>
<td>352</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>429</td>
<td>86</td>
<td>343</td>
</tr>
<tr>
<td>Tulare</td>
<td>375</td>
<td>75</td>
<td>300</td>
</tr>
<tr>
<td><strong>SWP Contractor Total</strong></td>
<td>15,000</td>
<td>2,979</td>
<td>12,021</td>
</tr>
<tr>
<td><strong>Non-SWP Contractor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Luis &amp; Delta-Mendota Water Authority</td>
<td>15,000</td>
<td>5,250&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9,750</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>30,000</td>
<td>8,229</td>
<td>21,771</td>
</tr>
</tbody>
</table>

<sup>a</sup> Carriage loss does not apply to Napa because these contractors are north of the Delta.
<sup>b</sup> San Luis & Delta-Mendota Water Authority’s water was pumped through Jones Pumping Plant by Reclamation with deliveries reduced by 35 percent carriage water losses.

Westlands Water District

An agreement between DWR and Westlands, executed June 29, 2015, allowed for the introduction of up to 30,000 af of Westlands’ local groundwater within Westlands’ service area in Reaches 4 through 7 of the California Aqueduct through October 30, 2015. During 2015, a total of 26,835 af of Westlands’ water was pumped into the California Aqueduct under this agreement. (SWPAO #15019)

An amendment was executed February 10, 2015, to extend the term of an agreement between DWR and Westlands. The original agreement (SWPAO #14010) executed July 15, 2014, approved the introduction of up to 30,000 af of Westlands’ local groundwater into the California Aqueduct, and provided for the conveyance and delivery by DWR to Westland’s turnouts in Reaches 4 through 7 of the California Aqueduct through October 31, 2014. This amendment (SWPAO #14010-B) extends the term of the agreement to February 28, 2015. In 2015, Westlands introduced 4,297 af of local water into the California Aqueduct; DWR conveyed and delivered to Westlands a total of 3,641 af within the San Luis Canal portion (Reaches 4–7) of the California Aqueduct. Westlands made available, as mitigation to the SWP, 568 af for allocation to the SWP water contractors. (SWPAO #14010 and SWPAO #14010-B)
MANAGEMENT OF THE

CALIFORNIA

STATE WATER

PROJECT

BULLETIN 132-17  |  JANUARY 2019

GAVIN NEWSOM
Governor, State of California

JOHN LAIRD
Secretary for Natural Resources
California Natural Resources Agency

KARLA NEMETH
Director, California Department of Water Resources
water, leaving them with an end-of-year balance of -65,000 af. Castaic started the year with a balance of -85 af in flexible storage. Castaic did not withdraw or repay any flexible storage water, leaving them with an end-of-year balance of -85 af.

**Extended Carryover Program**

Pursuant to Article 56 of the Monterey Amendments, SWP water contractors can elect to store SWP water outside of their service areas and carry it over to the following year for use within their service areas. Qualified SWP water contractors can request the carryover of Table A water for delivery in the following year to the extent that such deliveries do not adversely affect current or future project operations. Factors that influence how much extended carryover water can be delivered include operational constraints of project facilities, filling of SWP conservation storage facilities, flood control releases, and water quality restrictions.

If storage requests exceed the available storage capacity, the amount available is allocated among the SWP water contractors requesting storage in proportion to their annual Table A amount for that year. Fifteen SWP water contractors took delivery of Article 56(c) water in the amount of 71,248 af of previously approved Table A water carried over into 2016. A total of 1,613 af of SWP water contractors’ carryover water was delivered to non-SWP contractors for a total of 72,861 af of water delivered.

**2016 Water Transfers**

When dry or critical hydrologic conditions result in significant water supply shortages, DWR enters into water transfer conveyance agreements with SWP water contractors and non-SWP agencies. Transfer water is made available from a combination of reservoir releases and groundwater substitution. Conveyance losses and carriage water losses are a component of water transfer deliveries. In 2016, there were no water transfers.

**Lower Yuba River Accord**

For Lower Yuba River Accord background information, see the sidebar, Lower Yuba River Accord.

**Component 1 Water Deliveries**

In 2016, Yuba delivered 60,000 acre-feet of Component 1 water to DWR and Reclamation to benefit the SWP and the CVP under the 2007 DWR/Yuba Water Purchase Agreement and a 2016 DWR-Reclamation agreement.

In addition to 60,000 af of Component 1 water, Yuba released and had 8,234 af of surface water backed into Lake Oroville from mid-September through October 15, 2016. All of the backed water was later released when Lake Oroville began flood control releases.

Yuba also provided a repayment of 60,000 af of Component 1 water for water owed dating back to calendar year 2011. In 2011, excess conditions in the Delta prevented accounting of Yuba releases as transfer water for the entire summer transfer period. The 60,000 af of Component 1 water was owed to DWR for SWP project purposes, but was shared equally with Reclamation for CVP purposes. DWR exported its share of Component 1 water at Banks Pumping Plant during the July 1 through September 30 transfer period. Reclamation exported its share of the water at the Jones Pumping Plant during the same period.

A shortfall of 869 af of prepaid Component 1 water from 2015 still remains and must be repaid by Yuba in the next year that is not classified as dry or critical.

No Component 2, 3, or 4 water was provided in 2016.
Lower Yuba River Accord

The Lower Yuba River Accord (Yuba Accord) settled long standing litigation over instream flow issues associated with the operation of the Yuba River Development Project. Operated by the Yuba County Water Agency (Yuba), the Yuba River Development Project’s primary purposes are water supply, flood control, power generation, recreation, and environmental protection and enhancement.

The Yuba Accord was developed collaboratively by fisheries, environmental, and agricultural interests and local, state, and federal agencies. It provides a framework for a comprehensive, science-based, consensus-oriented program to protect and enhance 24 miles of the lower Yuba River extending from Englebright Dam downstream to the Yuba River’s confluence with the Feather River. It establishes instream flow requirements to provide sufficient flows in the river for fisheries and to allow Yuba to meet local water needs and transfer water to other users; provides Yuba with a source of revenue for local activities, including a comprehensive conjunctive use program, flood control improvements, and a lower Yuba River fisheries program; and improves water supply reliability for the State Water Project (SWP) and Central Valley Project (CVP).

The Yuba Accord is based on three separate but related agreements: a water purchase agreement, a set of conjunctive use agreements; and a fisheries agreement. The agreements were executed in late 2007 and early 2008, and the State Water Resources Control Board (State Water Board) approved the Yuba Accord on March 25, 2008. The Yuba Accord has been amended five times and will expire in 2020.

Fisheries Agreement

The Fisheries Agreement is between DWR, Yuba, the Department of Fish and Wildlife, Friends of the River, South Yuba Citizens League, The Bay Institute, and Trout Unlimited. The U.S. Fish and Wildlife Service and National Marine Fisheries Service participate under the Statement of Support for Proposed Lower Yuba River Fisheries Agreement. The Fisheries Agreement establishes instream flow requirements to benefit salmon, steelhead, and other fish species in the lower Yuba River by improving instream habitat conditions. The agreement also establishes a long-term fisheries monitoring, studies, and enhancement program for the lower Yuba River.

Conjunctive Use Agreements

The conjunctive use agreements between Yuba and its member units establish a comprehensive conjunctive use program that integrates surface water and groundwater supplies with the local irrigation districts and mutual water companies that Yuba serves in Yuba County. Groundwater supplies will help meet local water supply needs in dry years, facilitating Yuba’s operation of its storage facilities to meet the instream flow requirements called for in the Fisheries Agreement and commitments of water transfer in the Water Purchase Agreement.
Lower Yuba River Accord (continued)

Water Purchase Agreement
The Water Purchase Agreement is between Yuba and DWR. It creates a long-term water transfer program, allowing Yuba River water to be transferred to other users in California and to provide 60,000 acre-feet per year to offset Delta SWP and CVP export reductions for the protection and restoration of Delta fisheries. The Water Purchase Agreement has been amended five times, and 24 agencies have agreed to continue their participation through 2020.

Under the agreement, the range of transfer volumes is segregated into four components which reflect variations in pricing, purpose of use, and schedule:

- Component 1 water includes 60,000 af purchased by DWR and Reclamation annually.
- Component 2 water includes water that DWR and Reclamation purchase from Yuba—15,000 af in a dry year and 30,000 af in a critical year.
- Component 3 water supplies include 40,000 af of water that Yuba makes available for purchase by DWR and Reclamation under certain SWP and CVP delivery allocation scenarios.
- Component 4 water includes any additional water available from surface and groundwater supplies that Yuba may offer to DWR and Reclamation for purchase.

Carriage Water Losses
At the end of the transfer season, DWR performed a computer-aided study to simulate the water quality conditions that prevailed during the transfer period (July through September), and to estimate the amount of water necessary to prevent further salinity intrusion (i.e., carriage water losses) due to the higher exports. The 2016 carriage water cost was determined to be 30 percent of the 60,000 af of Yuba’s transferable releases that were accounted for as Delivered Transfer Water.

For additional information about the Lower Yuba River Accord, see previous Bulletin 132 editions.

Agreements with Non-SWP Agencies
In addition to negotiating agreements with SWP water contractors to provide for specified water deliveries, DWR also enters into agreements with non-SWP agencies to provide water conveyance service.

South San Joaquin Irrigation District/Oakdale Irrigation District/ San Luis & Delta-Mendota Water Authority
An agreement among DWR, San Luis & Delta-Mendota Water Agency, South San Joaquin Irrigation District, and Oakdale Irrigation District, executed