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9 Attorneys for PLACER COUNTY
10 WATER AGENCY

11
12 BEFORE THE
13 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
14

15 HEARING ON THE MATTER OF
16 CALIFORNIA DEPARTMENT OF WATER
RESOURCES AND UNITED STATES
17 BUREAU OF RECLAMATION REQUEST
FOR A CHANGE IN POINT OF DIVERSION
18 FOR CALIFORNIA WATER FIX.

TESTIMONY OF EINAR MAISCH

19
20 This testimony is offered on behalf of the Placer County Water Agency (PCWA).

21 **I. INTRODUCTION**

22 My name is Einar Maisch. I serve as the General Manager of PCWA, and have
23 done so since May of 2015. I am a graduate from the California State University,
24 Sacramento Civil Engineering class of 1979 and soon thereafter began my engineering
25 career in private industry, working on regional land development and water resource
26 projects as a California registered Civil Engineer, before joining PCWA in 1985. My
27 California Civil Engineering License is # C33291. Prior to my position as General
28 Manager of PCWA in May of 2015, I served PCWA in various professional capacities.

1 During my thirty (30) year tenure at PCWA, I served as a Senior Civil Engineer
2 (1985-1987), Engineering Administrator (1987-1989), Agency Engineer (1989-1994),
3 Director of Planning and Marketing (1994-2000), Director of Strategic Affairs
4 (2000-2015), and now as the General Manager (2015-present). I am familiar with the
5 water supplies, facilities, and operations of PCWA. I am also generally familiar with
6 Folsom Dam and Reservoir and their operation by the United States Bureau of
7 Reclamation (Reclamation).

8 PCWA was established by an Act of the California State Legislature in 1957
9 (PCWA Act). Exhibit PCWA-022 is a true and correct copy of the PCWA Act. The
10 purpose of PCWA is to secure and develop water rights in Placer County to ensure an
11 adequate water supply for the county's future economic development. PCWA is also
12 charged with advocating for water resource issues throughout Placer County. PCWA is
13 governed by a five (5)-member elected Board of Directors that represents the entire
14 geographic area of Placer County.

15 To carry out its statutory charge, PCWA has obtained various water rights,
16 entered into various water supply contracts, and purchased and constructed significant
17 water storage, treatment, and delivery infrastructure in Placer County, including the
18 Middle Fork American River Project (MFP). Exhibit PCWA-023 is a true and correct
19 copy of PCWA's 2015 Urban Water Management Plan, adopted June 2016, which
20 provides a summary of PCWA's water rights, water supply and water supply
21 infrastructure.

22 PCWA plays a key role in the economic well-being and environmental health of
23 Placer County through energetic leadership and stewardship of Placer County's water
24 resources. As the population of Placer County has grown, the portfolio of PCWA's
25 activities has become more complex, and more essential to Placer County's continued
26 vitality. However, regardless of changing demands, developing and distributing Placer
27 County's water resources to provide clean and reliable water to the people of Placer
28 County continues to be the focus of PCWA's activities.

1 To help contextualize the basis of PCWA's protest to California WaterFix
2 (WaterFix), my testimony will include an overview of PCWA's rich history, focusing on its
3 relationship with Reclamation and the federal Central Valley Project (CVP), beginning
4 with the development of the Middle Fork Project, then the acquisition of Pacific Gas &
5 Electric's (PG&E) West Placer Water System and accepting the role of supplying water
6 to the region's vital and growing economy, and coming to terms with PCWA's role in
7 environmental stewardship of the American River through its participation in the
8 Sacramento Area Water Forum. My testimony then turns to dry years planning, PCWA
9 operations, and injury PCWA believes will result from the construction and operation of
10 WaterFix.

11 II. RELATIONSHIP BETWEEN PCWA'S MFP AND THE CVP

12 With development of the CVP looming in the early-1940's, local communities
13 feared the loss of water resources to downstream interests, which resulted in numerous
14 water studies to determine the feasibility of large scale water projects in the American
15 River region.

16 With the impending construction of Folsom Dam, as part of the CVP, and with the
17 looming threat of losing Placer County water resources to further CVP development, on
18 March 31, 1948, the Placer County Board of Supervisors submitted to the State Water
19 Resources Board (State Water Board) the original water right filings to develop the water
20 resources of the American River basin for the residents of Placer County under
21 Application Numbers 12456, 12457, and 12458.

22 On September 16, 1948, the Placer County Board of Supervisors approved
23 Resolution Authorizing the Upper American River Project (Resolution), and forming the
24 Upper American River Project (UARP) Board. Exhibit PCWA-024 is a true and correct
25 copy of the Resolution Authorizing the Upper American River Project. The Resolution
26 declared that Placer County had made, and would continue to make, application for
27 water, power, and storage rights on the American River and its tributaries in stating: "The
28 County of Placer fully intends to secure said rights and proceed to make immediate and

1 beneficial use of said rights for irrigation and power production.” This action was the first
2 major step to developing water resources of Placer County and started the grass roots
3 movement to develop the water resources within Placer County and protect local water
4 supplies for the future economic benefit of the area of origin.

5 On December 23, 1948, the County of Placer Board entered into agreement with
6 the State Water Board and the State Department of Public Works to survey and
7 inventory the water resources of Placer County, estimate current and ultimate future
8 water demands, and to develop preliminary plans and cost estimates for water
9 development works to meet future demands.

10 On June 30, 1955, the State Water Board released the results of this Placer
11 County investigation under Bulletin No. 10 which, in part, detailed a viable water supply
12 and hydroelectric power generation project for the upper American River.

13 Exhibit PCWA-025 is a true and correct copy of Bulletin No. 10.

14 On March 18, 1957 Water Right Application Numbers 12456 and 12457 (originally
15 filed by the Placer County Board of Supervisors in 1948) were cancelled pursuant to
16 State Water Board Decision 893 because, according to the State Water Board, the
17 applications filed by Placer County (generally) were not “in position to proceed within a
18 reasonable time with construction work and in applying the water to beneficial use.”

19 Exhibit PCWA-026 is a true and correct copy of State Water Board Decision 893.

20 Soon thereafter, Assemblyman Francis Lindsay's bill, the PCWA Act, was
21 approved by the California Legislature and signed by the Governor on July 3, 1957,
22 becoming law on September 11, 1957. The purpose of the Act was to:

23 [C]reate the Placer County Water Agency, prescribing its powers and
24 duties, providing for its organization, operation, and management, and
25 authorizing the acquisition of property and works to carry out the purposes
26 of the district, authorizing the issuance of indebtedness, providing for the
27 issuance of bonds, providing for the levy and collection of taxes for the
28 payment of such indebtedness, providing for the levying of bonds payable
solely from revenues of the district, providing for the levy and collection of
taxes for the payment of general district expenses and for cooperation and
contracts with the entity. (Calif. Stats. 1957, c. 1234.)

With a clear State-backed plan outlined in Bulletin 10 for the development of

1 Placer County water resources, PCWA filed Water Right Application Numbers 18084,
2 18085, 18086, and 18087 on April 7 and 8, 1958 for the Middle Fork American River
3 Project (MFP). Exhibit PCWA-027 is a true and correct copy of PCWA Application to
4 Appropriate Unappropriated Water No. 18085; Exhibit PCWA-028 is a true and correct
5 copy of PCWA Application to Appropriate Unappropriated Water No. 18087. These
6 original application filings made by PCWA proposed the MFP as detailed in the State's
7 Bulletin No. 10.

8 With a viable water project in hand, a bond election was held in Placer County on
9 June 20, 1961. In that election, the citizens of Placer County voted by an overwhelming
10 margin of 25 to 1 to authorize the issuance of \$140 million in revenue bonds for
11 construction of the MFP. Exhibit PCWA-029 is a true and correct copy of Revenue Bond
12 Resolution No. 61-190, dated June 27, 1961.

13 At the same time Reclamation was considering the feasibility of developing the
14 Auburn-Folsom South Unit of the CVP, which included as its principal feature the Auburn
15 Dam and Reservoir on the North Fork American River. Reclamation also had filed
16 applications to appropriate water from the American River to be stored behind Auburn
17 Dam; the applications of PCWA and Reclamation were in conflict. PCWA and
18 Reclamation filed protests with the State Water Board, protesting each other's water
19 rights applications on the American River. PCWA and Reclamation then entered into
20 negotiations in an attempt to resolve the protests in a way that would allow both the MFP
21 and Auburn Dam and Reservoir proceed to construction.

22 In addition to the primary concerns over the competing water right applications
23 filed for the American River watershed, there was a conflict in the physical features of
24 the MFP and Auburn Dam. PCWA's original plans, submitted to the Federal Power
25 Commission, the predecessor of the present Federal Energy Regulatory Commission
26 (FERC), as proposed in MFP water rights Application Numbers 18084, 18085, 18086,
27 and 18087, included construction of a third large dam and storage reservoir known as
28 the American Bar Dam, which was to be in addition to French Meadows and Hell Hole

1 storage reservoirs. Exhibit PCWA-030 is a true and correct copy of the PCWA General
2 Plan from 1959, which depicts PCWA's original plans for the MFP project.

3 The American Bar Dam, which was planned to be located just downstream of the
4 confluence of the Middle Fork and the North Fork, would have provided for 100,000 acre
5 feet (AF) of additional storage in the MFP. Reclamation opposed American Bar Dam
6 because it was planned in the upper reaches of the flooded area of the future Auburn
7 Dam. Reclamation insisted PCWA relocate the American Bar Dam so Reclamation
8 could build Auburn Dam.

9 PCWA and Reclamation's negotiations resulted in the February 23, 1962, letter
10 Agreement between Reclamation and PCWA (February 1962 Agreement).
11 Exhibit PCWA-031 is a true and correct copy of the February 1962 Agreement. The
12 February 1962 Agreement provided that PCWA, in the operation of the MFP, could divert
13 up to 120,000 acre feet per year (AFY) from the American River, assuming the State
14 granted PCWA permits and subsequent licenses to do so. PCWA agreed to move
15 American Bar Dam upstream to accommodate the construction of the proposed Auburn
16 Dam. To compensate PCWA for the loss of water resulting from the relocation of
17 American Bar Dam, Reclamation agreed to provide PCWA up to 117,000 AFY of CVP
18 water. The provision of water to PCWA under this agreement was not dependent on the
19 actual construction of Auburn Dam, which, at that time, had not even been authorized by
20 Congress.

21 The February 1962 Agreement also provided for each party withdrawing their
22 protests to the other's water right applications, set forth a schedule for the delivery of
23 CVP water to PCWA to begin in 1992, and designated the prices to be paid to
24 Reclamation for each acre foot of irrigation and municipal and industrial (M&I) water.

25 The February 1962 Agreement was amended by the subsequent July 16, 1962, letter
26 Agreement between Reclamation and PCWA (July 1962 Agreement). Exhibit PCWA-
27 032 is a true and correct copy of the July 1962 Agreement. The July 1962 Agreement
28 amended the February 1962 Agreement in three respects. The first amendment

1 reiterated the schedule for the delivery of Reclamation water, but added the following
2 language:

3 If the Auburn Dam and Reservoir has been constructed by the Federal
4 Government, water under the above schedule shall be delivered to [PCWA]
5 at Auburn Reservoir. Otherwise said water shall be delivered to [PCWA] at
points mutually agreed upon.

6 This language reaffirmed the understanding between the parties that the sale and
7 delivery of Reclamation water to PCWA was not dependent upon the existence of an
8 Auburn Dam and Reservoir. The second amendment provided for PCWA's acceptance
9 of a maximum water service elevation of the proposed Auburn Reservoir of 1,140 feet,
10 instead of the previous 934.5 feet, because Reclamation was considering an enlarged
11 Auburn Reservoir. This change necessitated PCWA abandoning its proposed American
12 Bar Dam and Reservoir and reduced the potential power output of the MFP significantly.
13 The third amendment made by the July 1962 Agreement required PCWA to operate its
14 MFP "so as to maximize its yield for the development, conservation and use of water for
15 consumptive purposes," once the MFP bonds were retired.

16 After these two letter agreements were executed, PCWA and Reclamation
17 withdrew their respective protests and subsequently each party was issued water right
18 permits for its respective project. After the letter agreements were entered into and the
19 protests withdrawn, there was no great time pressure to embody the provisions of the
20 letter agreements into a more formal Reclamation contract for water service.

21 As a result of these agreements, PCWA filed amended Applications Numbers
22 18084, 18085, 18086, and 18087 on August 8, 1962 for the MFP, functionally removing
23 the American Bar Dam from the MFP, consistent with its settlement with Reclamation.
24 Exhibit PCWA-033 is a true and correct copy of documents from the State Water Board
25 Division of Water Rights files, including a July 16, 1962 letter from Reclamation to the
26 State Water Board documenting PCWA's settlement with Reclamation and PCWA's
27 August 8, 1962 submittal of the amended water rights applications.

28 On March 16, 1962, the California Water Commission, now known as the

1 Department of Finance (DOF), executed a release from priority of Application Numbers
2 7936 and 7937 (originally filed by the State in 1934) in favor of PCWA's MFP Application
3 Numbers 18084, 18085, 18086, and 18087. Exhibit PCWA-034 is a true and correct
4 copy of the March 16, 1962 release from Application Number 7936 and 7937. Taken
5 together, the State's release of priority to PCWA, and Reclamation's agreement to
6 PCWA's re-diversion of 120,000 AFY of its MFP supply for consumptive use, puts this
7 water right senior to Reclamation's Folsom water rights, consistent with Area of Origin
8 statutes and protections.

9 Construction of the MFP began in earnest in 1963. The MFP was completed in
10 1967 at a cost of \$115 million and became operational in June of 1968. The MFP
11 included a pump station on the North Fork American River near Auburn and a
12 three (3)-mile tunnel to deliver project water to Western Placer County.

13 III. PCWA'S CVP WATER SUPPLY CONTRACT

14 On September 18, 1970, with construction of the Auburn Dam well underway,
15 PCWA executed a water service contract (forty (40)-year term) with Reclamation
16 (No. 14-06-200-5028A). Exhibit PCWA-035 is a true and correct copy of Contract
17 No. 14-06-200-5028A. This contract was intended to be consistent with the
18 February 1962 Agreement and the July 1962 Agreement to ensure that the CVP would
19 supply PCWA's service area buildout demands. This contract allowed PCWA to take up
20 to 117,000 AFY of CVP water, beginning in 2007.

21 That contract was subsequently modified and finally replaced by Amendatory
22 Contract dated February 26, 2002 (Exhibit PCWA-036), and the Amendment to that
23 Amendatory Contract dated August 27, 2002 (Exhibit PCWA-037). This contract expired
24 in 2010. PCWA and Reclamation negotiated a long-term renewal contract which has not
25 yet been signed by Reclamation.

26 With the long-term renewal contract unsigned by Reclamation, the parties have
27 agreed to interim renewal contracts. In this regard, PCWA and Reclamation entered into
28 an interim renewal contract, Contract No. 14-06-200-5082A-IR1 (Exhibit PCWA-038),

1 which covered the period from January 1, 2012 through February 28, 2014. PCWA and
2 Reclamation then entered into a successive renewal of Contract No. 14-06-200-5082A-
3 IR2 (Exhibit PCWA-039), which covered the period from March 1, 2014, through
4 February 29, 2016. Finally, PCWA and Reclamation entered into another successive
5 renewal, which is Contract No. 14-06-200-5082A-IR3 (Exhibit PCWA-040), which covers
6 the period from March 1, 2016, through February 28, 2018.

7 **IV. PCWA AGREEMENTS WITH RECLAMATION RELATED TO THE**
8 **AMERICAN RIVER PUMP STATION (ARPS)**

9 In July 1972 Reclamation and PCWA entered into an agreement which provided
10 for the removal of PCWA's existing pump station to clear the way for the reservoir to be
11 filled behind the Auburn Dam (1972 Agreement). Exhibit PCWA-041 is a true and
12 correct copy of PCWA Resolution No. 72-15 authorizing PCWA to enter into the
13 1972 Agreement. The 1972 Agreement also provided that if PCWA required access to
14 its MFP water to meet the needs of its customers before completion of an Auburn Dam,
15 Reclamation would provide a temporary pumping facility that would perform substantially
16 the same function as PCWA's then existing pumping facilities which were being
17 removed.

18 With the suspension of construction on the Auburn Dam in the mid-1970's, PCWA
19 and Reclamation entered a challenging period wherein Reclamation would seasonally
20 install a temporary pump station to enable PCWA to access its American River water
21 rights in the summer and fall, and then remove the pump station to prevent damage from
22 winter runoff which frequently exceeded the capacity of the Auburn Dam diversion
23 tunnel.

24 Eventually PCWA and Reclamation reached an agreement to cooperatively fund
25 a permanent replacement of PCWA's original pump station with a new facility. A new
26 and expanded ARPS, with state of the art fish screens, was completed in 2007.
27 Exhibit PCWA-042 is a true and correct copy of the American River Pump Station
28 Project Final Environmental Impact Statement/Environmental Impact Report – Executive

1 Summary (June 2002); Exhibit PCWA-043 is a true and correct copy of the American
2 River Pump Station Project Final Environmental Impact Statement/Environmental Impact
3 Report (June 2002); Exhibit PCWA-044 is a true and correct copy of the American River
4 Pump Station Project Final Environmental Impact Statement/Environmental Impact
5 Report – Appendix C, Volume 1 (June 2002); Exhibit PCWA-045 is a true and correct
6 copy of the American River Pump Station Project Final Environmental Impact
7 Statement/Environmental Impact Report – Appendix C, Volume 2 (June 2002); and
8 Exhibit PCWA-046 is a true and correct copy of the American River Pump Station
9 Project Final Environmental Impact Statement/Environmental Impact Report – Appendix
10 D (June 2002). The ARPS project included closure of the Auburn Dam Diversion
11 Tunnel, restoring the river to its original channel, and with the removal of the Diversion
12 Tunnel hazard, reopening 3.3 miles of river to public recreation.

13 **V. PCWA'S EXISTING WATER RIGHT PERMITS FOR THE MFP**

14 PCWA holds water right Permits 13856 and 13858 for the MFP issued by the
15 State Water Board on January 10, 1963, for Applications 18085 and 18087, respectively.
16 Exhibit PCWA-047 is a true and correct copy of PCWA's Water Right Permit 13856.
17 Exhibit PCWA-048 is a true and correct copy of PCWA's Water Right Permit 13858.
18 These permits allow the diversion, storage, and re-diversion of water for irrigation,
19 domestic, recreational, and M&I uses of water from the North Fork American River,
20 Middle Fork American River, and select tributaries.

21 These permits were preceded in the watershed by Applications 7936 and 7937,
22 filed by the DOF (then the California Water Commission) on May 21, 1934 for future
23 disposition. Exhibit PCWA-049 is a true and correct copy of Application 7936 and
24 Application 7937. As previously discussed (see Section II), on March 16, 1962, the DOF
25 executed a release from priority of these applications in favor of PCWA's Applications
26 18085 and 18087 (as well as Applications 18084 and 18086, which are used for non-
27 consumptive power generation purposes). (See Exhibit PCWA-034.)

28 In 1975 and 2000, the State Water Board issued Orders amending the original

1 permits. The original permits provided for re-diversion of MFP water only at PCWA's
2 Auburn Pumping Plant on the North Fork American River (since replaced by the ARPS).
3 On June 25, 1975, the permits were amended to add an additional point of diversion at
4 Folsom Dam. Exhibit PCWA-050 is a true and correct copy of the State Water Board
5 Order Allowing a New Point of Diversion and Rediversion and Adding Permit Terms
6 Related to PCWA Water Rights Permits 13856 and 13858, dated June 25, 1975.

7 On May 24, 2000, the permits were again amended to expand the Place of Use to
8 include portions of northern Sacramento County as part of a comprehensive
9 groundwater management plan. Exhibit PCWA-051 is a true and correct copy of the
10 State Water Board Order Approving Change in the Place of Use and Amending the
11 Permit Related to PCWA Water Right Permit 13856, dated May 24, 2000;
12 Exhibit PCWA-052 is a true and correct copy of the State Water Board Order Approving
13 Change in the Place of Use and Amending the Permit Related to PCWA Water Right
14 Permit 13858, dated May 24, 2000. This amendment allowed PCWA to deliver water to
15 Sacramento Suburban Water District (SSWD) and portions of the San Juan Water
16 District (SJWD) located in Sacramento County in non-dry years.

17 In November 2007, PCWA timely filed petitions for extension of time with the
18 State Water Board requesting an additional 36 years (until the year 2043) in which to put
19 water allocated under these permits to full beneficial use. Exhibit PCWA-053 is a true
20 and correct copy of the PCWA Request for Extension of Time to Complete Use –
21 Permits 13856 and 13858 (November 15, 2007); Exhibit PCWA-054 is a true and correct
22 copy of State Water Board Request for Additional Information – Petition for Time
23 Extension of Permits 13856 and 13858 (December 4, 2007); Exhibit PCWA-055 is a true
24 and correct copy of PCWA Petition for Extension of Time for Permit 13856 and
25 Supplemental Information (January 3, 2008); and Exhibit PCWA-056 is a true and
26 correct copy of PCWA Petition for Extension of Time for Permit 13858 and Supplemental
27 Information (January 3, 2008). These petitions were accepted by the State Water Board
28 in January 2008. Exhibit PCWA-057 is a true and correct copy of State Water Board

1 Acceptance of Petition for Extension of Time for Permit 13856 (January 28, 2008).
2 Exhibit PCWA-058 is a true and correct copy of State Water Board Acceptance of
3 Petition for Extension of Time for Permit 13858 (January 28, 2008).

4 In March 2008, the State Water Board issued a Notice of Petition for Extension of
5 Time (Petition) for Water Right Permit 13856 and Water Right Permit 13858.

6 Exhibit PCWA-059 is a true and correct copy of State Water Board Notice of Petition for
7 Extension of Time for Permit 13856 (March 6, 2008); Exhibit PCWA-060 is a true and
8 correct copy of State Water Board Notice of Petition for Extension of Time for Permit
9 13858 (March 6, 2008). PCWA's Petition for Extension of Time is pending before the
10 SWRCB.

11 VI. PCWA'S MIDDLE FORK PROJECT

12 As explained briefly, above, in 1961, Placer County voters, with over 95 percent
13 (95%) approval, authorized a \$140 million revenue bond issue to fund the construction of
14 the MFP. Today, the MFP serves as a multi-purpose water supply and hydro-generation
15 project to benefit the people of Placer County.

16 PCWA owns and operates the MFP (FERC Project No. 2079) under a 50-year
17 license that was issued on March 13, 1963. That license expired February 28, 2013.
18 PCWA initiated early outreach activities in 2004 with federal and state resource agencies
19 and Native American tribes and formally initiated the relicensing process in December
20 2007. PCWA subsequently conducted extensive data gathering, stakeholder meetings,
21 and technical working group meetings resulting in the development of a Final License
22 Application, which was filed with FERC in February 2011. PCWA, resource agencies,
23 and other stakeholders reached consensus on all matters related to operations and
24 maintenance of the MFP; that consensus was codified in the U.S. Forest Service's
25 submittal of Final Terms and Conditions, pursuant to Section 4(e) of the Federal Power
26 Act.

27 On March 7, 2013, FERC issued an order authorizing PCWA to continue to
28 operate the MFP under an annual license that is automatically renewed until action is

1 taken by FERC on PCWA's Application for New License. Exhibit PCWA-061 is a true
2 and correct copy of the March 7, 2013 FERC Notice of Authorization. FERC is awaiting
3 the State Water Board's issuance of a Clean Water Act, Section 401 Water Quality
4 Certification (anticipated 2018), before it can issue a new license for the MFP.

5 Major components of the MFP, which began operation in 1967, consist of two (2)
6 storage reservoirs (French Meadows and Hell Hole which store a combined
7 342,583 acre-feet of water), five (5) regulating reservoirs and diversion pools, and five
8 (5) powerhouses. The MFP seasonally stores and releases water to meet consumptive
9 water demands within western Placer County and northern Sacramento County while
10 simultaneously generating clean and renewable power for the California electric grid.

11 PCWA has three (3) wholesale contracts to supply water to: SJWD, the City of
12 Roseville (Roseville), and SSWD (which was previously known as the Northridge Water
13 District). The water to supply these wholesale contracts is derived exclusively from the
14 MFP and natural flow re-diverted at Folsom Dam.

- 15 • The SJWD contract, signed on July 25, 1972, provides for the delivery of water
16 of up to 25,000 AFY. This contract was renewed on December 7, 2000, and
17 amended on June 7, 2015. Exhibit PCWA-062 is a true and correct copy of
18 the December 7, 2000 contract between PCWA and SJWD. Exhibit PCWA-
19 063 is a true and correct copy of Amendment No. 1 to the PCWA/SJWD
20 contract.
- 21 • The Roseville contract, signed on November 20, 1991, provides for the
22 delivery of water of up to 30,000 AFY. The contract was renewed on
23 September 20, 2010. Exhibit PCWA-064 is a true and correct copy of the
24 September 20, 2010 contract between PCWA and the City of Roseville
25 relating to Water Supplies and Exchanges.
- 26 • The SSWD contract, signed on August 21, 1995, provides for the delivery of
27 water of up to 29,000 AFY, delivered at Folsom Dam to allow in-lieu
28 groundwater recharge and to promote and groundwater stabilization. Delivery

1 is subject to the terms which prohibit delivery in dry years, when the
2 unimpaired inflow to Folsom for the period March to November is less than 1.6
3 MAF. The contract was renewed in 2000 and amended in 2008.
4 Exhibit PCWA-065 is a true and correct copy of the June 1, 2000 Agreement
5 between PCWA and Northridge Water District for a Water Supply for
6 Groundwater Stabilization; Exhibit PCWA-066 is a true and correct copy of
7 October 2, 2008 Amendment No. 1 to the Agreement between PCWA and
8 Sacramento Suburban Water District for a Water Supply for Groundwater
9 Stabilization.

10 From the river intake at the ARPS, PCWA diverts MFP water into its Western
11 Water System that serves communities along the I-80 corridor from Alta to Rocklin, and
12 from upper Granite Bay to Lincoln. With 340,000 acre feet of storage, but limited to only
13 120,000 acre feet of consumptive use (per PCWA's settlement with Reclamation),
14 PCWA's modeling shows that it can deliver the full amount of its allowable consumptive
15 use in every year.

16 **VII. MFP MODELING AND OPERATIONAL CONSIDERATIONS**

17 For the first 50 years, PG&E had functional control of MFP operations under the
18 terms of a Power Purchase Agreement that expired in 2013. For most of this period
19 PCWA's needs for MFP water in its Western Water System were relatively light, and
20 often only required during annual PG&E fall maintenance (hence Reclamation's annual
21 installation of temporary pumps), and the needs of SJWD and Roseville were also not
22 yet fully developed and easily met with little or no impact to MFP power operations.

23 However, when PCWA began planning for its water supply buildout condition and
24 the reconstruction of its ARPS, it attracted the concern of the Water Forum participants.
25 As described below, PCWA engaged in the Water Forum, eventually signing the Water
26 Forum Agreement and enjoying the support of the Water Forum for construction of its
27 new ARPS. Between engagement and agreement there was a lot of work, including the
28 development of a robust model of the MFP using the Oasis engine.

1 The MFP model was constructed with a hierarchy of objectives. The first, or
2 primary objective, was to be able to deliver 120,000 acre feet of water for consumptive
3 use within Placer County every year, plus provide additional water to benefit Lower
4 American River habitat and fishery conditions in dry years, including in a repeat of 1976
5 and 1977 hydrology. The second objective was to maximize hydroelectric generation,
6 which is primarily achieved by minimizing uncontrolled reservoir spills that bypass
7 generation.

8 The key to optimizing these two competing objectives was choosing the right
9 carryover storage target. The lower the carryover storage, the less spill and the more
10 generation, but the lower the water supply available in dry years. The higher the
11 carryover, the more reliable the water supply in dry years, but the more water lost to
12 spills and the lower the total generation.

13 Setting water supply reliability as a priority, PCWA simply increased the normal
14 year carryover storage level until it reached the objective. This creates a reservoir of
15 water that is available to be drawn down in dry years, when inflow is less than demand,
16 to meet consumptive and environmental objectives.

17 Today, the MFP is primarily operated under PCWA's existing water rights to
18 ensure water supply reliability to PCWA's retail and wholesale customers through careful
19 reservoir storage management and a schedule of water releases from Agency storage
20 during periods of customer demand.

21 MFP reservoirs are operated similarly to other Northern California reservoirs.
22 Reservoirs are filled during the late-winter and spring runoff period, and gradually
23 emptied over the summer and fall, to be refilled by the following winter's precipitation. A
24 key distinction is that MFP reservoirs are operated to an end-of-year carry-over storage
25 target of 150,000 acre-feet of combined storage. This level of carry-over ensures
26 adequate water supplies for Placer County residents, even in periods of severe drought
27 such as 2013 through 2015.

28 Periods of high water demand in Placer County generally occur during the months

1 of May through October, when air temperatures and evapo-transpiration rates are high.
2 This coincides with periods of high electrical demand in northern California and leads to
3 a pattern of water releases from PCWA reservoirs that support both needs.

4 As reservoir releases make their way through a series of three powerhouses from
5 PCWA's storage reservoirs and then to the Middle and North Forks of the American
6 River, PCWA diverts or re-diverts a portion of the North Fork flow at its ARPS near
7 Auburn, California. In the period of November through July 1, this diversion of water
8 may be a combination of storage releases and natural flow as defined by PCWA water
9 rights (Applications 18085 and 18087) and during the balance of the year, the diversion
10 is strictly a re-diversion of storage release, subject to the terms of the same water rights.

11 Any flow available to PCWA pursuant to MFP Water Right Permits 13856 and
12 13858, not diverted or re-diverted at the ARPS, remains in the North Fork American
13 River and flows into Folsom Reservoir, where it is available for diversion or re-diversion
14 at Folsom Dam by PCWA's wholesale customers (City of Roseville, SJWD, and SSWD).
15 All MFP water diverted by the City of Roseville, SJWD, and SSWD at Folsom Dam's
16 municipal water supply intake is authorized pursuant to a Warren Act contract with the
17 U.S. Bureau of Reclamation negotiated by each wholesale agency, respectively.

18 When Folsom Reservoir storage falls below 200,000 acre-feet, the maximum rate
19 of delivery to the wholesale customers served from PCWA's Folsom Dam point of re-
20 diversion is reduced below the rate necessary to meet peak summer demands. When
21 Folsom Reservoir storage reaches 90,000 acre-feet, the municipal intake ceases to
22 function. There is currently no other delivery method to PCWA's wholesale customers
23 for MFP water.

24 **VIII. PCWA'S WESTERN WATER SYSTEM**

25 PG&E's predecessor amalgamated ownership of numerous canal systems, many
26 originally built to supply water for gold mining, in the early-1900's for the purpose of
27 installing hydroelectric generation to supplement income from the sale of water to
28 agriculture and communities. Over the next 50 plus years, PG&E built or expanded

1 reservoirs, constructed water treatment facilities, and generally improved the reliability of
2 its water supply system. Eventually PG&E made the business decision to divest its retail
3 water systems, while retaining its water rights, storage reservoirs and hydroelectric
4 generators. PG&E eventually sold its lower and upper Placer Water Systems to PCWA
5 in 1968 and 1982, together with water supply contracts totaling 125,400 acre feet.

6 The PG&E Drum Spaulding system has its headwaters in the South Yuba River
7 watershed, and its principal storage reservoirs Spaulding and Fordyce, have a combined
8 capacity of 124,673 acre feet. PG&E's system moves water west and south, first
9 crossing into the Bear River watershed above Alta, through Nevada Irrigation District's
10 (NID) Rollins Reservoir, and then continuing across western Placer County to terminate
11 in Folsom Reservoir.

12 The PG&E water system has proven to be highly reliable even though its storage
13 capacity is relatively low. Since PCWA acquired the retail water system from PG&E in
14 1968, there have only been three (3) years that PG&E has not been able to deliver a full
15 supply, 1977, 2014 and 2015. In 1977 PG&E was only able to deliver about 50% of the
16 contract amount, while in 2014 and 2015 PCWA was reduced to about a 70% supply.

17 Beginning in the early 1990's, economic development in western Placer County
18 began to accelerate and PCWA began to evaluate means to access its MFP water
19 supply to meet the expanding urban needs of its Western Water System. PCWA began
20 work on a plan to re-establish a permanent American River Pump Station (ARPS). See
21 Exhibits PCWA-042; 043; 044; 045; and 046.

22 To construct a new ARPS required not only the support and participation of
23 Reclamation and Congress (for funding), but also a new level of engagement with the
24 wider Sacramento region and the local environmental community as PCWA began to
25 recognize the significance of the MFP in the stewardship of environmental, recreational,
26 and aesthetic resources of the American River. Thus began PCWA's participation in the
27 Sacramento region Water Forum (Water Forum).
28

- Support the Water Forum Successor Effort

PCWA has supported all seven (7) elements of the Water Forum Agreement. It received support from the environmental caucus for the construction of its ARPS. PCWA has implemented its Dry Year Actions to release additional water from its MFP reservoirs in drier years to improve water supply and environmental conditions in the LAR. It implemented water conservation and actions to improve groundwater conditions. It has financially supported and participated in habitat improvement projects and the Water Forum Successor Effort.

The Water Forum continues to seek a binding and lasting commitment on Folsom Reservoir operations and LAR flows that optimizes the coequal objectives of water supply reliability and LAR fishery protection. An improved pattern of flows in the LAR – known as the Flow Management Standard – was included as a Reasonable and Prudent Alternative (RPA) in the NMFS 2009 Biological Opinion and Conference Opinion for the Long-term Operations of the Central Valley Project and the State Water Project. See Exhibit SWRCB-84.

Although Reclamation has been operating to the RPA, recent history has shown that water supply reliability and the LAR require additional protections. As we have seen in this recent drought, Folsom Reservoir water levels can fall to levels that deplete the cold water pool and result in thermally unsuitable water temperatures and very low flows that have caused harm to the species of LAR. Similarly, critically low water levels in 2014 and 2015 perilously threatened the ability of the purveyors that rely on Folsom Reservoir to divert water.

X. DRY YEAR PLANNING

I have reviewed and listened to the testimony of various witnesses testifying on behalf of the Department of Water Resources (DWR) and Reclamation. I have listened to their testimony regarding the driest years, the capability of modeling to operate in those dry years, and how WaterFix project operators would simply react in real-time to prevent reservoirs from reaching what has been referred to as “dead pool.” I also

1 listened to witnesses for Reclamation discuss present and future plans for emergency
2 pumping facilities at Folsom Reservoir as a backstop of sorts in the event the municipal
3 intake at Folsom Reservoir is compromised due to low water levels.

4 In my opinion, as a water manager responsible for providing a dependable water
5 supply for some of the nearly 500,000 people in Placer and Sacramento counties
6 dependent upon Folsom Reservoir for their primary water supply, simply deferring to
7 emergency measures in dry and critically dry years is not the appropriate way to manage
8 the potable water supply for those people. Long-term planning requires of us foresight
9 that those circumstances and situations are anticipated and protected against. It is the
10 dry and critically dry years that present the greatest threat to the municipal water
11 supplies of the American River region – the years that represent the 10% exceedances
12 on the carryover storage graphs produced by the WaterFix project proponents.

13 As a water supply agency, PCWA locally plans for those types of years. Every
14 five (5) years PCWA prepares Urban Water Management Plans and submits them to
15 DWR to ensure that adequate water supplies are available to meet existing and future
16 water demands, particularly in the face of single year and multi-year drought conditions.
17 As explained in my testimony, above, PCWA developed modeling and an operation
18 regime that provided for minimum carryover targets for MFP reservoirs sufficient to
19 provide a reliable, adequate water supply for the inhabitants of Placer County.

20 It is precisely those years where we need to have a long-term vision for the
21 management of the Folsom Reservoir water supply and the larger water supply system
22 to avoid and protect against “real-time” drastic emergency situations. To protect against
23 Folsom Reservoir being driven to extremely low storage year after year, and to dead
24 pool in drought years, like PCWA has done with the MFP, we need measures to ensure
25 Folsom Reservoir is maintained at storage levels that provide safe water supplies in
26 single year droughts and carryover water supply in Folsom Reservoir to protect against
27 the second year of a drought sequence such as 1976–1977, or longer drought
28 sequences as we just experienced.

1 The fact that neither Reclamation nor DWR has offered proposed conditions to
2 prevent Folsom Reservoir and Shasta Reservoir from reaching dead pool, as modeled in
3 the WaterFix No Action Alternative and various action alternatives, is astounding.
4 Reclamation and DWR fail to even recognize that WaterFix creates and exacerbates the
5 potential for this very serious problem.

6 If current export restrictions due to potential environmental impacts at the existing
7 south Delta diversion site are eliminated by virtue of adding a second point of diversion
8 upstream as planned, Reclamation will no doubt further increase water exports, at the
9 further expense of upstream water supply reliability in dry years. WaterFix should not be
10 allowed to go forward as currently planned.

11 XII. INJURY TO PCWA'S WATER RIGHTS AND CVP SUPPLY

12 As explained above, PCWA's MFP water right Permits 13856 and 13858 have the
13 municipal intakes at Folsom Dam as a point of re-diversion of PCWA's previously stored
14 water. PCWA currently delivers water from the MFP to Roseville, SJWD, and SSWD
15 pursuant to contract at that point of diversion. Additionally, PCWA holds Contract No.
16 14-06-200-5082A-IR3 for American River Division CVP supplies.

17 Based upon the work of and testimony by MBK Engineers on behalf of the
18 Sacramento Valley Water Users (SVWU), it is my understanding that, with the WaterFix
19 project constructed and operating, Reclamation will have more opportunities to divert
20 water at the new North Delta intakes, including natural flows and water that was
21 previously stored in Folsom Reservoir. It is also my understanding, based upon the
22 testimony submitted on behalf of the City of Roseville and the American River Water
23 Agencies (ARWA), that the capacity of the municipal intakes at Folsom Dam diminishes
24 as water levels decline. So, if Reclamation is able to remove more stored water with the
25 WaterFix project, and water levels in Folsom Reservoir reach dangerously low levels as
26 they have in the past, PCWA's water rights will be injured because water diverted under
27 PCWA's water rights cannot be re-diverted at Folsom Reservoir as it has historically
28 been diverted, and because PCWA will be unable to receive water provided for in its

1 various contracts with Reclamation.

2 Furthermore, taking into account the overarching goal of the WaterFix project to
3 attenuate the existing disparity between North of Delta and South of Delta CVP M&I
4 allocations, it is likely that a balancing of allocations resulting from the WaterFix project
5 would result in injury to the American River Division CVP M&I contractors, compounding
6 the issues regarding low water levels at the municipal intakes of Folsom Reservoir.

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

9 Executed on this 31st day of August 2016 in Auburn, California.

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11 _____
Einar Maisch

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