

DESERT WATER AGENCY
AUGUST 1, 2017



BOARD OF DIRECTORS
REGULAR MEETING AGENDA

REGULAR MEETING 8:00 A.M. OPERATIONS CENTER - 1200 SOUTH GENE AUTRY TRAIL – PALM SPRINGS – CALIFORNIA

About Desert Water Agency:

Desert Water Agency operates independently of any other local government. Its autonomous elected board members are directly **accountable to the people they serve**. The Agency is one of the desert's two State Water Contractors and provides water and resource management, including recycling, for a 325-square-mile area of Western Riverside County, encompassing parts of Cathedral City, Desert Hot Springs, outlying Riverside County and Palm Springs.

1. PLEDGE OF ALLEGIANCE
2. APPROVAL OF MINUTES – July 18, 2017 CIOFFI
3. **GENERAL MANAGER'S REPORT** KRAUSE
4. COMMITTEE REPORTS – A. Executive – July 25, 2017 CIOFFI
5. PUBLIC INPUT:
Members of the public may comment on any item not listed on the agenda, but within the jurisdiction of the Agency. In addition, members of the public may speak on any item listed on the agenda as that item comes up for consideration. Speakers are requested to keep their comments to no more than three (3) minutes. As provided in the Brown Act, the Board is prohibited from acting on items not listed on the agenda.
6. ITEMS FOR ACTION
A. Request Acceptance of Constructing Zone 1240 Booster Plant JOHNSON
7. ITEMS FOR DISCUSSION
A. State Water **Contractors' Meeting** – July 20, 2017 RIDDELL
B. California WaterFix (Operations White Paper #2) KRAUSE
8. OUTREACH & CONSERVATION METZGER
A. Media Information
B. Activities
9. DIRECTORS COMMENTS AND REQUESTS
10. CLOSED SESSION
 - A. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Pursuant to Government Code Section 54956.9 (d) (1)
Name of Case: Agua Caliente Band of Cahuilla Indians vs. Coachella Valley Water District, et al
 - B. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Pursuant to Government Code Section 54956.9 (d) (1)
Name of Case: Agua Caliente Band of Cahuilla Indians vs. County of Riverside, et al
 - C. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
Pursuant to Government Code Section 54956.9 (d) (1)
Name of Case: Mission Springs Water District vs. Desert Water Agency
 - D. CONFERENCE WITH REAL PROPERTY NEGOTIATORS
Pursuant to Government Code Section 54956.8
Property: 0.504 acre west of Indian Canyon Drive between Racquet Club Rd. and Via Olivera
APN No. 504-260-026 and portions of APN No. 504-260-025 and 504-260-027
Agency Negotiators: Mark S. Krause, General Manager and Steven L. Johnson, Asst. General Manager
Negotiating Parties: Ayres Advisors
Under Negotiation: Price and terms

E. CONFERENCE WITH REAL PROPERTY NEGOTIATORS

Pursuant to Government Code Section 54956.8

Property: Conveyance of Property APN No. 687-030-019 to City of Cathedral City and

Conveyance of Easement APN 677-420-021 to City of Cathedral City

Agency Negotiators: Mark S. Krause, General Manager and Steven L. Johnson, Asst. General Manager

Negotiating Parties: DWA and City of Cathedral City

Under Negotiation: Terms

11. RECONVENE INTO OPEN SESSION – REPORT FROM CLOSED SESSION

12. ADJOURN

**MINUTES
OF THE REGULAR MEETING
OF THE
DESERT WATER AGENCY
BOARD OF DIRECTORS**

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July 18, 2017

DWA Board: James Cioffi, President) **Attendance**
Joseph K. Stuart, Vice President)
Kristin Bloomer, Secretary-Treasurer)
Patricia G. Oygar, Director)
Craig A. Ewing, Director)

DWA Staff: Mark S. Krause, General Manager)
Steve Johnson, Asst. General Manager)
Martin S. Krieger, Finance Director)
Sylvia Baca, Asst. Secretary of the Board)
Irene Gaudinez, Human Resources Mgr.)
Ashley Metzger, Outreach & Conserv. Mgr.)

Consultant: Michael T. Riddell, Best Best & Krieger)

Public: Mayor Moon, City of Palm Springs)
Marcus Fuller, City of Palm Springs Asst. C.M.)
David Freedman, P.S. Sustainability Comm.)
Paul Polubinskas, Palm Springs resident)

17870. President Cioffi opened the meeting at 8:00 a.m. and asked everyone to join him in the Pledge of Allegiance. **Pledge of Allegiance**

17871. President Cioffi called for approval of the June 20, 2017 Regular Board meeting minutes. **Approval of 06/20/17 Regular Board Mtg. Minutes**

Director Oygar moved for approval. After a second by Director Ewing, the minutes were approved as written.

President Cioffi requested Item No's 7-B (Resolution No. 1171 City of Palm Springs recognition) and 8-B (Certificates of Appreciation-Turf Buy Back Projects) be heard at this time. **Agenda Re-Order**

17872. President Cioffi asked General Manager Krause to present staff's request for adoption of Resolution No. 1171. **Action Item:**
Resolution No. 1171
City of Palm Springs
Recognition

General Manager Krause stated that California recently endured one of the most severe droughts on record prompting a drought

emergency from January 2014 to April 2017. Desert Water Agency was required to meet various conservation targets ranging from 36% to 10% during this period. The Agency found the City of Palm Springs to be a helpful and enthusiastic partner. As one of the Agency's largest customers and a public entity, the City of Palm Springs set an incredible example for the community.

Action Item:
(Cont.)
Resolution No. 1171

Continuing his report, Mr. Krause noted that Agency customers saved a cumulative 24% during the restriction period. During this period, the City saved 28.5%, more than 234 million gallons, enough to fill 2.9 million bathtubs. The City was a significant part in the Agency being above the statewide average for conservation. The City continues to demonstrate an interest in partnering with the Agency to protect water resources now and for the future. Staff recommends approval and adoption of Resolution No. 1171 acknowledging the appreciation of the City of Palm Springs.

Director Ewing moved for approval and adoption of Resolution No. 1171. Vice President Stuart seconded the motion, which carried unanimously.

**RESOLUTION NO. 1171
A RESOLUTION OF THE BOARD OF DIRECTORS
OF DESERT WATER AGENCY RECOGNIZING
THE CITY OF PALM SPRINGS FOR
OUTSTANDING WATER SAVINGS**

**Resolution No. 1171
Adopted**

Mayor Moon thanked the Agency for the recognition and stated the City of Palm Springs looks forward to a continued partnership.

17873. President Cioffi asked Outreach and Conservation Manager Metzger to present staff's report on Turf Buy Back projects appreciation certificates.

Discussion Item:
Certificates of
Appreciation for Turf
Buy Back Projects

Mrs. Metzger stated that the Agency is one of five members of the CV Water Counts collaborative. The group chose to recognize great turf conversion projects in each area within the Coachella Valley. Recipients in the Agency's service area include: 1) Chris Prescott, local resident who converted 1,540 square feet of grass to desert landscape accentuating his mid-century modern home; 2) Palm Springs Hilton, removed nearly 19,000 square feet of grass and transformed the hotel frontage with a desert friendly façade; and 3) Tahquitz Creek Municipal Golf Course, converted about 50,000 square feet in turf to desert landscape for a more sustainable native landscape.

Recipients: Christ
Prescott, Palm Springs
Hilton, Tahquitz Creek
Municipal Golf Course

17874. President Cioffi called upon General Manager Krause to provide an update on Agency operations.

**General Manager's
Report**

Mr. Krause informed the Board of a recent incident regarding a pressurized leak on a steel Whitewater line.

Whitewater Mutual
Water System
Abandonment

Mr. Krause provided an update from the Facilities and Safety department.

2016/2017 Replacement
Pipeline Project

Continuing his report, Mr. Krause stated the contractor has begun mobilizing and grinding Area 1 streets. The City of Palm Springs requested adjusting the street schedule. As a result, the contractor will begin work on Sunny Dunes Road (Area 4) upon completion of Area 1 streets. Completion of the entire project is anticipated to be done by December 15, 2017.

Mr. Krause reported for the month of June, the Whitewater Hydro Plant generated 726,993 kWh and SCE paid a monthly settlement of \$67,141.

Whitewater Hydro
Update

Mr. Krause reported on July 12 at approximately 2:00 p.m. Construction responded to a hit fire hydrant on the 3000 block of Hermosa Dr., north of Sunrise Palms HOA. It was hit by a seated lawn mower. The water loss was from a fully open fire hydrant bury which ran for approximately 20 minutes. The customer's billing information was obtained and a damage report was filed.

Hit Fire
Hydrant/Hermosa Drive

Mr. Krause stated on July 12 at approximately 3:00 p.m., Engineering staff informed Construction that SoCal Gas reported water in their lines at Nueva Vista Drive. Construction responded and provided assistance. The gas line was located directly over the one-inch PE service line. The water from the leak cut a 1/4 inch hole in the gas line and was starting to split. The water and gas lines were repaired. 23 homes need their gas meters replaced and lines purged due to the water intrusion.

Nueva Vista Drive Gas
Incident

Mr. Krause then report on July 13 at approximately 2:30 a.m., stand-by responded to a hit fire hydrant on the west side of Cathedral Canyon Drive, south of East Palm Canyon Drive. It appeared to be hit by a drunk driver. The hydrant was replaced and put back in service and a police report was made. The water loss was from a fully open fire hydrant bury which ran for approximately 15 minutes.

Hit Fire Hydrant/E.
Palm Cyn. Dr.

Concluding his report, Mr. Krause noted the current system leak data and his recent meetings and activities.

System Leak Data
Meetings/Activities

17875. President Cioffi noted the minutes for the July 12, 2017 Executive Committee were provided in the Board's packet.

Committee Reports
Executive 07/12/17

17876. President Cioffi opened the meeting for public input.

Public Input

There being no one from the public wishing to address the Board, President Cioffi closed the public comment period.

17877. President Cioffi called upon Secretary-Treasurer Bloomer to provide an overview of financial activities for the month of June 2017.

Operating Fund

Secretary-Treasurer Bloomer reported that the Operating Fund received \$2,409,694 in Water Sales Revenue, \$175,445 in Reclamation Sales Revenue and \$402,814 in Meter Sales and Services. Included in the Miscellaneous Receipts is \$47,440 from Jones Cree Ventures for Sewer Capacity Fees. \$1,647,418 was paid out in Accounts Payable. Year-to-date Water Sales (Pre-audit) are 14% over budget, Year-to-date Total Revenues (Pre-audit) are 11% over budget and Year-to-date Total Expenses (Pre-audit) are 8% under budget. There were 22,456 active services as of June 30, 2017 compared to 22,425 as of May 31, 2017.

General Fund

Reporting on the General Fund, Ms. Bloomer stated that \$294,849 was received in Property Tax Revenue. \$69,497 was received in Whitewater Hydro Power Sales for May 2017. In the Miscellaneous Receipts category is \$25,000 from the Wastewater Fund (Principal payment #17 on the Capital Improvement loan). \$677,507 was paid in State Water Project Charges. Paid \$183,068 to CVWD for 2nd and 3rd quarter SWP Charges (YTD payments July 2016-June 2017 \$18,148,901).

Wastewater Fund

Reporting on the Wastewater Fund, Ms. Bloomer stated that \$49,983 was received in Sewer Capacity Fees (\$47,440 Jones Cree Ventures and \$2,543 Sewer Contracts). There are a total of 55 contracts (46 Cathedral City Cove and 9 Dream Homes). Total contracts paid in full 3 (Dream Homes). Total delinquents of 31 (56%). \$136,018 was paid out in Accounts Payable.

Items for Action:

17878. President Cioffi called upon General Manager Krause to present the civil penalty hearing for water use violations.

Water Use Violation –
Civil Penalty Hearing

Mr. Krause noted there have been more than 475 violations issued and that recipients have 7 days to request a hearing in writing. Staff has received one hearing request for today.

Paul Polubinskis

Mr. Krause announced the appellant is Paul Polubinskis and noted the violation of runoff. The fine is \$50 and the reasons for appeal: 1) Has done a lot to conserve, 2) Doesn't have a sprinkler system, 3) Can't take advantage of a rebate to remove penalty, 4) Was in the process of turning water down from hose and 5) Water was pointed towards irrigated area.

Mr. Polubinskis stated that he did not feel there was any runoff and at the time the photo was taken, he was in the backyard re-setting the timer.

Director Oygar stated she is in favor of waiving the penalty fee.

Items for Action:

(Cont.)

Water Use Violation –
Civil Penalty Hearing
Deny Appeal/Waive
Penalty/Violation
Occurred

Request Authorization
for Board
Attendance/2017 CSDA
Annual Conference

Director Ewing made a motion to deny the appeal, waive penalty; violation occurred. After a second by Vice President Stuart, the motion carried unanimously.

17879. President Cioffi called upon General Manager Krause to present staff's request for authorization for Board attendance at the 2017 California Special Districts Association (CSDA) Annual Conference.

Mr. Krause explained at the April 18, 2017 meeting, the Board approved and authorized Secretary-Treasurer Bloomer's attendance at CSDA's Legislative Day's events. Ordinance No. 62 authorizes specific organizations events that are pre-approved for Board participation, which CSDA is not listed. CSDA will be having its Annual Conference in Monterey on September 25 – 28, 2017. Staff recommends that the Board approve and authorize Board Members who wish to attend the 2017 CSDA Annual Conference in service to the Board. If the Board wishes to revise the Ordinance and add future CSDA events, staff can bring a new Ordinance back at a future meeting for adoption.

Director Oygur made a motion to approve staff's recommendation authorizing Board attendance at the 2017 CSDA Annual Conference in service to the Board. President Cioffi seconded the motion, which carried unanimously.

Staff was directed to bring back a revised Ordinance at a future meeting.

17880. President Cioffi called upon General Manager Krause to present staff's request for Association of California Water Agencies (ACWA) Nominations for the 2018-2019 term.

ACWA Candidate
Nominations 2018-2019
Term

Mr. Krause stated on June 7, ACWA's Nominating Committee issued a call for nominations for statewide positions. Candidates for positions of President and Vice President are being sought for those interested in leading the direction of ACWA for the 2018-2019 term. ACWA bylaws require nominations be accompanied by a nominating resolution from the ACWA member agency. If any Board member is interested, an official nominating resolution can be brought back at a future Board meeting.

Director Ewing made a motion to table this item pending Board interest. After a second by Director Oygur, the motion carried unanimously.

17881. President Cioffi asked Agency Counsel Riddell to provide a report on the June 14, 2017 Meeting of the Board of Directors of the State Water Contractors, Inc.

06/14/17 SWC Mtg.

Mr. Riddell provided a report on the following items: 1) Board Action, 2) Legislative Update, 3) General Manager's Report, 4) Oroville Spillway Incident, and 5) Water Supply Report.

17882. President Cioffi asked General Manager Krause to report on the June water reduction figures. June Water Reduction

Mr. Krause reported that the Agency and its customers achieved an 18% reduction in potable water production during June 2017 compared to the same month in 2013. He noted the cumulative savings June 2016 through current is 21 percent. He also noted the amount of fresh water outflow to the ocean was 2,244,376.86-acre feet.

17883. President Cioffi asked General Manager Krause to present the report on the California WaterFix Infrastructure Update.

Mr. Krause explained as reported in his June 6 report, significant progress has been made in the environmental review and approval of the project. It was anticipated that DWA staff would present a series of white papers prepared by Metropolitan Water District (MWD) as presentations to its Board. These papers will explain the physical infrastructure, benefits and reasons for improving and modernizing the system; the operations and supply yield; and the cost allocation amongst the contractors and finance.

Continuing with his report, Mr. Krause stated the first of said whitepapers entitled: *"Modernizing the System: California WaterFix Infrastructure"* is provided for review today. This is intended to inform this Board as a starting point for discussion on the California WaterFix. Also provided is a copy of MWD's Special Committee on Bay-Delta Water Planning and Stewardship Committee PowerPoint entitled: "Modernizing the System, California WaterFix Infrastructure" presented to the MWD Board on July 10, 2017. Staff recommends holding a Board Study Session to discuss this information on July 24 at 8:00 a.m.

It was decided that a Study Session will be held on Monday, July 24 at 8:00 a.m.

17884. President Cioffi noted that Board packets included Outreach & Conservation reports for June 2017. Outreach & Conservation – June 2017

17885. Director Ewing stated he will be on vacation starting next week; therefore, unable to attend the July 24 Study Session. Directors Comments/Requests

Secretary-Treasurer Bloomer stated that long time Desert Hot Springs resident and Mission Springs Water District Board Member John Furbee recently passed away. Passing of John Furbee

President Cioffi stated that one of CVWD's Board Member requested holding a joint meeting regarding public relations efforts between both boards. He asked staff to look into this later in the year.

17886. At 9:55 a.m., President Cioffi convened into Closed Session for the purpose of Conference with Legal Counsel, (A) Existing Litigation, pursuant to Government Code Section 54956.9 (d) (1), Agua Caliente Band of Cahuilla Indians vs. Coachella Valley Water District, et al; (B) Existing Litigation, pursuant to Government Code Section 54956.9 (d) (1), ACBCI vs. County of Riverside, et al; (C) Existing Litigation, pursuant to Government Code Section 54956.9 (d) (1), Mission Springs Water District vs. Desert Water Agency; and (D) Real Property Negotiators, pursuant to Government Code Section 54956.8, Property-0.504 acre west of Indian Canyon Drive between Racquet Club Rd. and Via Olivera, Agency Negotiators: Agency Negotiators: Mark S. Krause, General Manager and Steven L. Johnson, Assistant General Manager, Negotiating Parties: DWA and Ayres Advisors, Under Negotiation: Price and terms.

Closed Session:

- A. Existing Litigation – ACBCI vs. CVWD, et al.
- B. Existing Litigation – ACBCI vs. Riverside County
- C. Existing Litigation – MSWD vs. DWA
- D. Real Property Negotiators (DWA & Ayres Advisors)

17887. At 10:36 a.m., President Cioffi reconvened the meeting into open session and announced there was no reportable action.

Reconvene –No Reportable Action

17888. In the absence of any further business, President Cioffi adjourned the meeting in memory of John Furbee at 10:37 a.m.

Adjournment

James Cioffi, President

ATTEST:

Kristin Bloomer, Secretary-Treasurer

GENERAL MANAGER'S REPORT AUGUST 1, 2017

Date Palm Drive Sewer Main

On July 17 at approximately 8:40 a.m. Asst. Construction Superintendent Kuhlman responded to a call regarding damage to the Agency's 16" ductile iron sewer force main on Date Palm Drive, south of Gerald Ford Drive. Riverside Construction Company, Inc., performing work related to the Date Palm Bridge Widening Project hit the force main while installing a storm drain pipeline, causing a 4" X 2" hole. The sewer line had been properly marked by our utility locator and the Agency also spoke to the contractor prior to their work, requesting that the Agency be notified so that we could observe the work while they excavated. The contractor did not do this. When Mr. Kuhlman arrived on site, the contractor admitted full responsibility and also acknowledged that he was asked to contact the Agency before exposing the sewer main. DWA personnel immediately arranged for 3 pumping trucks to pump from the Date Palm lift station, transporting the sewage to a designated sewer manhole at the west end of Gerald Ford Drive. Riverside Construction assisted with the repair by excavating and exposing the sewer line. They also provided shoring equipment. Agency crews completed the repairs at approximately 6:00 p.m. All of the sewage was contained within the excavated area and within a contained area on the street. The soil was also removed from the site and clean fill was used to backfill the hole. Also, no sewage was spilled from the lift station.



Date Palm Drive Sewer Main
(Cont.)



Facilities & Safety Update

As mentioned at the last Board meeting, two months ago, two DWA Well sites sustained damage caused by vehicles. Fortunately, it was limited to one perimeter fence at Well 25 on the corner of Avenue 34 and Marguerite, and the gate to the easement at Well 34, located at the end of N. Sunrise, north of Four Seasons. Allen Fence Construction was contracted for the repairs and the work was finished on Wednesday July 19th, 2017.



Facilities & Safety Update

(Cont.)

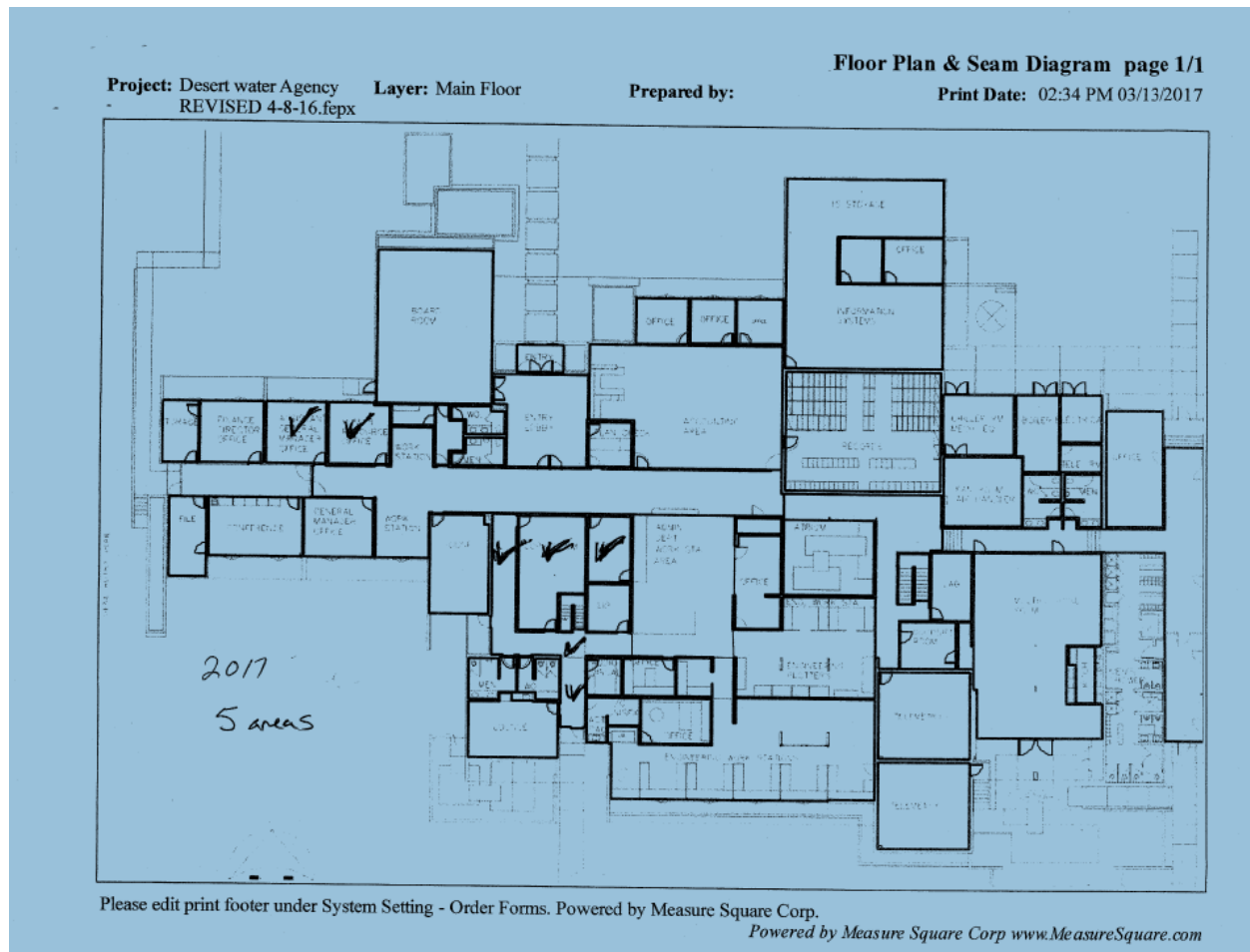
On July 26, 2017, at approximately 4:30 p.m. a vehicle crashed into our signage at the entrance on Dinah Shore. No one was injured in the collision. Best Signs is providing an estimate for repairs. We will obtain the police report when it is available and pursue an insurance claim for the damage.



Facilities & Safety Update (Cont.)

Carpet Replacement:

The Agency's carpeting project is scheduled to begin on August 19th. The areas that will be re-carpeted are, the Assistant General Manager's Office, the Human Resources Manager's Office, and the hallway leading to the Southwest Employee Entrance, the Mailroom and the Engineering Conference Room.



Whitewater Hydro Update

As of July 26, the Whitewater Hydro Plant has generated 533,968 kWh and we had anticipated generating approximately 685,500 kWh for the entire month. The plant has been offline for a total of 90 hours this month due to SCE power equipment problems in the area. According to SCE, the causes for the power interruptions were:

- Wire down (fixed)
- Circuit relay opened and reclosed multiple times due to wires slapped together (fixed). This is related to the first incident.
- Burnt cross arm (near I-10 Haugen-Lehmann Way exit) (fixed).

For the year, there have been 8 power interruptions resulting in approximately 158 offline hours or 158,000 kWh the plant was not able to generate. This equates to approximately \$14,000 in loss revenues.

Final 2017 Construction Plans for Lake Oroville Spillways Project Approved

Updates on other project-related activities

On July 26, the Department of Water Resources (DWR) provided an update on construction work on the Lake Oroville Spillways Emergency Recovery Project.

DWR received authorization to proceed with its final 2017 construction plan from the California Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC) on July 13 and 15 respectively.

The work to be completed this year now has all required approvals from federal, state, and independent oversight groups. The independent Board of Consultants (BOC) also approved DWR's construction plans last month pending final approval from FERC.

The first phase of construction will be completed by November 1, 2017, with the objective of ensuring that the main spillway can safely pass Feather River watershed flows this year. The first phase of construction includes:

- Removal and reconstruction of 2,270 feet of the main spillway.
- Repairs to the uppermost 730-foot portion of the main spillway that connects to the radial gates. This portion will be demolished and reconstructed in 2018.
- Construction of an underground cutoff wall below the emergency spillway. The purpose of the cutoff wall is to prevent uphill erosion if the emergency spillway is used again.

The remaining construction will be completed in 2018, which will also need federal and state approval, includes:

- Addition of structural concrete to the entire main spillway.

Lake Oroville Update

(Cont.)

- Resurfacing and hydro-blasting of the energy dissipaters at the base of the spillway.
- Construction of a roller-compacted concrete buttress (sloped wall) and splashpad on the emergency spillway to dissipate the energy of any waterflows.

DWR's final design and construction plans, which will continue to be monitored by DSOD, FERC, and the independent BOC, include modern technologies and methods to meet and exceed today's safety and construction standards.

Other Project-related Updates:

- The independent BOC met in Oroville on Monday, July 24, and Tuesday, July 25. The BOC received an overview of DWR's construction schedule and milestones moving forward. The BOC was also briefed on the design concepts for the 1,050-foot section of the main spillway that will be constructed with roller-compacted concrete in 2017, and an update on foundation preparation and clean-up.
- The current lake level at Lake Oroville is 800 feet, and reservoir releases into the Feather River are now at 6,500 cfs. With guidance from FERC, DWR has established a projection schedule to draw down the reservoir's elevation to 700 feet by November 1. This is a more conservative reservoir level than normal for that date as a public safety precaution. This schedule is tentative and subject to change because of a multitude of contributing factors.
- DWR this week finished hosting its second round of community meetings to update residents about the Lake Oroville Spillways project. The first meeting was held on Monday, July 17, in Oroville, followed by Wednesday, July 19, in Marysville, and finally Monday, July 24, in Yuba City. These meetings are part of DWR's continued effort to provide updates from DWR leadership and experts on construction efforts, collect feedback from the community and answer questions. The next round of public meetings is planned for late summer or early fall of 2017.



State Water Contractors – OME Committee Meeting
July 6, 2017



Perris Dam – Seismic Remediation of Embankment – Contract Update
Specification 14-03 Contract No. C51484

Contract Summary

Notice To Begin Work:	August 20, 2014
Contract Completion:	November 20, 2017
Pulice Construction:	\$75,538,626
Engineers Estimate:	\$83,000,000
Current Update:	92.3% of Work Completed, 84.9% Time Elapsed



Completed Work

- Cement Deep Soil Mixing Complete
- Borrow Source Cleared and Potholed
- New Toe Drain complete
- Existing Toe Drain Line Replaced
- Left Abutment Road Blasted/Excavated
- Old Toe Drain protected from storm water with Filter/Berm
- Berm



State Water Contractors – OME Committee Meeting
July 6, 2017



Perris Dam – Seismic Remediation of Embankment – Contract Update
Specification 14-03 Contract No. C51484

Safety

DWR and Contractor continue to review safety hazard concerns. Contractor has successfully completed over 462 work days without a lost-time incident. A near miss incident happened on June 7, 2017. A back trailer flipped over on its side due to over wetting haul road for dust control. No injury.

On-Going Work

Right Abutment Embankment and Spillway

Row 1 Relief Wells

Post Construction Instrumentation

Site Restoration

Schedule and Construction Sequencing

Construction sequencing was modified to allow CDSM installation before construction of the toe drain. Left Abutment Road, Drain Lines, and CDSM completed (see Schedule Status below). Construction of the berm was completed on 6/23/2017.

Construction Contract Challenges and Potential Impacts

Left Abutment Access Road

DWR and the contractor reviewing the LAAR delays and related liquidated damages. DWR and contractor are discussing best use of LAAR materials for the project. Only CDSM spoils and LAAR-fines material remain.

Quarry Rock Processing

Contractor continues to claim differing site condition as the cause of material processing problems. The materials are currently meeting specifications.

Other Challenges

Weather. Additional work required by DSOD (right abutment, spillway).

Contract Status as of 05/20/17

Spec No.	Award Amount	Liquidated Damages	Contract Variance To Date	Current Contract Amount	Current Contract Completion Date	Pay To Date	Percent Complete
14-03	\$75,538,626	\$1,053,000	\$2,764,811 See below	\$78,303,437	11/15/2017	\$72,451,364.18	92.3%



State Water Contractors – OME Committee Meeting
July 6, 2017



Perris Dam – Seismic Remediation of Embankment – Contract Update
Specification 14-03 Contract No. C51484

Contractor Pay Requests

<u>Start Date</u>	<u>End Date</u>	<u>Date Signed</u>	<u>Net Payment</u>	<u>Gross Earnings</u>	<u>Net Payment (to date)</u>	<u>Gross Earnings (to date)</u>
3/21/2017	4/20/2017	5/8/2017	\$2,594,990.06	\$2,731,568.48	\$65,154,121.84	\$69,691,707.20
4/21/2017	5/20/2017	5/24/2017	\$2,621,674.13	\$2,759,656.98	\$67,775,795.97	\$72,451,364.18

Schedule Status

Left Abutment Access Road Milestone – May 15, 2015
Completed – October 28, 2016

Drain Lines Installation Milestone – July 1, 2015
Completed – Sept 30, 2016

CDSM Milestone – November 15, 2016
Completed May 1, 2016

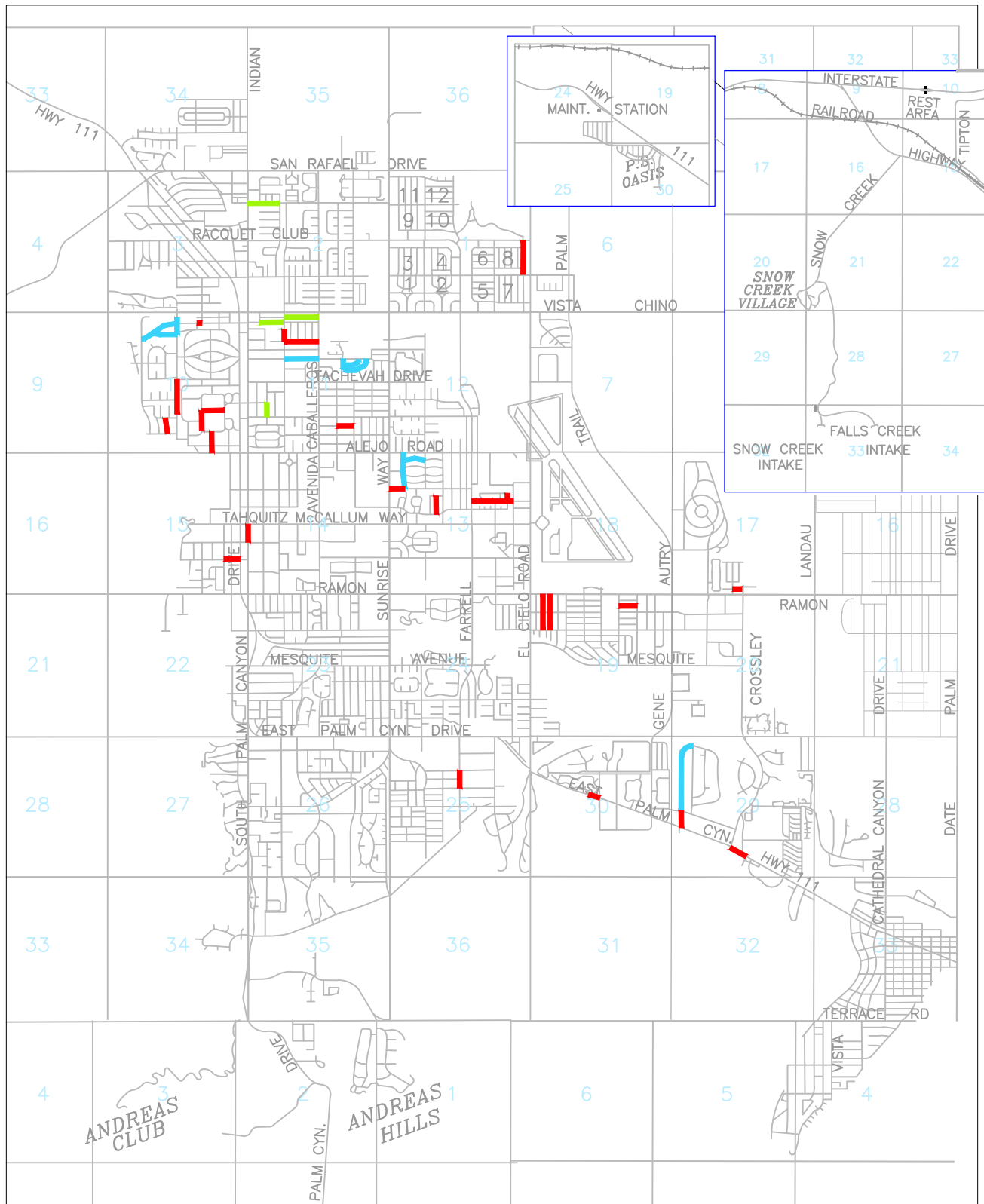
Compacted Berm Milestone – May 15, 2017
Completion Date – June 23, 2017

Contract Variance To Date	
Spec No: 14-03	
Contract Item Overages:	\$1,678,392.46
Change Orders:	\$421,200.02
Adjustments	\$665,218.46
Contract Variance To Date:	\$2,764,810.94

SYSTEM LEAK DATA		
(PERIOD BEGINNING JULY 12, 2017 THRU JULY 25, 2017)		
STREET NAME	QUARTER SECTION	NUMBER OF LEAKS
MISSION RD (4")	4410SE	8
SATURMINO DR	4413NW	7
PASEO EL MIRADOR	4411NW	6
LINDA VISTA RD	4411NE	6
FRANCIS DR	4402NW	6
PASATIEMPO RD	4411NE	4
COTTONWOOD RD	4411NW	4
AVENIDA PALOS VERDES	4411SW	3
BELDING DR	4413NW	2
SARAH ST	4517SW	2
BROADMOOR DR (10")	4529SW	2
MOUNTAIN VIEW PL	4410SE	2
DEBBY DR	4413NW	2
CHIA RD	4411NW	2
BROADMOOR DR	4529NW	1
VIA MONTE VISTA	4410NW	1
STEVENS RD	4410NW	1
CAMINO NORTE	4410NW	1
CHUCKWALLA DR	4411NW	1
VIA MIRALETE	4411NW	1
LIVMOR AVE (ALL SECTIONS)	4413NE	1
E PALM CANYON DR (6")	4529SW	1
BARISTO RD	4415SE	1
AMADO RD	4413NW	1
ARABY DR	4425NE	1
HIGHLAND DR	4519NW	1
CALLE DE CARLOS	4519NE	1
INDIAN CANYON DR	4415SE	1
DESERT WAY	4519NW	1
DRY FALLS RD	4410SW	1
AIRLANE AVE	4413NE	1
CAHUILLA RD	4410SE	1
WHITEWATER CLUB DR	4401SE	1
VIA MONTE VISTA	4410SW	1
E PALM CANYON DR	4530NW	1
W STEVENS RD	4410NE	1
VIA ALTAMIRA	4411SE	1
TOTAL LEAKS IN SYSTEM:		79

* Streets highlighted in blue are being replaced as part of the 2016/2017 Replacement Pipeline Project

* Streets highlighted in green are included as part of the proposed list of streets for the 2017/2018 Replacement Pipeline Project



SYSTEM LEAKS

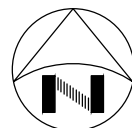
(Period beginning July 12, 2017 thru
July 25, 2017)

DESERT WATER AGENCY
PALM SPRINGS, CALIFORNIA

LEGEND

- LEAK(S) RECORDED
- LEAK(S) RECORDED;
INCLUDED IN 2016/17
REPLACEMENT PIPELINES
- LEAK(S) RECORDED;
INCLUDED IN PROPOSAL
FOR 2017/18
REPLACEMENT PIPELINES

DWG. BY
SR



DATE
7/17

SCALE
NTS

EXHIBIT
"A"

General Manager's Meetings and Activities

Meetings:

07/17/17	DWA I.S./Staff/Snow Creek Security Weekly Meeting	DWA
07/18/17	DWA Bi-Monthly Board Meeting	DWA
07/19/17	CWF Cost Allocation Workshop	Sacramento
07/19/17	SWC Delta Committee	Sacramento
07/19/17	SWC Policy Dinner Meeting	Sacramento
07/20/17	SWC Monthly Board Meeting	Sacramento
07/20/17	SFCWA Monthly Board Meeting	Sacramento
07/20/17	Sites Reservoir Committee Monthly Meeting	Sacramento
07/24/17	DWA Special Board Study Session on Cal WaterFix	DWA
07/26/17	CWF Cost Allocation Workshop	Conf. Call
07/27/17	Friends of the Palm Springs Mountains	DWA
07/31/17	DWA I.S./Staff/Snow Creek Security Weekly Meeting	DWA

Activities:

- 1) Sites Reservoir
- 2) E-Billing – implementing customer payment history capabilities
- 3) Outreach Talking Points – KESQ
- 4) Snow Creek Hydro SCE contract extension - ongoing
- 5) Whitewater Hydro – Developing new administration and operating procedures
- 6) State and Federal Contractors Water Authority and Delta Specific Project Committee (Standing)
- 7) MSWD Second Amended Petition– Ongoing
- 8) ACBCI Section 14 Facilities & Easements
- 9) Lake Oroville Spillway Damage
- 10) Replacement Pipelines 2017-2018
- 11) Lake Oroville NMFS Requirements
- 12) DWA/CVWD/MWD Operations Coordination/Article 21/Pool A/Pool B/Yuba Water
- 13) DWA/CVWD/MWD Agreements Update
- 14) SGMA Alternative Plans and Bridge Documents
- 15) SWP 2017 Water Supply
- 16) ACBCI Law Suits
- 17) Lake Perris Dam Remediation
- 18) Section 14 Pipeline Easements
- 19) DOI Regulation
- 20) A.B. 1562
- 21) Cathedral City Monitoring Well Site Abandonment
- 22) Whitewater Hydro Operations Coordination with Recharge Basin O&M
- 23) Multi-Agency Rate Study
- 24) SGMA Tribal Stakeholder Meetings
- 25) Whitewater Spreading Basins – BLM Permits
- 26) Lake Perris Dam Seepage Recovery Project Participation
- 27) Cal Waterfix Cost Allocation

Minutes
Executive Committee Meeting
July 25, 2017

Directors Present: Jim Cioffi, Joe Stuart

Staff Present: Mark Krause, Steve Johnson, Martin Krieger

1. Discussion Items

A. Review Agenda for August 1, 2017 Regular Board Meeting

The proposed agenda for the August 1, 2017 regular board meeting was reviewed.

2. Other – None

3. Adjourn

**STAFF REPORT
TO
DESERT WATER AGENCY
BOARD OF DIRECTORS**

AUGUST 1, 2017

**RE: REQUEST ACCEPTANCE OF CONSTRUCTING ZONE 1240
 BOOSTER PLANT (DESERT PALISADE TRACT)**

All construction work performed by Cora Constructors has been essentially completed. The original contract amount, contract change order amounts, and adjusted contract amount are set forth as follows:

Original Contract Amount	\$741,000.00
Contract Change Order No. 1	\$9,009.88
	<hr/>
Adjusted Contract Amount	\$750,009.88

Contract Change Order No. 1 consists of additional work for electrical relays, modified SCE vault cover, and by-pass piping redesign installation. A credit for Agency-provided construction staking was also included in the change order. In addition, Change Order No. 1 extended the Contract Completion Date to May 26, 2017 due to a delay in the installation of the electrical service to the property by SCE. The service was scheduled to be installed by SCE in November 2016. The service was not completed until mid-April 2017.

To date, no stop notices have been filed with this Agency.

The 2015/2016 Capital Improvement Budget includes Work Order 15-150-B for the installation of Zone 1240 Booster Plant. This plant is located inside the Desert Palisade tract and will provide service to 54 lots within the upper zone of the development. The current budget amount for the work order is \$950,000 to include engineering, construction, inspection, and overhead costs.

The Agency costs to date for the 1240 Booster Plant, to include engineering, construction, inspection and overheads are approximately \$1,073,495. This is \$123,495, or approximately 13% over budget.

The main reason for the project exceeding the budget was construction cost estimates, project management and engineering costs. When the project was advertised to bid, the Agency anticipated having to augment the budget based on a revised construction cost estimate that Krieger and Stewart prepared. The estimate increased from \$800,000 to \$1,130,000. When the bid from Cora Constructors was received in the amount of \$741,000, staff estimated that the budget would be over by approximately \$27,000,

however, staff did not augment the budget because the amount over was far below 10% of the total budget. Also, the total spent for the first two projects for Desert Palisades (16" transmission main, 0.5 MG reservoir) was approximately \$45,000 under the total budget amounts.

Krieger and Stewart received over 40 RFI's (request for information) from the contractor which resulted in 80 hours of engineering time. According to Krieger and Stewart, this was an unusually large amount for this type of project. Krieger and Stewart spent approximately 180 hours reviewing over 90 submittal drawings. Krieger and Stewart associates the large amount of submittal drawings to how the contractor approached constructing the hydro-pneumatic tank. Typically, tanks are manufactured by a specialized company, to include all of the fittings that make up the components of the tank. This type of tank would be submitted under one submittal package. Cora did not utilize a company and instead purchased all of the components individually. Although this is acceptable, it does require much more review by the engineer to ensure that the tank meets all of the design specifications. To date, the total amount spent on engineering is approximately \$178,000. The engineering budget for the project was \$100,000.

Inspection and miscellaneous costs also exceeded the budgeted amount for the project in the amount of \$18,000.

The booster was the third and final water supply project for the Desert Palisade development. The total amount of money budgeted for all three projects (16" transmission pipeline, 0.5 MG steel reservoir, booster plant) was \$3,585,000. To date, the total amount spent for all three projects is \$3,667,413. This is approximately \$82,400 over the total combined budgets for the projects, or 2.3%.

Staff recommends the Agency accept said work in the amount of \$750,009.88. Subsequent to Board acceptance, a Notice of Completion will be filed and thereafter, following the lien period, the Agency will release retained funds in the amount of \$37,500.49 to Cora Constructors.

July 20, 2017

MEMORANDUM

TO: GENERAL MANAGER AND BOARD OF DIRECTORS
OF DESERT WATER AGENCY

FROM: BEST BEST & KRIEGER LLP

RE: JULY 20, 2017 MEETING OF THE BOARD OF DIRECTORS OF THE STATE
WATER CONTRACTORS, INC.

The monthly meeting of the Board of Directors of the State Water Contractors, Inc., was conducted at the Tsakopoulos Library Galleria in downtown Sacramento.

1. Retirement Resolutions.

As its first item of business, the Board adopted two resolutions to recognize and thank DWR management personnel upon their retirement from the Department. Those included Bill Croyle, who served briefly as the Director of DWR following the retirement of Mark Cowin, and also Deputy Director Mark Anderson following his long career with the Department.

2. Summary of Ongoing Contractual Arrangements.

At its previous meeting, the Board approved budgets for the upcoming year for ongoing contracts with consultants, but requested a report providing some detail regarding those consultants and their roles. Staff followed up on that request by identifying and discussing the arrangements with Fiona Hutton and Mary Lou Cotton for public outreach efforts; with Nancy Clem and David Schuster for consulting work on water supply and operations matters; with Essex Partnership and Hanson Environmental for assistance on the Collaborative Adaptive Management Team; and with Strategic Resource Advisors, KP Public Affairs, Dick Ferreira and Craig Jones regarding strategic advice and outreach efforts on energy matters. Staff also mentioned the dues expense for membership in the California Municipal Utility Association, also related to energy efforts.

3. Water Supply Report.

John Leahigh reported on State Water Project operations and water supply conditions. He again stated that this last year was quite unusual, proving to be the wettest year on record for the Northern Sierra, almost the wettest on record for the San Joaquin region, and very good (although not the wettest) in the Tulare Basin area. He added that the snow pack was also very good, but not quite as good as total precipitation. All of the State's reservoirs are in excellent shape, although Oroville is lower than the others due to the problem with the spillway. DWR has had a number of exchanges with the Federal Energy Regulatory Commission regarding dam safety at Oroville. DWR anticipates that reconstruction work will provide a functioning spillway by November 1, but it will be a two year project to completely refurbish the spillway. Total exports from the Delta as of the date of the meeting were at 7,180 cfs. The SWP share of storage in the San Luis Reservoir was at 1.7 million acre feet, and DWR was actually encroaching a bit on the Federal share of storage space. John expects the total carryover in Oroville at the end of the year to be approximately 800,000 acre feet. He also said that the anticipated allocation next year will probably be 10 percent to 15 percent lower than it would have been if storage could have been maximized in Oroville, without the problem at the spillway.

4. Statement of Charges.

Dave Paulson of the State Water Project Analysis Office provided a brief report on the statement of charges for 2018. He stated that overall the bills will be decreased approximately 7% from what they were in 2017, primarily due to more accurate budgeting. However, the statement of charges will not reflect expenses that will result from the spillway reconstruction efforts at Oroville. DWR is not including those anticipated expenses on its statement of charges because DWR wants to maximize the potential recovery from FEMA. Paulson also cautioned that the overall decrease of 7% will not affect each Contractor in exactly the same way. In other words some Contractors will experience decreases of more than 7%, while others will experience lesser decreases.

5. Action Items.

The SWC Board took action on two items, as follows. First, the Board acted to extend the existing contract to participate in funding of the dissolved oxygen program in the Stockton ship channel through May 31, 2019. This extension does not represent any additional cost to the Contractors, because funds provided at the outset have not been fully depleted and the program has proven to be less expensive than anticipated. The Board also took action to authorize an agreement to fallow land in the Delta as part of a study to determine the amount of evapotranspiration across the Delta. This study is intended to determine how much water is used by crops within the Delta. The State Water Contractors' share of that expense will be \$150,000.

6. Business Process Objectives.

Staff provided a presentation regarding progress in addressing Business Process Objectives, which focused primarily on the SWP budget, internal controls, and cash flow requirements. A copy of the PowerPoint presentation used to provide that report is enclosed with this memo.

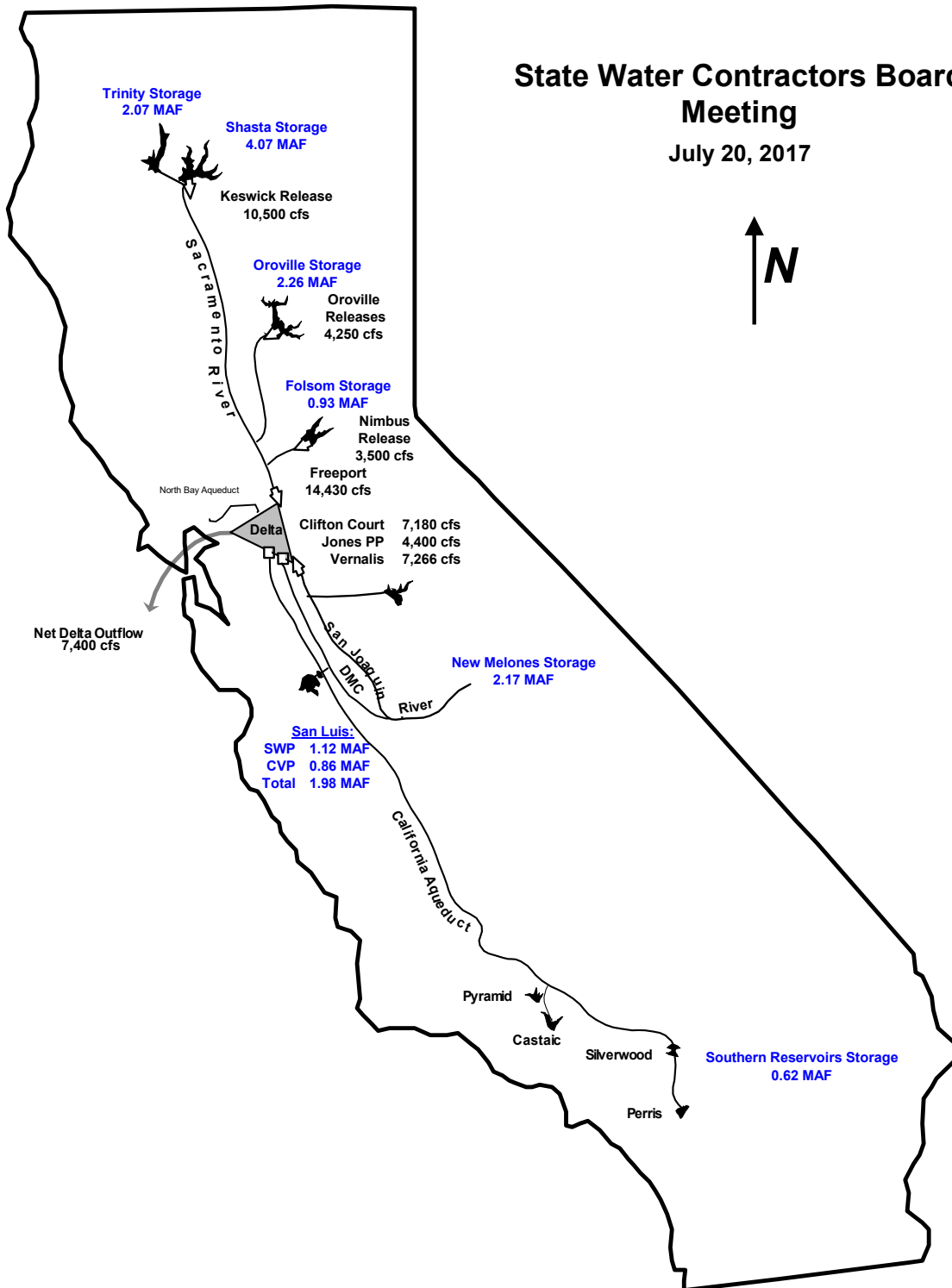
7. General Counsel's Report.

General Counsel Stefanie Morris said that a special meeting would be called, and conducted in closed session, to discuss litigation arising from approval of the Cal WaterFix Delta improvement project. However, she did need Board action on two items of litigation, seeking authorization to intervene in two lawsuits that had been filed to challenge the biological opinions issued for Delta smelt and for salmon. The Board provided that authorization.

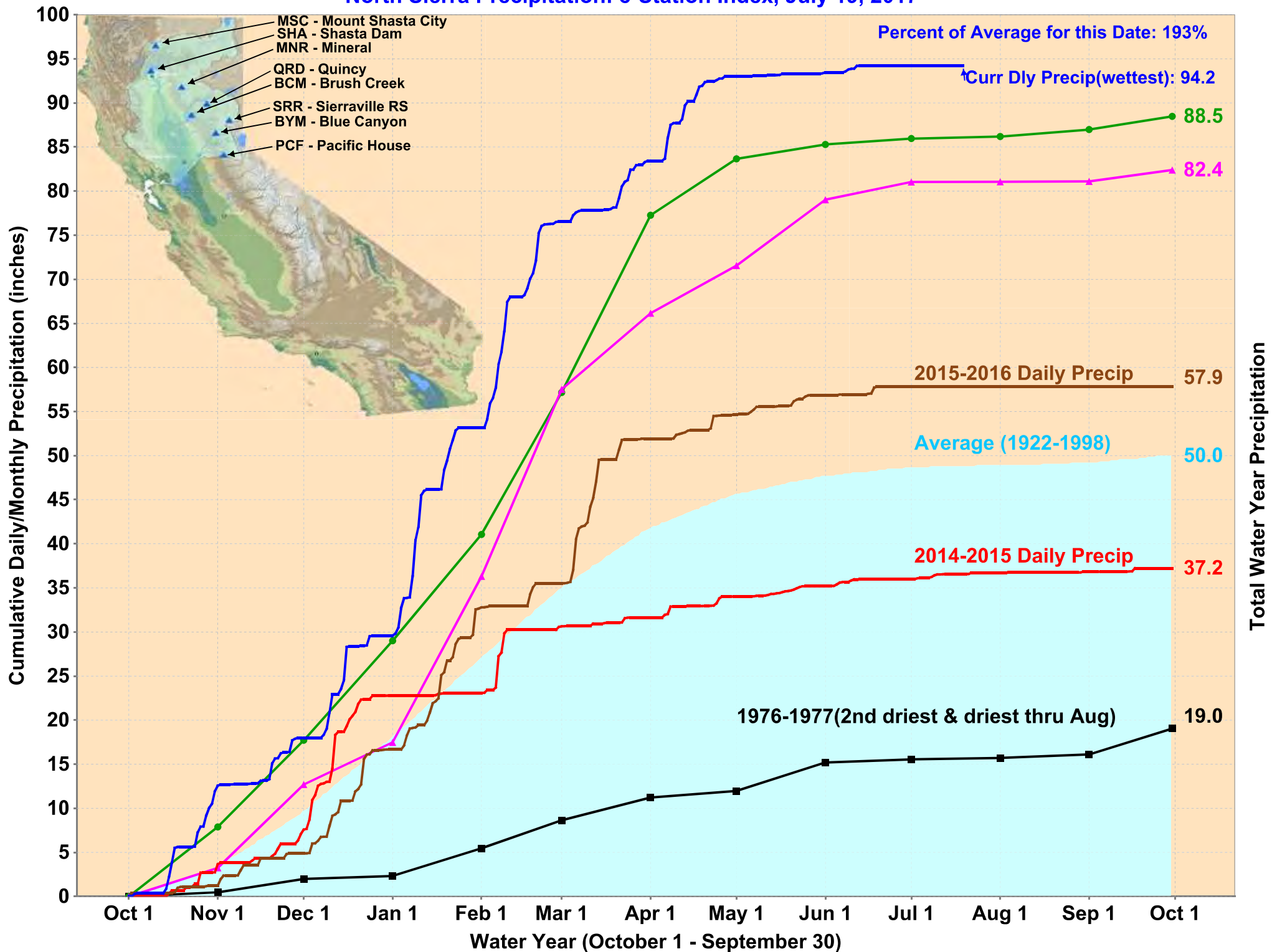
Michael T. Riddell

State Water Contractors Board Meeting

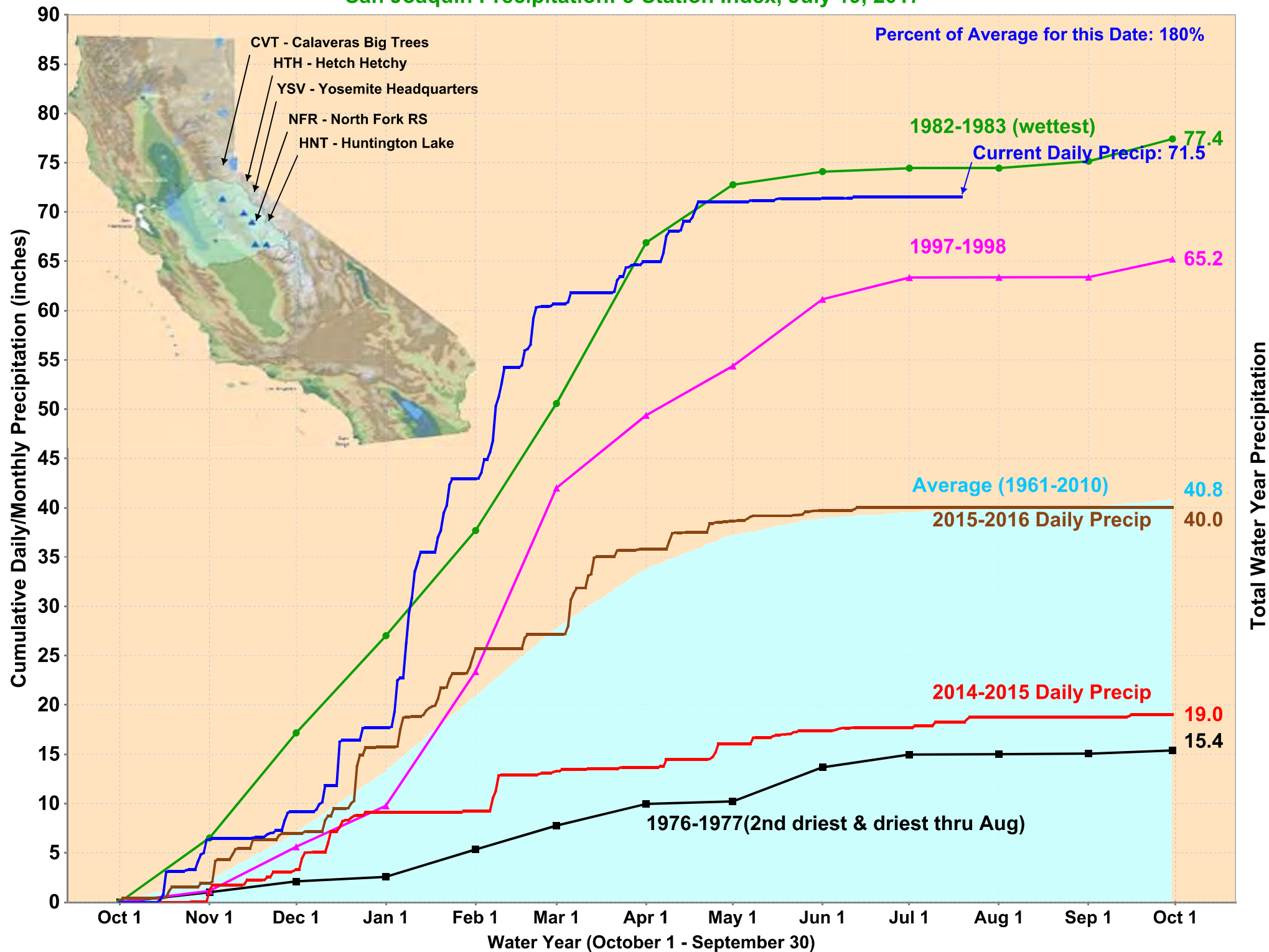
July 20, 2017



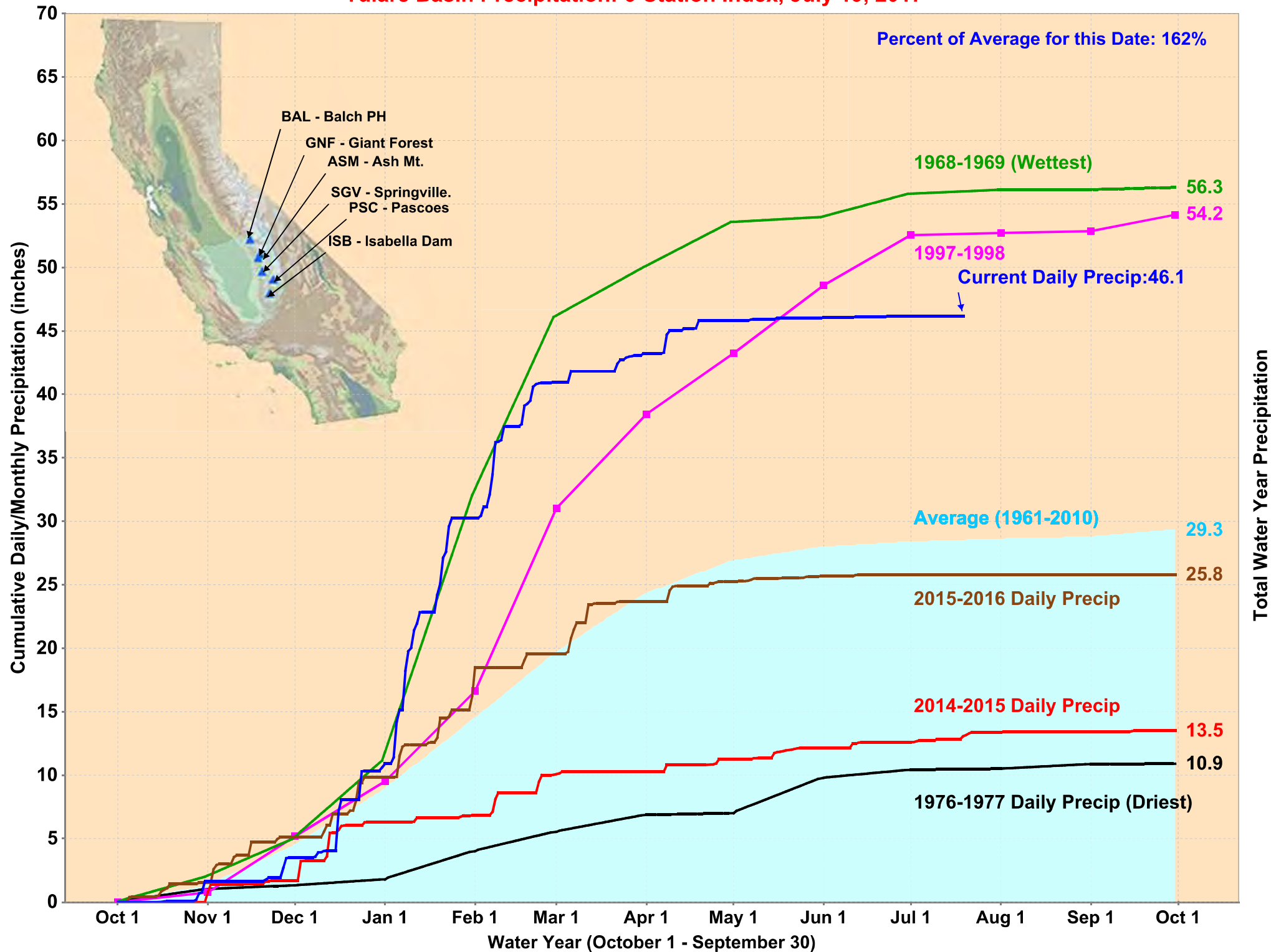
North Sierra Precipitation: 8-Station Index, July 19, 2017



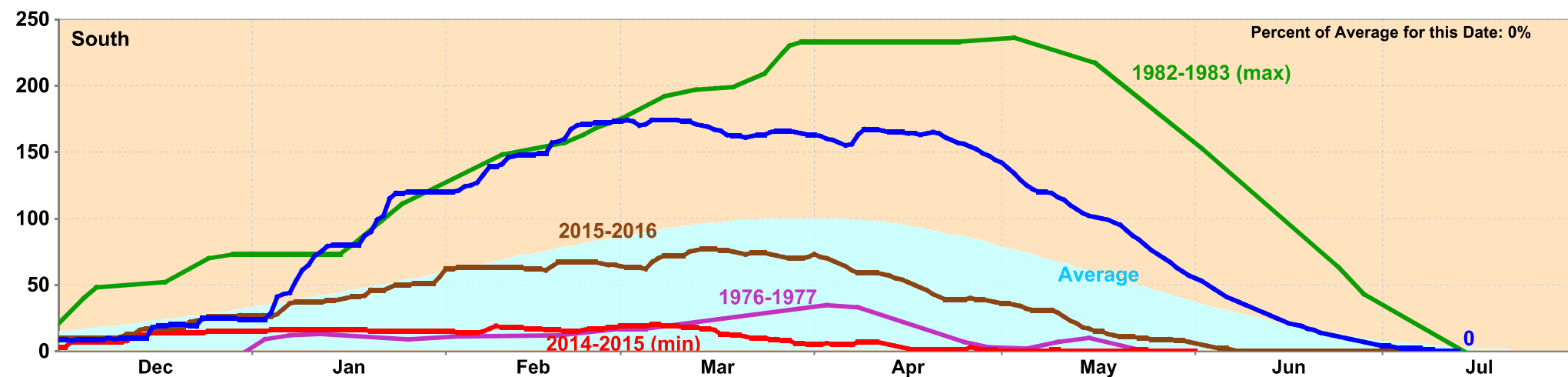
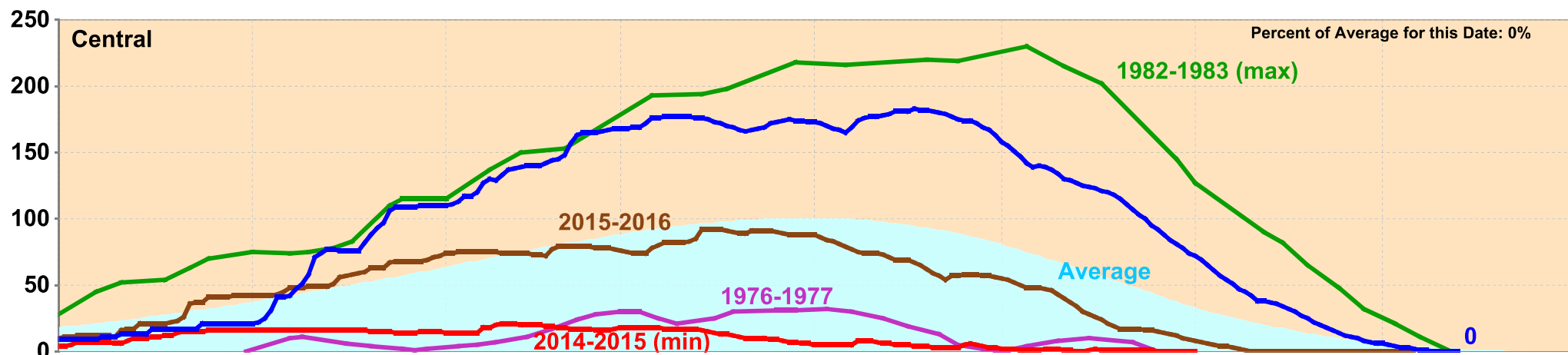
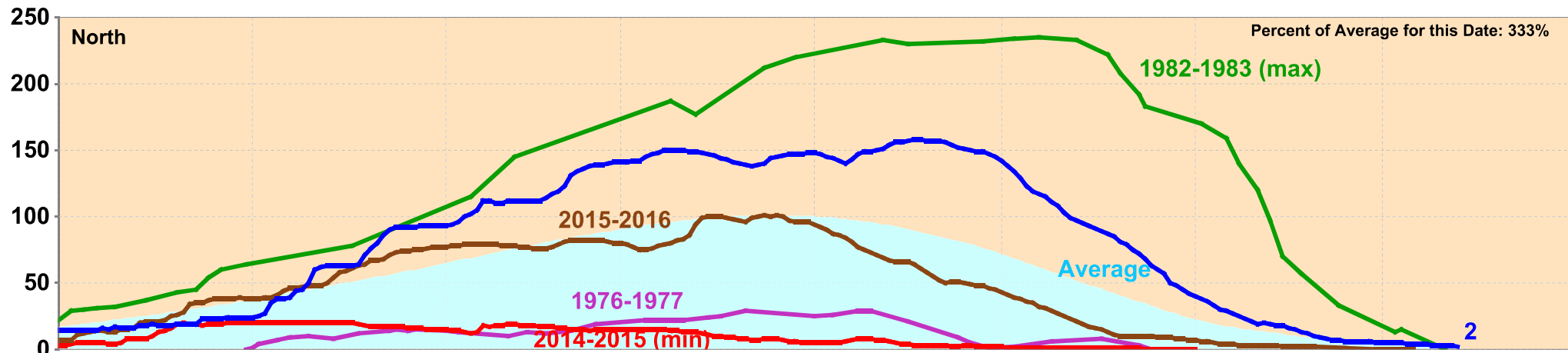
San Joaquin Precipitation: 5-Station Index, July 19, 2017



Tulare Basin Precipitation: 6-Station Index, July 19, 2017



California Snow Water Content, July 13, 2017, Percent of April 1 Average



Statewide Percent of April 1: 1%

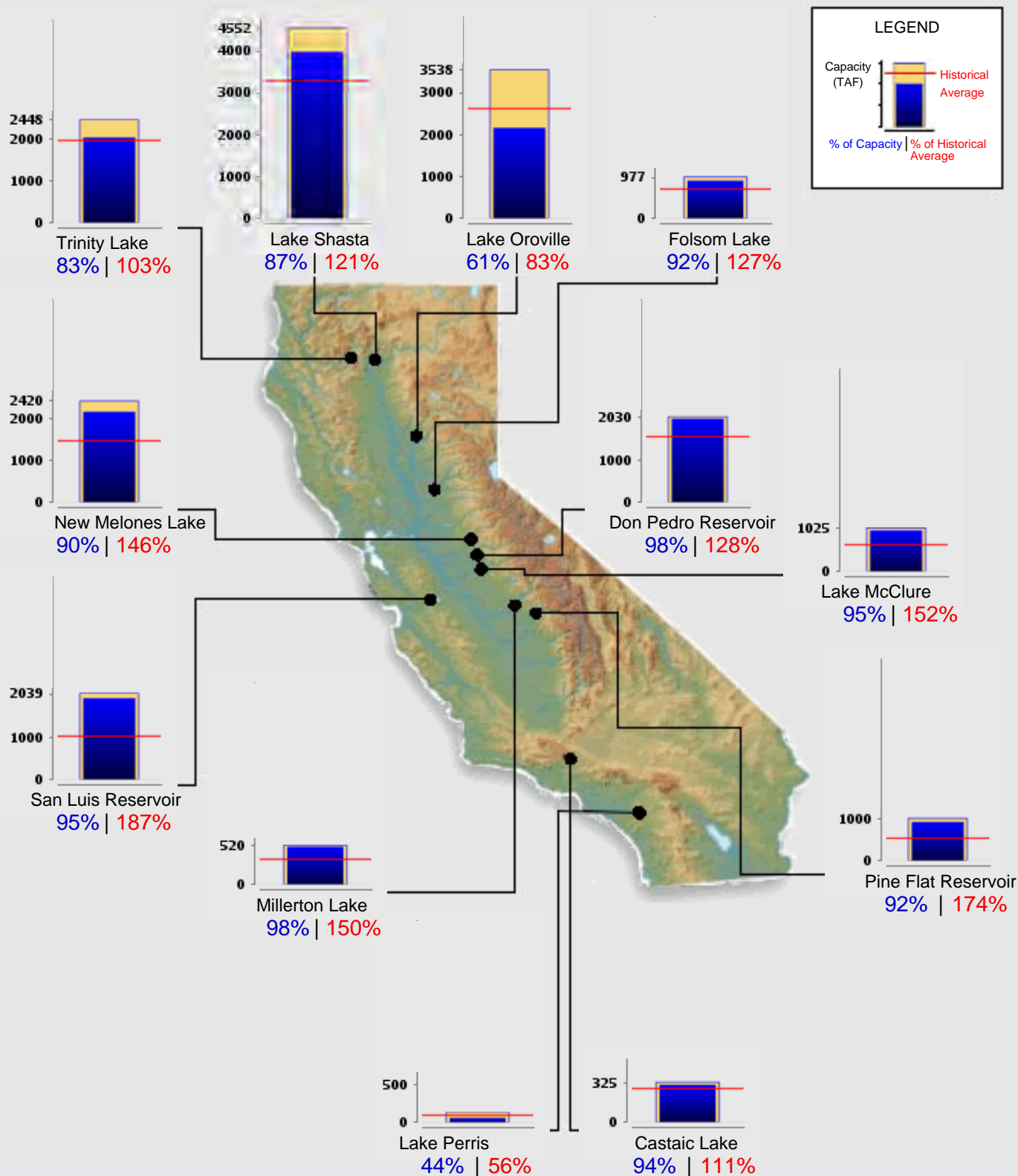
Statewide Percent of Average for Date: 63%



Reservoir Conditions

Ending At Midnight - July 27, 2017

CURRENT RESERVOIR CONDITIONS



FY2017-18 Business Processes Objectives

State Water Contractors
July 20, 2017



*Enhance the financial management of the
State Water Project to preserve the
long-term delivery of affordable water*

Business Processes Objectives

OBJECTIVES:

Functions of Financial Management	1.	Budgets	Monitor and promote DWR's development and management of a SWP budget to minimize annual variances and optimize reasonable revenue requirements
	2.	Financial Projections	Monitor and promote DWR's analysis, development and management of SWP's cost trends to maximize operational readiness at an optimal cost level ensuring long-term affordability
	3.	Financial Resources, Revenue Requirements, and Investments	Monitor and assess DWR's State Water Project financial performance with regard to operational goals, budgets, financial targets, and forecasts to maximize use of available revenues and optimize determination of revenue requirement
	4.	SWRDS Capital Development and Investment in Capital Infrastructure	Monitor and assess DWR's State Water Project capital infrastructure goals, budgets, financial targets, and forecasts to maximize debt financing and investment ensuring stable and level capital revenue requirements
	5.	Business Process Control Activities and Environment	Monitor and promote DWR's internal control directives, activities and environment to minimize financial risk, ensure financial integrity and maintain reporting reliability
	6.	Cash-flow	Monitor and promote DWR's development and management of a SWP cash-flow statement(s) and business process to ensure short-term and long-term SWP cash availability regardless of project purpose

Business Processes Initiatives

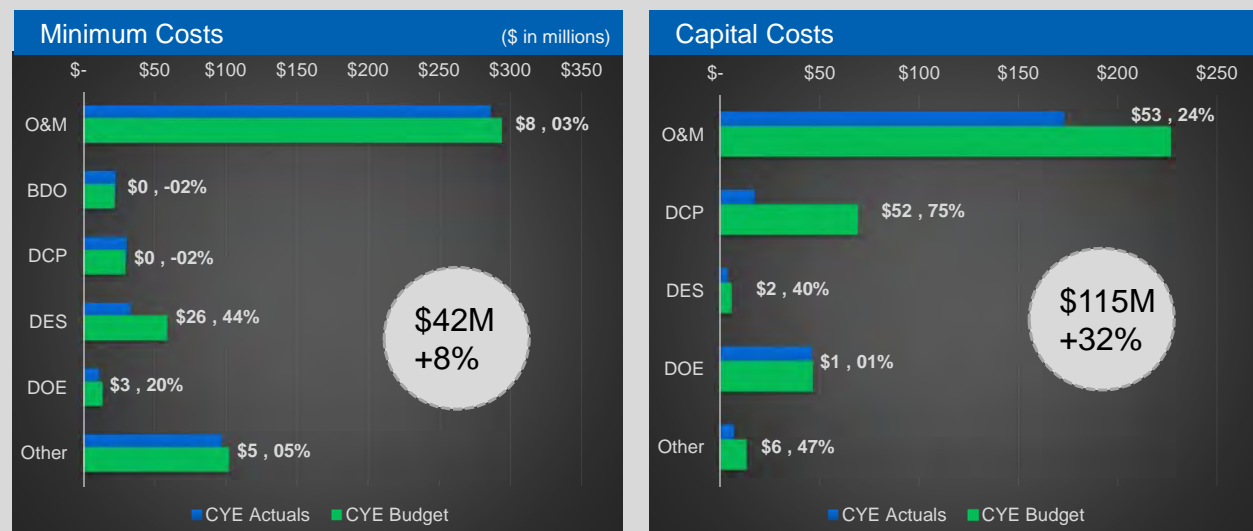
Objectives	Initiatives
1. Budgets	1.1 Review Budget Projections Submitted by Divisions 1.2 Review Budget vs. Actual Comparison Reports
2. Financial Projections	2.1 Work Plan Scoping Budget/Forecasting Process 2.2 Forecasting O&M and Variable Projections
3. Financial Resources, Revenue Requirements, and Investments	3.1 Annual Statement of Charges Preparation 3.2 Review Annual Calculation of 51(e) Revenue 3.3 Review Uses and Investment of 51(e) Revenues 3.4 Review the 51(e) 5-Year Review Report 3.5 Research Contract & Recommend Reimbursement Process 3.6 Updating and Standardizing Alpha Allocations
4. SWRDS Capital Development and Investment in Capital Infrastructure	4.1 Capital Financing/Funding Plan for SWRDS Facilities 4.2 Review Capital Facilities Account 4.3 Review Water System Revenue Bond Issuances 4.4 Develop SRA and SSA Account Review Processes
5. Business Process Control Activities and Environment	5.1 Audit Findings 5.2 Audit Matrix 5.3 Cost-Debt Service Reconciliation Project 5.4 Reporting 5.5 Scoping Recommendation for CFM Work Plan 5.6 Review Freeze-Go Billing Implementation and Processes 5.7 Identify and Prioritize Projects affected by completion of Cost-Debt Service Reconciliation Project 5.8 Develop processes and reports to transition Divisional Budgets to SOC Estimates
6. Cash-flow	6.1 Review Quarterly Cash-flow Report

State Water Contractors
Business Processes

July 20, 2017

3

CYE2016 – SWP Projections vs Actual (as of Dec 31, 2017)

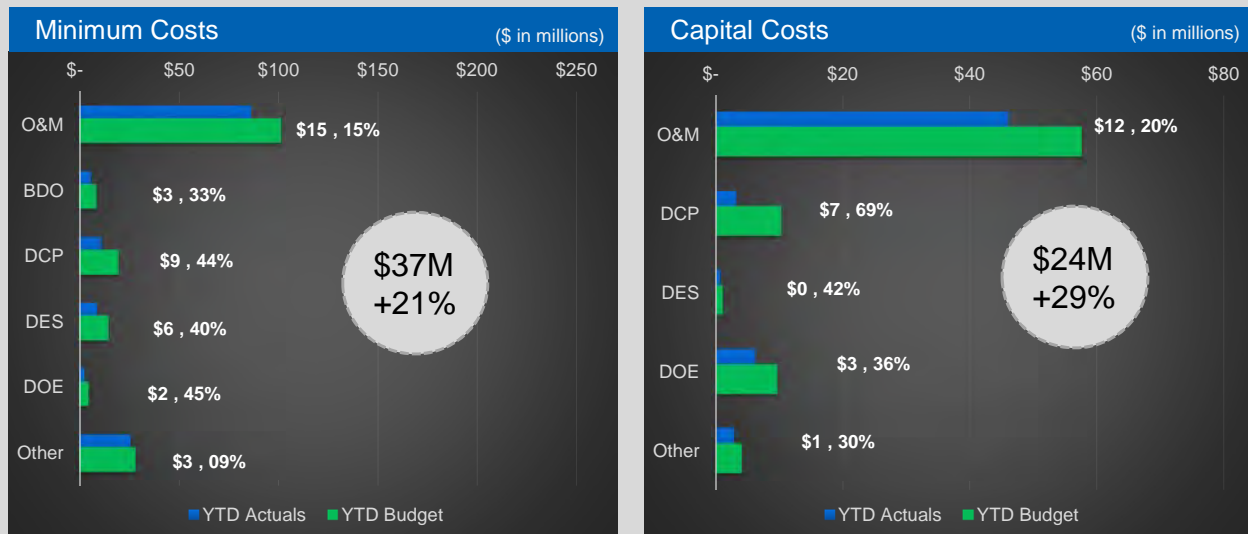


State Water Contractors,
Business Processes

July 20, 2017

4

YTD2017 – SWP Projections vs Actual (as of Apr 30,2017)

State Water Contractors,
Business Processes

July 20, 2017

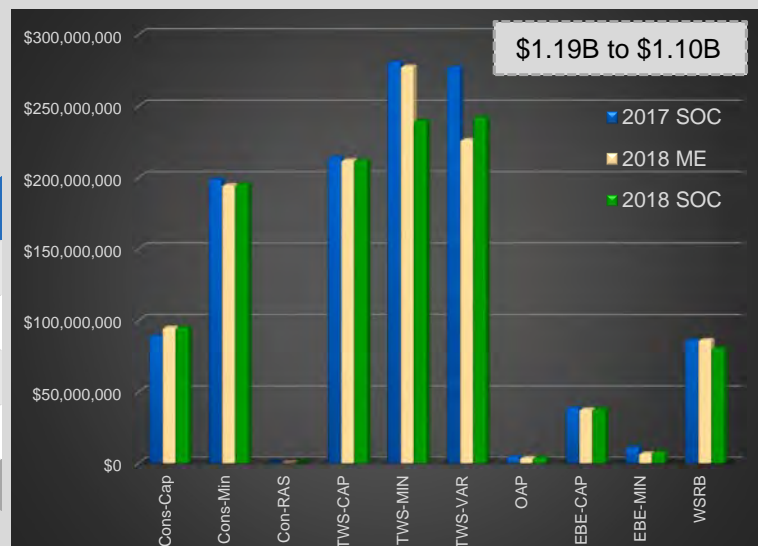
5

2018 Statement of Charges (SOC)

**\$85M or 5% Net Reduction
in 2018 SOC**

(\$ in Millions)

	2018 SOC	2017 SOC	Net Decrease
Transportation Minimum	240	281	(41)
Transportation Variable	242	277	(35)
East Branch Enlargement	45	49	(4)
WSRB Surcharge	81	86	(5)
			(85)

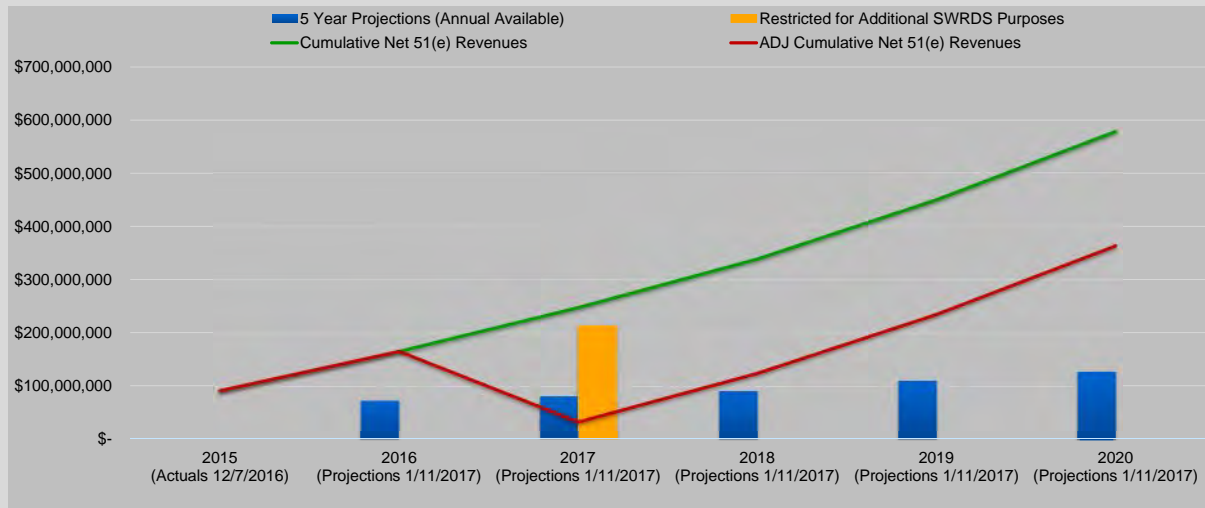
State Water Contractors
Business Processes

July 20, 2017

6

51(e) Revenues – 5 Year Projections

Preliminary Article 51(e) Five Year Review



State Water Contractors,
Business Processes

July 20, 2017

7

Project Financing

Commercial Paper

- Revolving Credit Agreements as of May 1, 2017
 1. Wells Fargo Bank; \$500M (Oroville Spillway)
 2. Bank of America; \$300M (Water System Facilities)
- Annual Fee is .36% on Available Credit Line
- Transaction Fees and Issuance Fees Apply
- Current Issues between .83% and .86%
- Bank Rate (Prime +1%, Federal Funds Rate +2%, 7%)

Water System Revenue Bonds

- Restructuring of Series AU and AT
 - Variable Rate Debt
 - Series AU - \$150 million at 1.06%—matures September 1
 - Series AT - \$110 million at 1.38%—matures December 1
- This will provide flexibility for improved debt portfolio management.
- DWR is looking to change the base used to determine the interest rate from SIFMA to LIBOR, since the rates are better.

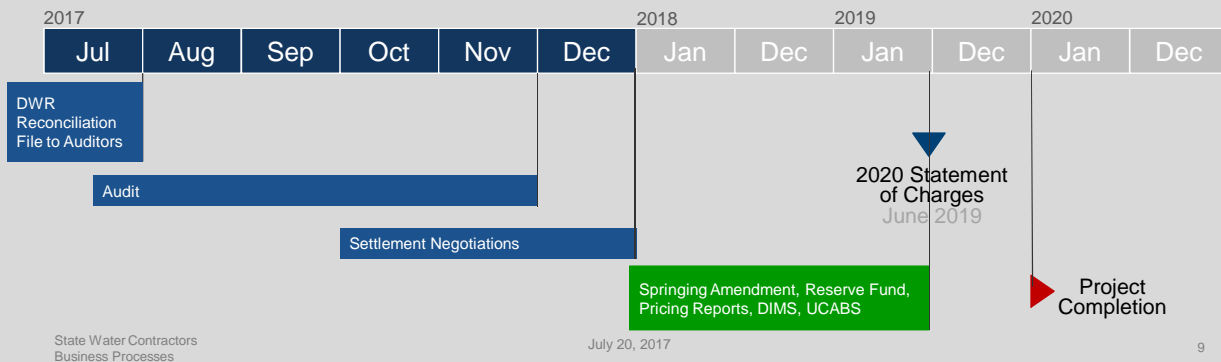
State Water Contractors,
Business Processes

July 20, 2017

8

Cost to Debt Service Reconciliation Project

- **Issue:** Exclusion of bond proceeds (Capital Costs) has resulted in approximately \$136 million overcharged in the WSRB Surcharge from 2001 to 2016
- **Settlement:** Project is critical in the determination of capital cost allocated to SWP Projects (Reach, Contractor) and SWP Debt Service
- **Schedule:**



Questions

**STAFF REPORT
TO
DESERT WATER AGENCY
BOARD OF DIRECTORS**

AUGUST 1, 2017

RE: CALIFORNIA WATERFIX OPERATIONS UPDATE

As reported in the General Manager's report to the Board on June 6, 2017, significant progress has been made in the environmental review and approval of the project. It was anticipated that DWA staff would present a series of white papers prepared by Metropolitan Water District of Southern California (MWD) as presentations to its Board. These papers were anticipated to explain the physical infrastructure, the benefits and reasons for improving and modernizing the system; the operations and the supply yield; and the cost allocation amongst the contractors and finance.

On July 24, the DWA Board conducted a workshop on the first of said whitepapers which was presented to the MWD Board entitled "*Modernizing the System: California WaterFix Infrastructure*". The second white paper in the series of three policy papers prepared for the consideration of Metropolitan's Board of Directors in advance of planned summer meetings has now been published by MWD and was distributed to the DWA Board at the July 24, 2017 California WaterFix workshop on Infrastructure. The second paper is intended to inform this Board for discussion on the California WaterFix Operations.

The majority of information presented in the second white paper is applicable to all State Water Contracting Agencies. However, there are certain sections which are relevant only to MWD. One such section are the two tables shown on page 12 of the report. MWD used a number of modeling studies from the 2015 Delivery Capability Report to generate this data. Separate copies of these tables have been provided with the data exchanged to reflect DWA allocations using ratios of data from the aforementioned table.

Also attached is a spreadsheet showing the actual deliveries to DWA and CVWD starting at 2005 through 2016, it also shows an estimated 2017 delivery based on current recharge rates and projected deliveries through 2024 based on the average actual water delivery SWP allocations from 2005-2016 which is 45%. At an average 45% allocation our water delivery is calculated to be 25,088 acre-feet. After approximately 7% is diverted to the Mission Creek Sub-basin 23,331 acre-feet is diverted into the Whitewater Sub-basin for recharge.

Staff wishes to discuss the report with the Board after a general overview of the operations information provided similar to the review and discussion of the first white paper on infrastructure.

TABLE 1: SUMMARY OF SWP SUPPLIES AVAILABLE TO DWA WITHOUT ADDITIONAL INVESTMENTS

(ACRE-FEET)

SWP	2016	2020	2025	2030	2035	2040
Minimum	2,788	2,788	2,788	2,788	2,788	2,788
Average	34,565	24,068	24,068	24,068	24,068	24,068
Maximum	55,750	46,735	46,735	46,735	46,735	46,735

TABLE 2: SUMMARY OF SWP SUPPLIES AVAILABLE TO DWA WITH CALIFORNIA WATERFIX

(ACRE-FEET)

SWP	2016	2020	2025	2030	2035	2040
Minimum	2,788	2,788	2,788	3,823	3,823	3,823
Average	34,565	28,295	28,295	34,879	34,879	34,879
Maximum	55,750	46,735	46,735	50,722	50,722	50,722

Recharge (45% Future - average)

Year	Whitewater River Sub-Basin						Mission Creek Sub-Basin				Total		Ratio of Recharge	
	Total Delivered	QSA	CR Credit	Other	SWP Annual	SWP Cumulative	Total Delivered	CPV	Annual	Cumulative	Annual	Cumulative	WRS Total	MCS Total
2005	165,554	0	0	0	165,554	165,554	24,723	0	24,723	24,723	190,277	190,277	87.0%	13.0%
2006	98,959	0	0	0	98,959	264,513	19,901	0	19,901	44,624	118,860	309,137	83.3%	16.7%
2007	16,008	0	16,000	0	8	264,521	1,012	0	1,012	45,636	1,020	310,157	0.8%	99.2%
2008	8,008	0	8,008	0	0	264,521	503	503	0	45,636	0	310,157	0.0%	0.0%
2009	57,024	0	7,992	3,000	46,032	310,553	4,090	754	3,336	48,972	49,368	359,525	93.2%	6.8%
2010	228,330	10,000	0	8,393	209,937	520,490	33,210	1,743	31,467	80,439	241,404	600,929	87.0%	13.0%
2011	232,214	105,000	0	0	127,214	647,704	26,238	5,350	20,888	101,327	148,102	749,031	85.9%	14.1%
2012	257,267	0	0	4,000	253,267	900,971	23,406	0	23,406	124,733	276,673	1,025,704	91.5%	8.5%
2013	26,620	2,508	0	0	24,112	925,083	2,379	0	2,379	127,112	26,491	1,052,195	91.0%	9.0%
2014	0	3,549	0	0	0	925,083	4,325	0	4,325	131,437	4,325	1,056,520	0.0%	100.0%
2015	0	865	0	0	0	925,083	171	0	171	131,608	171	1,056,691	0.0%	100.0%
2016	699	64,135	0	0	699	925,782	0	0	0	131,608	699	1,057,390	100.0%	0.0%
2017	300,000	35,000		9500	255,500	1,181,282	1,160		1,160	132,768	256,660	1,314,050	99.5%	0.5%
2018	121,961	35,000		9500	86,961	1,268,243	1,160		1,160	133,928	88,121	1,402,171	98.7%	1.3%
2019	121,961	35,000		9500	86,961	1,355,205	1,160		1,160	135,088	88,121	1,490,293	98.7%	1.3%
2020	121,961	35,000		9500	86,961	1,442,166	1,160		1,160	136,248	88,121	1,578,414	98.7%	1.3%
2021	121,961	35,000		9500	86,961	1,529,128	1,160		1,160	137,408	88,121	1,666,536	98.7%	1.3%
2022	121,961	35,000		9500	86,961	1,616,089	1,160		1,160	138,568	88,121	1,754,657	98.7%	1.3%
2023	121,961	35,000		9500	86,961	1,703,050	1,160		1,160	139,728	88,121	1,842,778	98.7%	1.3%
2024	121,961	35,000		9500	86,961	1,790,012	1,160		1,160	140,888	88,121	1,930,900	98.7%	1.3%
Total	2,244,413	466,057	32,000	91,393	1,790,012	18,925,033			140,888		1,930,900		92.7%	7.3%

	Estimated Values
	Estimated Values subtracted from total delivery
Red Text	Subtracted from total delivered

Total allocation for CVWD and DWA is:

194,100



- ***Special Committee on Bay-Delta***
- ***Water Planning and Stewardship Committee***

7/25/2017 Joint Committee Meeting

3a

Subject

Modernizing the System: California WaterFix Operations White Paper

Executive Summary

The attached White Paper ([Attachment 1](#)) is the second of three policy white papers prepared for Metropolitan's Board of Directors regarding the proposed California WaterFix. The overall objective of these papers is to provide relevant information for the Board to consider decisions regarding the project. This paper focuses on the predicted operations and performance of the proposed California WaterFix to advance the coequal goals improving water supply reliability and the Delta ecosystem in the face of an uncertain regulatory future. The first policy white paper focused on the physical infrastructure and construction management approaches of the proposed California WaterFix. The remaining policy white paper, which is scheduled for presentation at an upcoming committee meeting, will focus on financing and cost allocation. A Board Workshop is tentatively scheduled for August 29, 2017.

Description

The two major water projects in California are the State Water Project (SWP) and the Central Valley Project (CVP). Both of these projects rely upon water that flows into and through the Sacramento/San Joaquin River Bay-Delta. Threats of earthquakes, floods, subsidence, climate change, rising sea levels, and increasing regulatory constraints on water operations, as well as other risks and uncertainties in the Delta, are contributing to a decline in water supply reliability and ecosystem health. The Delta's ecosystem and water supply reliability will continue to decline unless action is taken. Despite previous actions and efforts by local, state, and federal entities to address these issues, as well as other challenges in the Delta, the region's ecosystem has continued to decline. Increasingly stringent state and federal regulations have been put in place to address the water quality, ecosystem, and endangered species issues. These regulations have impacted the operations of the SWP and CVP system and are expected to pose significant challenges in system capability in the future. The proposed California WaterFix addresses these long-standing issues by modernizing the existing SWP and CVP infrastructure in a way that is designed to withstand earthquakes, flood, and rising sea levels, while protecting the fragile Delta habitat. The flexibility that California WaterFix provides to the SWP and CVP operations allows for improvements in water supply reliability and water quality. In conjunction with coordinated efforts to improve science, adaptive management and ecosystem mitigation, and restoration, California WaterFix is in itself a risk management approach to protecting SWP and CVP water supplies against future uncertainties.

This paper focuses on the impact of regulations on SWP and CVP operations and the projected operations and performance of the California WaterFix given current and projected future regulations. It outlines the various performance benefits of the key project features from an operations perspective, including the non-facility features of the Adaptive Management Program and real-time operational flexibility. The key risk areas to the performance of the SWP and CVP with and without California WaterFix have been identified, and the approaches to mitigate these risks have been included in the white paper.

The objectives of this white paper are:

1. Describe the regulatory requirements and the challenges and issues that are imposed on the operation of existing SWP and CVP facilities;
2. Describe the new features and the proposed operation of California WaterFix under the requirements of current and projected state and federal regulations;
3. Describe the impact of operating California WaterFix on overall SWP and CVP performance and identify the major risk elements and risk management approaches; and
4. Describe California WaterFix and its relationship to ongoing efforts to restore the Delta ecosystem, to preserve the Delta as an evolving place, and to prepare California for an evolving Delta future.

Metropolitan's 2015 Integrated Resources Plan Update (IRP Update) provides a framework for Metropolitan and its member agencies to use when planning for long-term reliable water supplies including stable SWP supplies. The 2015 IRP Update calls for Metropolitan to pursue a successful outcome of California WaterFix.

Metropolitan's Board is scheduled to discuss the details of the California WaterFix at a Board Workshop tentatively scheduled for August 29, 2017 and to consider action at its September 12, 2017 Board meeting.

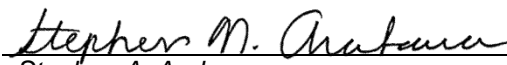
Policy

By Minute Item 47232, dated September 11, 2007, the Board adopted criteria for support of conveyance options in implementation of a long-term Delta improvement plan.

By Minute Item 47135, dated June 12, 2007, the Board adopted the proposed Delta Action Plan.

Fiscal Impact

None

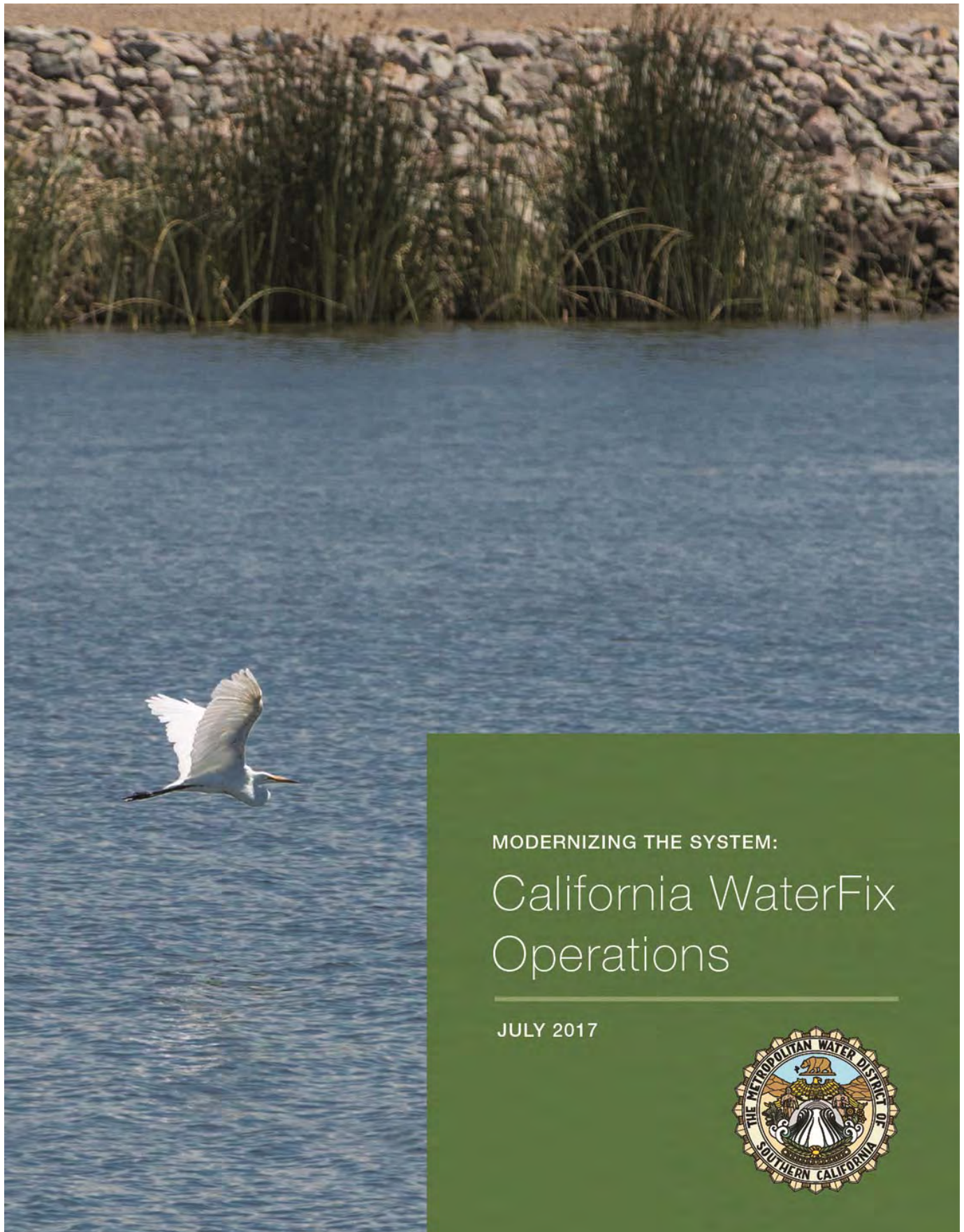

Stephen A. Arakawa
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7/20/2017
Date


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7/20/2017
Date

Attachment 1 – Modernizing the System: California WaterFix Operations White Paper



MODERNIZING THE SYSTEM:

California WaterFix Operations

JULY 2017



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Introduction

This is the second of three policy white papers prepared for the Metropolitan Water District of Southern California's Board of Directors on the proposed California WaterFix. The overall objective of these papers is to provide relevant information in preparation for the Board's decisions on the project.

This paper focuses on the proposed operations and performance of California WaterFix to advance the state's coequal goals of improving water supply reliability and the Delta ecosystem. It describes how the planned operations of California WaterFix's proposed three new intakes in the northern Sacramento-San Joaquin Delta (Delta) are to be operated in conjunction with existing State Water Project (SWP) and Central Valley Project (CVP) facilities in the south Delta. The paper also describes elements of the proposed project that aim to reduce risks and uncertainties regarding operations and ecological processes and to improve environmental conditions. The other two white papers focus on the project's infrastructure improvements and the financing/cost allocation.

The objectives of this white paper are:

- A. Describe the regulatory requirements and the challenges and issues that are imposed on the operation of existing SWP and CVP facilities;
- B. Describe the new features and the proposed operation of California WaterFix under the requirements of current and projected state and federal regulations;
- C. Describe the impact of operating California WaterFix on overall SWP and CVP performance and identify the major risk elements and risk management approaches;
- D. Describe California WaterFix and its relationship to ongoing efforts to restore the Delta ecosystem, to preserve the Delta as an evolving place, and to prepare California for an evolving Delta future.

Summary

The Sacramento River and San Joaquin River meet in the Delta, which is the hub of the state's water distribution system. Both of California's two largest water projects – SWP and CVP – operate within the Delta and deliver water to about two-thirds of all Californians and millions of acres of irrigated farmland.

The Delta is a vitally important ecosystem that supports hundreds of aquatic and terrestrial species, some of which are protected under federal and state endangered species laws. To protect listed species, the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and the California Department of Fish and Wildlife (CDFW) have issued biological opinions and incidental take permits requiring the state Department of Water Resources (DWR) and federal Bureau of Reclamation (Reclamation) to substantially alter the way the agencies operate the SWP and CVP facilities. These operational changes have reduced SWP and CVP deliveries and water supply reliability south of the Delta. In addition, the Delta is at risk from earthquake damage, persistent land subsidence, floods and rising sea levels.

The existing Delta water conveyance system needs to be improved and modernized to address these issues. For example, the current system has diversions in the south Delta. Many of the operational and environmental challenges with the current system would be addressed by the California WaterFix, which proposes three new diversion structures in the north Delta. The structures would have state-of-the-art fish screens that would be operated in coordination with the existing south Delta SWP and CVP diversion facilities. These infrastructure and operational improvements would help restore and protect ecosystem health, improve the reliability of SWP and CVP deliveries, and protect water quality consistent with statutory and contractual obligations.

The SWP supplies from Northern California account for about 30 percent of the water used in Southern California. Recognizing the need to modernize the state's conveyance system, Metropolitan's Board of Directors adopted the Delta Action Plan and Delta Conveyance Criteria in 2007 (Conveyance Criteria). The following Conveyance Criteria serve as benchmarks for evaluating the effectiveness of the proposed California WaterFix:

- Provide water supply reliability;
- Allow flexible pumping operations in a dynamic fishery environment;
- Improve export water quality;
- Reduce seismic risks;
- Reduce climate change risks;
- Enhance ecosystem fishery habitat throughout the Delta.

Underlying all these benchmarks is the principle that they would be achieved in an environmentally responsible manner.

California WaterFix would improve system operational capability to support more reliable Delta water exports, and greater assurances to guard against risks. Increased flexibility to strategically move water from either the north or south Delta and better real-time management of export operations in response to actual conditions would better protect fish. The proposed dual conveyance system would improve river flow patterns with a more natural upstream to downstream flow pattern during periods important for fishery protection and less fish entrainment in the south Delta diversion facilities. Having flexibility to divert in the north or the south Delta will help native fish species migrate to and from the ocean and better utilize Delta habitat. It also would ensure greater water supply certainty for the 25 million Californians and millions of acres of agriculture receiving water from the Delta, and offer greater resiliency to climate change and seismic events. With these physical and operational changes, California WaterFix would help advance and achieve the state's co-equal goals of ecosystem restoration and water supply reliability.

The potential impacts of the proposed system facilities and operations have been carefully and thoroughly reviewed. Appropriate risk management measures have been incorporated into the project to restore and protect ecosystem health, water supplies, and water quality within a stable regulatory framework, consistent with statutory and contractual obligations. An Adaptive Management Program would be implemented through a collaborative process with regulatory agencies, project operators, and water contractors. This would provide a structured science process to develop adaptive means of improving conditions for both the ecosystem and water supply. Project operations that respond to real-time Delta conditions would also advance these objectives and provide greater certainty for water deliveries.

With the proposed conveyance improvements, management actions, and framework for operation, the project would have a significant positive impact on water supplies and water quality when compared to current conditions. Without California WaterFix, it is estimated that combined future SWP and CVP average annual exports could potentially decrease to 3.5 to 3.9 million acre-feet (MAF) from the current average annual supply of 4.9 MAF. With California WaterFix, the range of combined annual exports in future years is projected to be 4.7 to 5.3 MAF.

California WaterFix has undergone an unprecedented level of public outreach, review, and comment, along with extensive scientific analysis as part of the environmental planning process. Significant refinements to both the physical configuration and operational characteristics were made to address issues raised during the environmental review to reduce impacts and to better protect species. These refinements have accomplished that while maintaining the underlying core capabilities of the proposed system.

DWR and Reclamation have completed the environmental review documents under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). In addition, USFWS and NMFS have issued biological opinions on the project. These biological opinions determined that California WaterFix as proposed would neither jeopardize the continued existence of species listed under the federal Endangered Species Act (ESA) nor destroy or adversely modify critical habitat for those species.

Based on the information available to date, it is staff's assessment that California WaterFix operation, system capabilities and adaptive management would meet Metropolitan's adopted policy direction and achieve greater supply reliability.

Challenges and Issues with the Existing System

The location of the existing SWP and CVP diversion facilities in the south Delta, within habitat for protected fish species, leads to a significant problem: unreliable water supplies. This is because the rules to protect beneficial uses in the Delta and the listed species greatly restrict operations.

The Bay-Delta Water Quality Control Plan (WQCP) identifies the beneficial uses of water in the Delta and establishes the water quality objectives necessary to protect those uses. The current WQCP, as implemented through Water Rights Decision-1641 (D-1641), requires the SWP and CVP to meet the protective standards established by the State Water Resources Control Board (SWRCB).

In addition, DWR and Reclamation operate their respective projects pursuant to biological opinions issued by USFWS and NMFS under the federal Endangered Species Act. DWR operates the SWP pursuant to an incidental take permit for longfin smelt issued by the CDFW under the state Endangered Species Act, California Fish and Game Code section 2081(b), and consistency determinations under California Fish and Game Code, section 2080.1.

The SWP and CVP facilities have long been impacted by changing regulations governing both projects' diversion facilities in the south Delta. On average, D-1641 has reduced SWP and CVP diversions and increased Delta outflows to the San Francisco Bay by about 300,000 acre-feet a year as compared to the SWRCB's prior requirements. Compounding the impacts, the biological opinions have decreased diversions and increased outflows by about another 1 MAF a year (Source: MBK Engineers and HDR "Retrospective Analysis of Changed Central Valley Project and State Water Project Conditions Due to Changes in Delta Regulations," January 2013).

The increased Delta requirements and export constraints have further affected SWP and CVP operations by decreasing operational flexibility and increasing water supply vulnerabilities during dry conditions. This, in turn, reduces project reservoir storage, water deliveries, and supply reliability. Figure 1 illustrates the decrease in average SWP and CVP delivery capability over time due to additional regulatory requirements. As shown in the figure, over a period of a little more than 25 years, the export capability of the two projects has been reduced by over 3 MAF per year. California WaterFix is intended to reverse this downward trend.

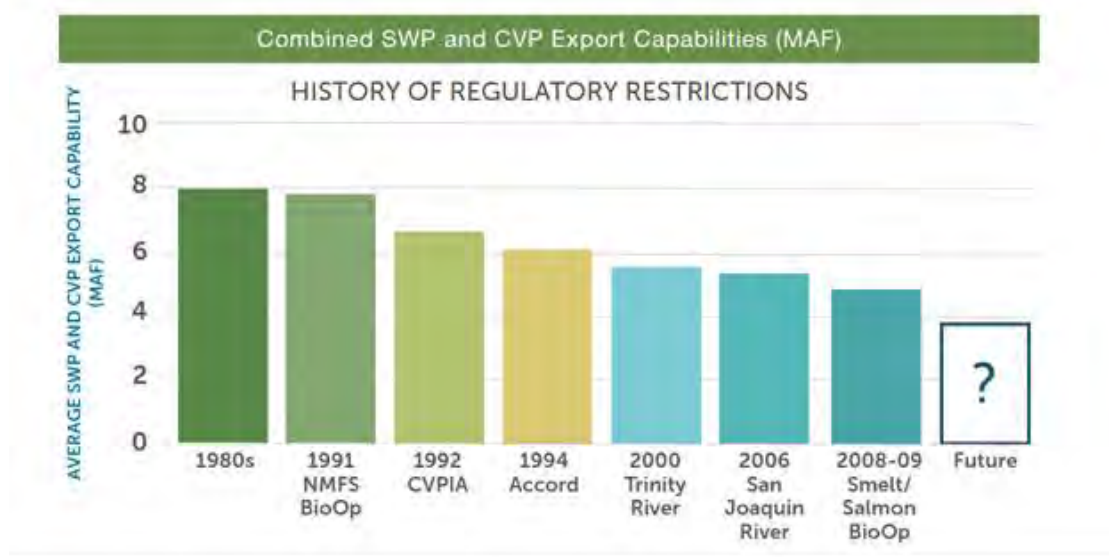


FIGURE 1: HISTORY OF SWP AND CVP EXPORT RESTRICTIONS DUE TO ENVIRONMENTAL REGULATIONS

California WaterFix Components

DESCRIPTION OF CALIFORNIA WATERFIX PHYSICAL COMPONENTS

The proposed infrastructure improvements are described in the first policy white paper (“Modernizing the System: California WaterFix Infrastructure”). The proposed facilities include three intake facilities along the east bank of the Sacramento River between the communities of Clarksburg and Courtland in the north Delta and dual tunnels that would carry water from the intakes to a pumping plant at Clifton Court Forebay. From there, water moved through these proposed facilities would connect with the SWP’s existing California Aqueduct and the CVP’s Delta-Mendota Canal for downstream deliveries (see Figure 2). Under California WaterFix, DWR and Reclamation would continue to use the existing south Delta facilities as appropriate in coordination with the north Delta facilities.

ADDITIONAL CALIFORNIA WATERFIX COMPONENTS

In addition to the physical facilities, California WaterFix includes a number of operational elements and environmental commitments to protect the Delta ecosystem. These include:

- A collaborative science and adaptive management program to address uncertainties and make adjustments over time;
- Continued real-time operation that makes adjustments to limit effects on listed species while maximizing water supply benefits;
- Environmental commitments to mitigate potential construction and operational impacts and to protect the Delta environment.

Each of these elements is described in more detail in the following sections of this paper.

Regulations and California WaterFix Proposed Operations

DESCRIPTION OF PROPOSED CALIFORNIA WATERFIX OPERATIONS

In the future, the SWP and CVP would continue to operate under regulatory conditions imposed for water quality and fisheries protection.

Operating criteria for California WaterFix would include both existing regulatory requirements and new criteria and requirements associated with the proposed new facilities.

California WaterFix facilities would not become operational for many years. Because evolving science and changing conditions may lead to changes in the criteria during this time, a robust collaborative science and adaptive management program to respond to such changes is a prominent feature of the overall operations strategy. In summary, the strategy involves the following steps:

- A. A set of criteria that would govern California WaterFix when it initially becomes operational was assumed to evaluate project effects for the environmental documents and biological opinions.
- B. A robust collaborative science and adaptive management program that includes water contractor representatives would evaluate initial operating criteria in light of additional focused studies and evolving science and propose appropriate changes in the criteria before and after California WaterFix becomes operational.
- C. Flexible real-time operations would respond to day-to-day conditions to maximize water supply and fish protection within the bounds of existing criteria.

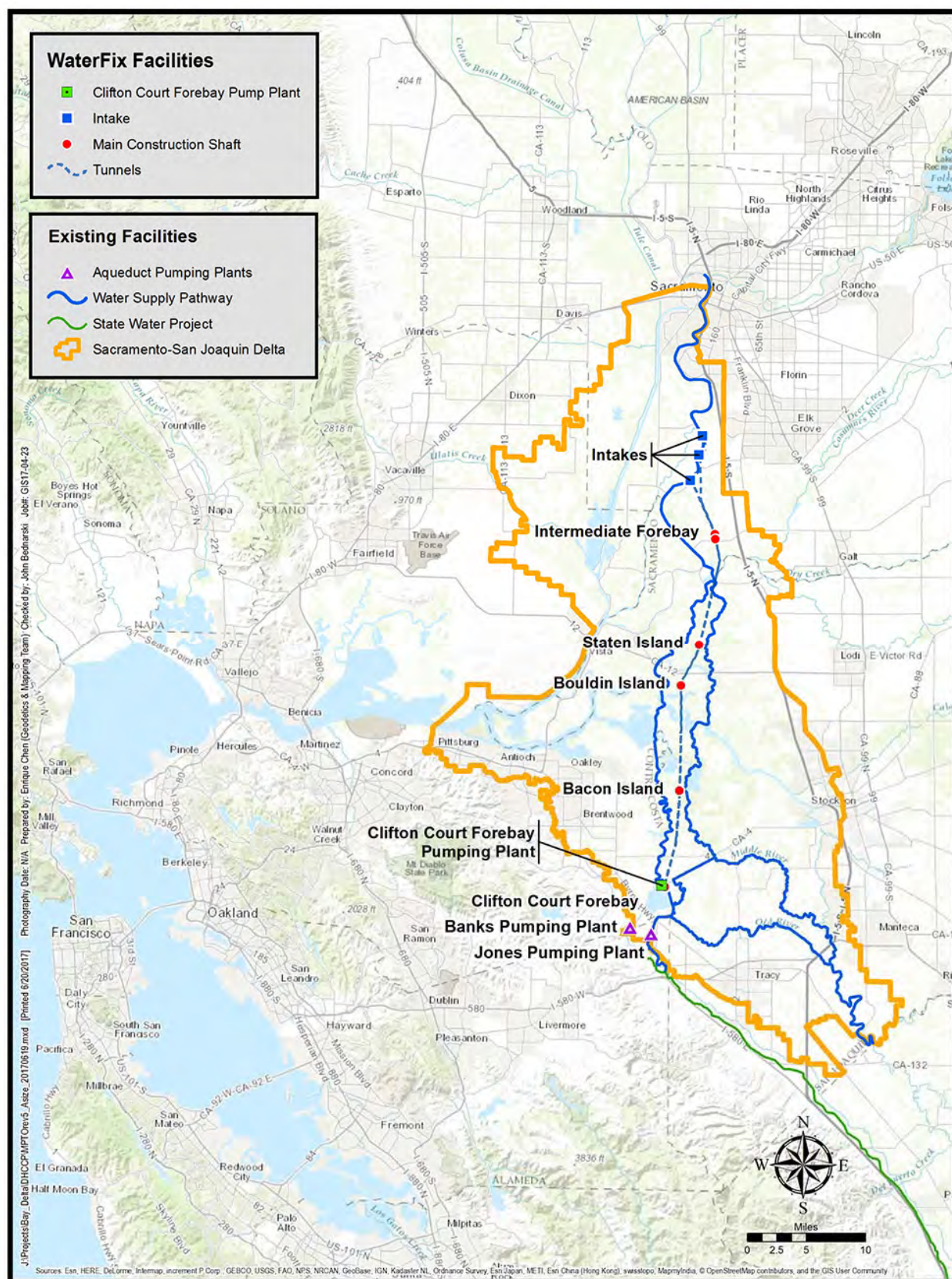


FIGURE 2: OVERVIEW OF THE DELTA AND CALIFORNIA WATERFIX FACILITIES

Initial Operating Criteria for California WaterFix

The initial operating criteria for California WaterFix includes regulatory requirements that were established through D-1641, the 2008 and 2009 biological opinions for existing water project operations, and new criteria developed through California WaterFix's environmental permitting process.

Existing regulatory requirements in the assumed initial operating criteria include:

- Salinity standards;
- Spring and fall outflow to manage the overall salinity gradient (known as "X2");
- Cross Channel Gate, Suisun Marsh Gate, and temporary agricultural barrier operations;
- Limits on SWP and CVP diversions to manage flows in Old and Middle Rivers and entrainment;
- Rio Vista flow.

New regulatory requirements in the assumed initial operation include additional limits on SWP and CVP diversions (i.e., Old and Middle River flow reversals) and flow (i.e., spring outflow, North Delta Diversion Bypass flow). California WaterFix also includes a permanent operable gate at the Head of Old River for fish migration protection and criteria for its operation.

Range of Potential Operations for Environmental Review

The California WaterFix preferred alternative is identified in the final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) as Alternative 4A. The proposed initial operations scenario, known as H3+, falls within a range of initial Delta outflows known as H3 to H4. Before California WaterFix begins operation, specific initial operating criteria would be established as set forth in the related biological opinions. These criteria may change based on adaptive management.

To support the potential changes, an analysis was adopted during SWRCB water rights proceedings to identify potential effects of California WaterFix over a broad range of operating criteria. As presented to the SWRCB, this range is defined as Boundary 1 and Boundary 2. Boundary 1's operational scenario has most of the existing regulatory constraints but does not include the additional Old and Middle River criteria and spring outflows that are included with in the H3-H4 range. Boundary 2's operational scenario assumes a significant increase in Delta outflows, similar to a scenario presented in the EIR/EIS that was developed in coordination with SWRCB staff.

The final state-federal environmental documents also evaluated other alternatives, including alternatives outside of Boundary 1 and Boundary 2.

These different assumed initial operating alternatives and each boundary are illustrated in Figure 3. Figure 4 presents a summary comparison of the key assumptions for these different scenarios.

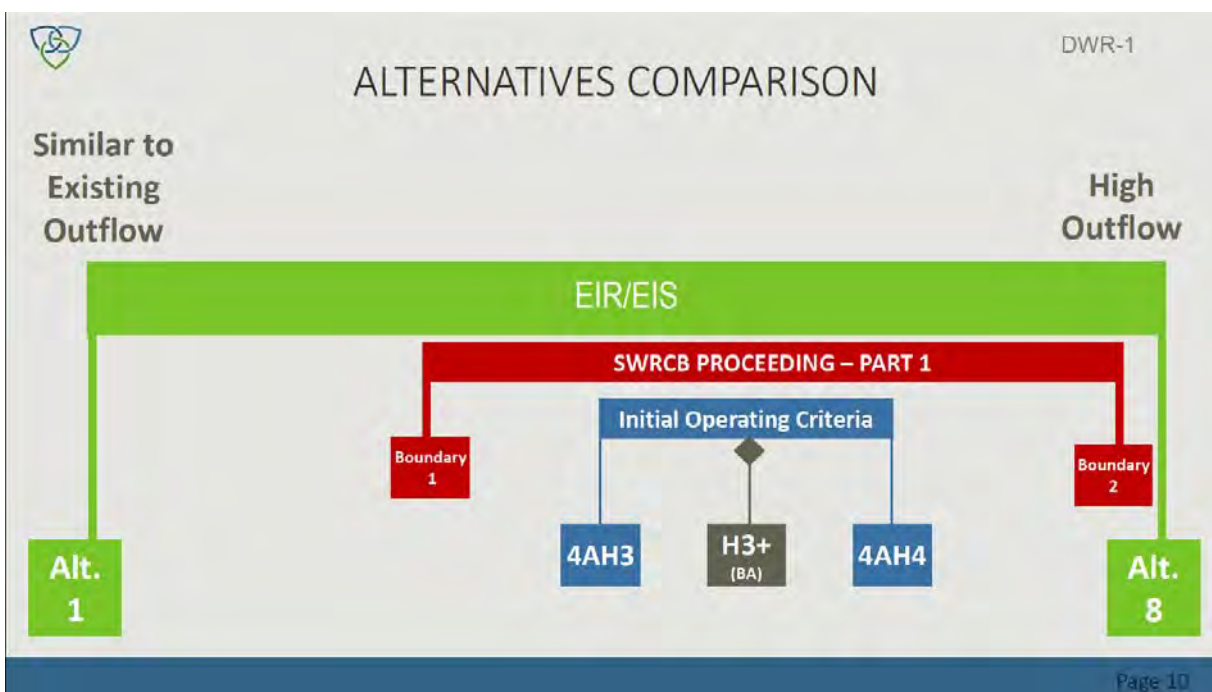


FIGURE 3: ALTERNATIVES COMPARISON

	9,000 cfs North Delta Diversion	Fall X2	Delta Outflow requirements	NMFS BiOp SJR i/e ratio	OMR Requirements	Head of Old River Barrier/Gate
No Action Alternative	No	Yes	Per D-1641	Yes	Yes; per BiOps	Temporary barrier installed in fall months
Boundary 1	Yes	No	Per D-1641	No	Yes; per BiOps	Permanent gate operating in fall months consistent with NAA
H3	Yes	Yes	Per D-1641	No	Yes; more restrictive of either BiOps or new OMR requirements identified in the RDEIR/SDEIS for Alternative 4A	Permanent gate operating in fall, winter and spring months (partial closure)
H4	Yes	Yes	Per D-1641 and increased Delta Outflow requirements during March-May	No		
Boundary 2	Yes	Yes	Per D-1641 and increased Delta Outflow goals in all months	No	Yes; more restrictive of either BiOps or new OMR requirements identified in the RDEIR/SDEIS Appendix C	Permanent gate operating in fall, winter and spring months (full closure)

Note: The term "BiOp" refers to the 2008 Fish and Wildlife Service biological opinion and 2009 National Marine Fisheries Service biological opinion on SWP and CVP operations.

FIGURE 4: PROPOSED OPERATING ALTERNATIVES AND BOUNDARIES

SWP and CVP Operations and Performance with California WaterFix

The facilities and operational features of California WaterFix would have a positive impact on water supply and water quality and provide significant capability to adapt to climate change and seismic concerns.

SWP AND CVP SUPPLY RELIABILITY

Extensive modeling and analysis has evaluated the potential operational and water supply benefits of California WaterFix. This work involved developing forecasts of SWP and CVP deliveries for a number of scenarios involving climate change, both with and without California WaterFix. The total water supply from the SWP and CVP under current conditions averages about 4.9 MAF of water per year. The No Action Alternative evaluated in the California WaterFix EIR/EIS is estimated to average about 4.7 MAF per year in year 2025 with climate change effects considered. The No Action Alternative incorporates an estimate of climate change and sea level rise that is consistent with the future cases with and without California WaterFix. In this way, the No Action Alternative isolates the impact of California WaterFix from the impact of climate change, and allows for direct comparisons between future cases.

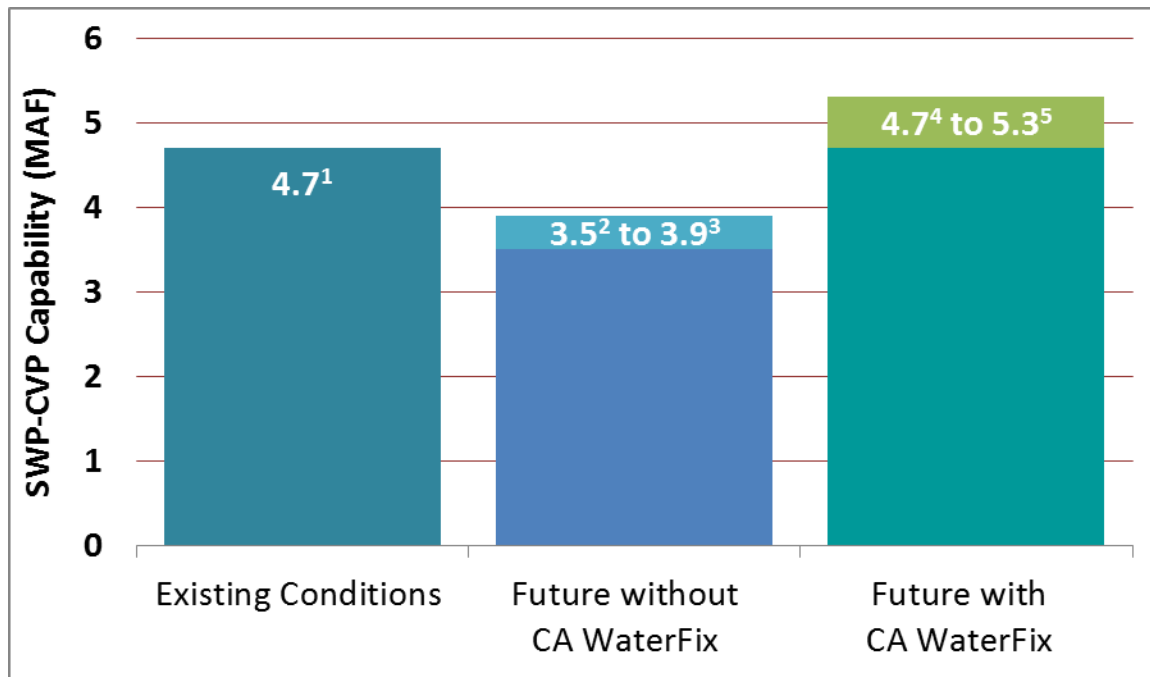
The estimated future supply without California WaterFix assumes increasing future regulatory constraints. Since the long-term trend has been toward increased regulation and reduced supply of the SWP and CVP, it is assumed that this trend would continue into the future. For example, the SWRCB is reviewing its Water Quality Control Plan (WQCP), which includes analysis of several new outflow scenarios as part of that process. The USFWS and NMFS also are reviewing the existing 2008 and 2009 biological opinions for existing SWP and CVP operations, which could lead to new operational restrictions. Next year, CDFW will review its Fish and Game Code Section 2081 permit regarding ongoing SWP operations, which could impose further restrictions on exports.

More specifically, it is assumed that future regulatory restrictions could include further reductions in direct diversions, as regulated using Old and Middle River flow, as well as increased outflow, as measured by outflow or X2. To approximate a future without California WaterFix, Alternative 4A without the proposed north Delta diversions was used in this report. This approach is consistent with DWR's planning activities, as evidenced by its 2015 DWR Delivery Capability Report (Capability Report), which used the same approach to estimate future regulatory constraints on SWP and CVP pumping for its Existing Conveyance High Outflow (ECHO) and Existing Conveyance Low Outflow (ECLO) scenarios. The predicted future water supply without California WaterFix under the ECHO Scenario is estimated to be 3.5 MAF per year on average, and 3.9 MAF under the ECLO Scenario.

Total deliveries with California WaterFix are estimated to range from 4.7 MAF under Alternative 4A-H4 to 5.3 MAF under Alternative 4A-H3 per year on average.

California WaterFix and Metropolitan's Integrated Water Resource Plan

Southern California's plan for a reliable water supply future depends on a reliable SWP supply and conveyance system, which requires much greater capability to move water into storage in wet periods and more flexibly to manage around fishery needs. Metropolitan's 1996 Integrated Water Resources Plan (IRP) identified the risk and variability associated with future SWP supplies, accurately projecting declines in water supplies because of projected future regulatory restrictions on SWP operations. As a result, Metropolitan embarked on a diversified strategy of local supply development, conservation, storage, and transfers to reduce future reliance on imported supplies, particularly reduced SWP deliveries in dry years. Much of the long-term investments in local supply development, conservation, storage, and transfers identified in the 1996 IRP have been made. Metropolitan today has more than 5.5 MAF of total storage capacity to help manage the highly variable imported supplies, particularly SWP deliveries. Reliable SWP supplies and flexibility of project operations remain key elements in the 2015 IRP Update.



¹California WaterFix EIR/EIS No Action Alternative, existing conditions with 2025 climate change impacts

²2015 Delivery Capability Report Existing Conveyance High Outflow scenario

³2015 Delivery Capability Report Existing Conveyance Low Outflow scenario

⁴California WaterFix EIR/EIS Alternative 4A-H4, initial operating criteria lower range

⁵California WaterFix EIR/EIS Alternative 4A-H3, initial operating criteria upper range

FIGURE 5: TOTAL DELIVERIES WITH AND WITHOUT CALIFORNIA WATERFIX

The 2015 IRP Update was grounded with a “Do Nothing” or “No New Investment” case for the SWP to identify the resource development needed to secure supply reliability to 2040. Under a “Do Nothing” or no new investment forecast for the SWP, notable changes would occur over time that would affect deliveries under the current system configuration.

The most notable change was the projected decline of SWP supply reliability that would take place because of climate change and the probability of more restrictive regulatory and operating conditions. Under current conditions, in 2016, total projected SWP and CVP water deliveries of 4.9 MAF on average translate to estimated SWP deliveries to Metropolitan of 1.2 MAF on average. Consistent with the prior discussion regarding increasing regulation and Delta flow restrictions, that projection was assumed to decline over time.

To reflect a future with no new actions or investments in the SWP, conservative approach was taken by estimating the decline using the Existing Conveyance High Outflow (ECHO) Scenario from the 2015 DWR Delivery Capability Report (Capability Report). Under this scenario, with total SWP and CVP water deliveries projected to be 3.5 MAF on average, SWP deliveries available to Metropolitan would drop to 837,000 acre-feet on average.

The 2015 IRP Update found that California WaterFix would improve the long-term reliability of Metropolitan’s water supplies, comparing projected supplies in Table 1 with Table 2. One of the key reliability goals of the 2015 IRP Update is to stabilize SWP supplies. The IRP describes an approach for achieving this goal that includes adaptive management of flow and export regulations in the near-term and attainment of a long-term Delta solution through California WaterFix.

**TABLE 1: SUMMARY OF SWP SUPPLIES AVAILABLE TO METROPOLITAN WITHOUT ADDITIONAL INVESTMENTS
(ACRE-FEET)**

SWP	2016	2020	2025	2030	2035	2040
Minimum	210,000	154,000	154,000	154,000	154,000	154,000
Average	1,202,000	837,000	837,000	837,000	837,000	837,000
Maximum	2,022,000	1,695,000	1,695,000	1,695,000	1,695,000	1,695,000

The 2015 IRP Update developed assumptions for SWP supplies with California WaterFix and evaluated the resulting reliability improvements in comparison to the “Do Nothing” case. In a manner similar to the “Do Nothing” case, SWP supplies were also estimated to decline in the near-term, but assumed to be less severe than in the “Do Nothing” scenario. The declines were assumed to be less due to the commitment to California WaterFix near-term adaptive management efforts. In this scenario, Metropolitan used the Existing Conveyance Low Outflow (ECLO) Scenario from the Capability Report as a proxy for near-term SWP supplies under less restrictive conditions. Under the ECLO Scenario, total SWP and CVP water deliveries were projected to be 3.9 MAF per year on average. Under this scenario, SWP deliveries to Metropolitan drop to 984,000 acre-feet on average (Table 2, Year 2025).

At the time of the 2015 IRP Update, Alternative 4A provided the best available estimate of total SWP and CVP yield, based on long-term land-use and climate change and assumed operating and regulatory conditions. It also factored in a change in project facilities to include conveyance consistent with California WaterFix. The IRP update analyses used Alternative 4A-H4 as the estimated deliveries with California WaterFix. It was estimated that the flexible operations from California WaterFix facility improvements would provide total average SWP and CVP deliveries of 4.9 MAF, with average SWP deliveries available to Metropolitan of 1.2 MAF starting in 2030 (Table 2).

**TABLE 2: SUMMARY OF SWP SUPPLIES AVAILABLE TO METROPOLITAN WITH CALIFORNIA WATERFIX
(ACRE-FEET)**

SWP	2016	2020	2025	2030	2035	2040
Minimum	210,000	229,000	229,000	314,000	314,000	314,000
Average	1,202,000	984,000	984,000	1,213,000	1,213,000	1,213,000
Maximum	2,022,000	1,695,000	1,695,000	1,863,000	1,863,000	1,863,000

The IRP analyses showed that California WaterFix would have a significant positive impact on the total supply reliability for Metropolitan’s service area. Under the “Do Nothing” case, IRP analyses showed that Metropolitan’s service area would experience water shortages 33 percent of the time in 2035 and 58 percent of the time in 2040. In addition, the region’s dry-year storage reserves would be drawn down to critical levels (less than 1 MAF dry year supplies) 55 percent of the time in 2035 and 80 percent of the time in 2040.

Under Alternative 4A-H4, the likelihood of water shortages would be reduced to 4 percent in 2035 and 10 percent in 2040. Storage reserves also improved under the proposed plan, with reserves being drawn down to critical levels 9 percent of the time in 2035 and 8 percent of the time in 2040. These findings were the primary driver in the development of the 2015 IRP Update’s target to stabilize the reliability of SWP supplies through California WaterFix.

California WaterFix advances the overall 2015 IRP Update strategy, leveraging the investments Metropolitan has made in regional storage capacity over the past two decades to provide supply reliability into the future. The data and estimates for available water supply from the SWP and the impacts of increased regulation used in the 2015 IRP Update analyses were based on the best available information and modeling at the time. Updated modeling

results of water deliveries that incorporate the latest information on future regulations and project facilities, shown in this paper, are consistent with (and improved over) those used in the 2015 IRP Update analyses. These findings confirm that California WaterFix remains an important part of the overall portfolio of water resource development strategy that is key to Southern California's water supply future.

OPERATIONAL FLEXIBILITY WITH CALIFORNIA WATERFIX

There are two ways that the operational flexibility provided by California WaterFix can increase water supply reliability within a given year. The first is through the increased ability to manage intermittent high-flow events in the Delta watershed. The second is through the increased conveyance capacity that could facilitate voluntary water transfers between north and south Delta interests.

Management of High Flow Events

The California WaterFix is intended to capture additional flow during wetter periods when unregulated flow is available. Metropolitan has analyzed the ability of California WaterFix to divert during such high flow events.

Using the winter of 2012/2013 as an example, Figure 6 shows that major storm flows produced significant volumes of water flowing through the Sacramento River past the location of the new intakes, through the Delta, and out to the San Francisco Bay. One 14-day storm event in December 2012 resulted in about 880,000 acre-feet of water flowing out to the Pacific Ocean. A second 14-day storm event resulted in about 1.1 MAF of Sacramento River outflow. As shown in Figure 6, state and federal water project exports were relatively minor in comparison to the outflows of the two storms. With the additional flexibility of California WaterFix's proposed north Delta intakes, Metropolitan's analysis estimates that several hundred thousand acre-feet of additional water could have been captured in these two storm events (as shown by the difference between the green and white lines on Figure 6). These results suggest that periodic high flow events could potentially provide reoperation benefits consistent with existing delivery contracts while at the same time meeting all criteria intended to protect fish, water quality, and existing water rights.

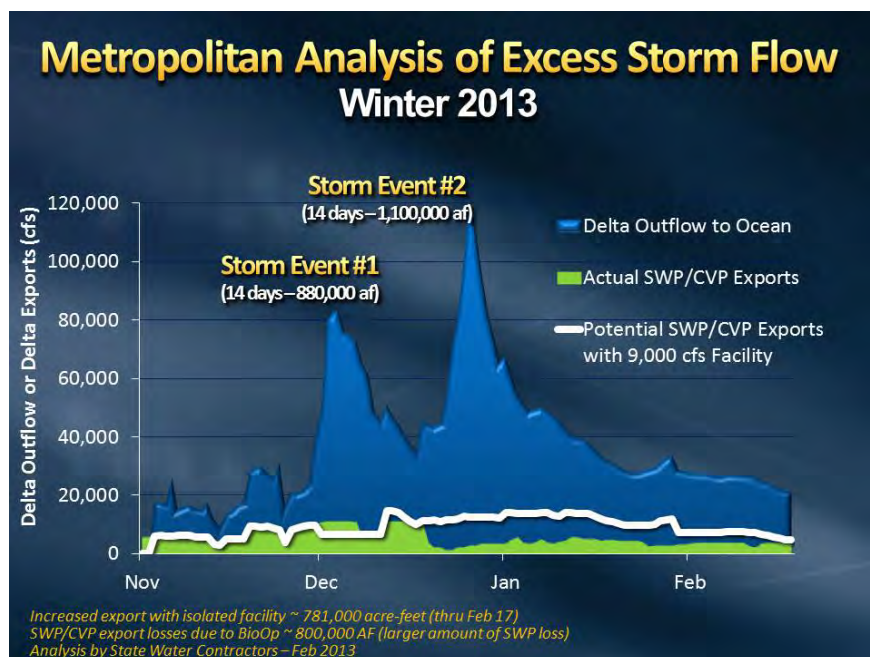


FIGURE 6: WINTER 2013 REOPERATION ANALYSIS WITH CALIFORNIA WATERFIX

As part of SWCRB's California WaterFix petition process, DWR presented a similar analysis illustrating the flexibility of the proposed project using water year 2016 as an example. DWR's analysis showed that an additional 1.2 MAF could have been diverted if California WaterFix had been operational in 2016. (Source: J. Leahigh

testimony, SWRCB Hearing Proceedings Regarding Changes in Water Rights for the California WaterFix Project, DWR Exhibit 61.)

This analysis is consistent with the average annual analysis presented in the environmental documents. All of the existing and new operating criteria for California WaterFix that are intended to protect fish and water quality would be maintained. Consequently, any diversions during high flow events would take place consistent with criteria intended to protect fish, water quality, and existing water rights. The analysis did not account for available south Delta storage or demand, so the actual quantity that may be diverted under similar circumstances in the future could be less than predicted.

Increased Capacity for Water Transfer Agreements

The flexibility provided by California WaterFix also improves the capability of moving water transfer supplies across the Delta. The increased conveyance and operational flexibility would significantly increase the amount of available capacity to accommodate the movement of water transfers across the Delta and the SWP and CVP system. Figure 7 shows the estimated increase in available transfer capacity with and without California WaterFix.

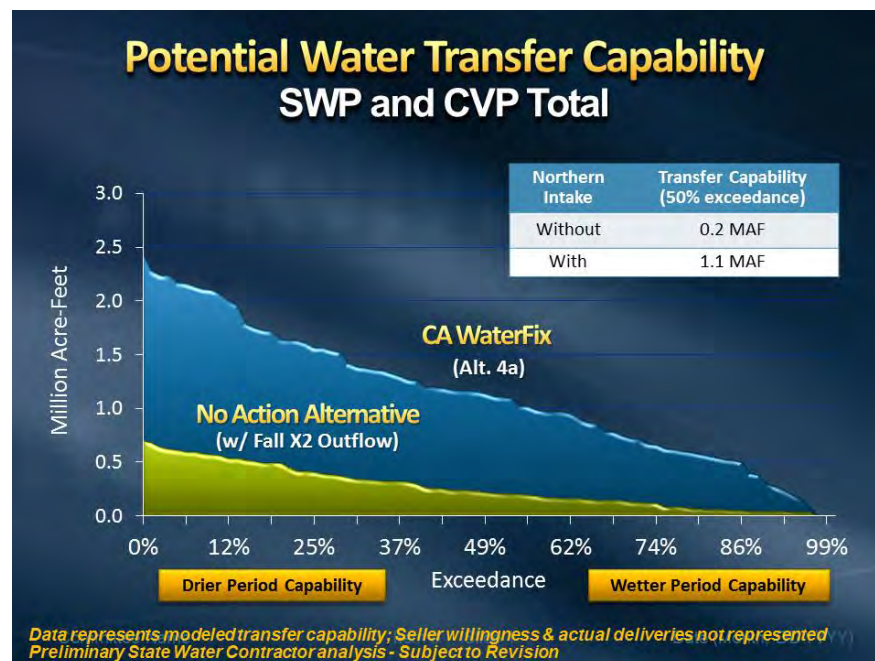


FIGURE 7: POTENTIAL WATER TRANSFER CAPABILITY, SWP AND CVP TOTAL

It is important to note that California WaterFix only serves to improve the available capacity and capability to accommodate water transfer agreements. Future water transfers or particular quantities of transfers are not components of California WaterFix. Because specific, future transactions for water transfers and other non-project voluntary water market transactions depend on future water supply, market, and other conditions, any amounts and locations of future water transfers are speculative. Future transactions and water transfer agreements would be subject to regulatory approvals and environmental review. Even with these considerations, California WaterFix would provide much greater capability to manage transfers.

COMPLIANCE WITH D-1641 WATER QUALITY STANDARDS WITH CALIFORNIA WATERFIX

California WaterFix would provide added flexibility to comply with flow and salinity criteria required by the SWRCB and other regulatory obligations, including for the protection of fish species. The additional location for SWP and CVP diversion in the north Delta enhances the flexibility of the water management system, allowing state and federal water system operators to balance flows for more optimal and precise salinity management. With California WaterFix, pursuant to D-1641, the SWP and CVP would still be required to meet all salinity and

flow objectives regardless of which diversion location is being used. However, the variable split between north and south diversions would allow a flexible and improved approach toward compliance with flow and salinity standards. For example, if salinity increased on the lower Sacramento River, the SWP and CVP could opt to increase diversions in the south Delta and thereby allow greater flow down the lower Sacramento River. In contrast, if salinity increased on the lower San Joaquin River, the SWP and CVP could decrease water diverted in the south Delta and increase diversions in the north Delta, thereby increasing flow in the lower San Joaquin River and south Delta. The flexibility offered by this example would limit reverse flows in the central Delta near Jersey Point, which in the past have drawn saltier water from the San Francisco Bay into the central Delta.

With California WaterFix, the SWP and CVP would continue to meet existing Delta water quality, fishery objectives, and any future regulatory requirements. Increased diversion flexibility afforded through the approval of California WaterFix would only enhance the capabilities of SWP and CVP projects to meet existing Bay-Delta requirements. Because California WaterFix can take advantage of opportunities to divert and store wet-period storm flows and allow for south Delta diversions in drier periods, in-Delta water quality can be better managed. As a result, the proposed California WaterFix operations would continue to be as protective, if not more, of existing beneficial uses.

EXPORT WATER QUALITY

California WaterFix would improve SWP and CVP export water quality. Urban water users, including Metropolitan, are concerned with the levels of salinity (electrical conductivity (EC), bromide, and total dissolved solids (TDS)), organic carbon, and nutrients in their imported supplies. The concern is related to meeting state and federal drinking water regulations to protect human health, preventing taste and odor complaints, and enhancing local water management programs.

California WaterFix would improve SWP and CVP export water quality through the use of the dual intake system. This is because water quality on the Sacramento River at the proposed intakes is generally lower in salinity, organic carbon, and nitrates as compared to the San Joaquin River and south Delta. As shown in Table 3, modeling of Alternative 4A compared to no action shows lower levels of EC (18-22% improvement), TDS (17-22% improvement), bromide (31-43% improvement), organic carbon (2-11% improvement), and nitrates (5-27% improvement).

With these improvements, source water quality would be improved both for human health protection as well as regional water management.

ALLOW FLEXIBLE PUMPING OPERATIONS IN A DYNAMIC FISHERY ENVIRONMENT

The proposed north Delta diversion would allow SWP water exports, consistent with applicable criteria, during high-flow periods. Accordingly, north Delta diversions would be greatest in wetter years and lowest in drier years. North Delta bypass flow criteria and the south Delta initial operations were developed with fishery agency involvement and are based on the scientific information available at the time of document preparation. These criteria are intended minimize project effects on listed fish species while providing water supply reliability gains, with the following considerations:

- Proposed initial operations would include a preference for south Delta facility pumping from July through September to manage water quality conditions in the south Delta. Additionally, real-time operations would be used to adjust operations and further protect listed species, while maximizing water supply benefits.
- The objectives of the north Delta diversion bypass flow criteria include regulation of flows to maintain fish screen sweeping velocities; minimize potential increase in upstream transport of productivity in the channels downstream of the intakes; support salmonid and pelagic fish movements to regions of suitable habitat; reduce losses to predation downstream of the diversions; and maintain or improve rearing habitat conditions in the north Delta.

TABLE 3: WATER QUALITY CONSTITUENTS

Banks Pumping Plant	No Action (Early Long-Term)	Alternative 4A (Early Long-Term)
Electrical Conductivity (µmohs/cm) ¹		
All	505	395
Drought	632	518
Total Dissolved Solids (TDS) (mg/L) ^{2,3}		
All	286	228
Drought	354	293
Bromide (µg/L) ^{4,5}		
All	391	223
Drought	482	334
Dissolved Organic Carbon (mg/L) ⁶		
All	3.8	3.4
Drought	4.1	4.0
Nitrate (mg/L-N) ⁷		
All	0.70	0.51
Drought	0.55	0.52

¹Source: Final EIR/S at Appendix 8H, p. 8H-32.

²Source: Conversion from EC using conversion formula: (TDS (mg/L) = 19.2 + (0.529 * EC).

³EC data from Final EIR/S at Appendix 8H, p. 8H-32.

⁴Source: Final EIR/S, Appendix 8E, p. 8E-23.

⁵Mass-balance approach.

⁶Source: Final EIR/S, Appendix 8K, p. 8K-12.

⁷Source: Final EIR/S, Appendix 8J, p. 8J-43.

- To meet bypass flow objectives, diversions must be restricted at certain times of the year that support the main juvenile salmon migration period (mostly from December through June).
- The proposed operational north Delta bypass criteria also protect water quality and flow for downstream water users. The north Delta diversion would not be operated during low-flow periods on the Sacramento River. Generally, during the period from December through June, as illustrated in Figure 8, the full 9,000 cfs diversion rate would not occur until Sacramento River flows are approximately 35,000 cfs. Compliance with D-1641 standards further restricts the north Delta diversion rate.

As a result of the limitation on north Delta diversion, there would be sufficient water downstream for both the fishery and water quality requirements. Overall, the flexibility provided by California WaterFix would better respond to the needs of the fishery.

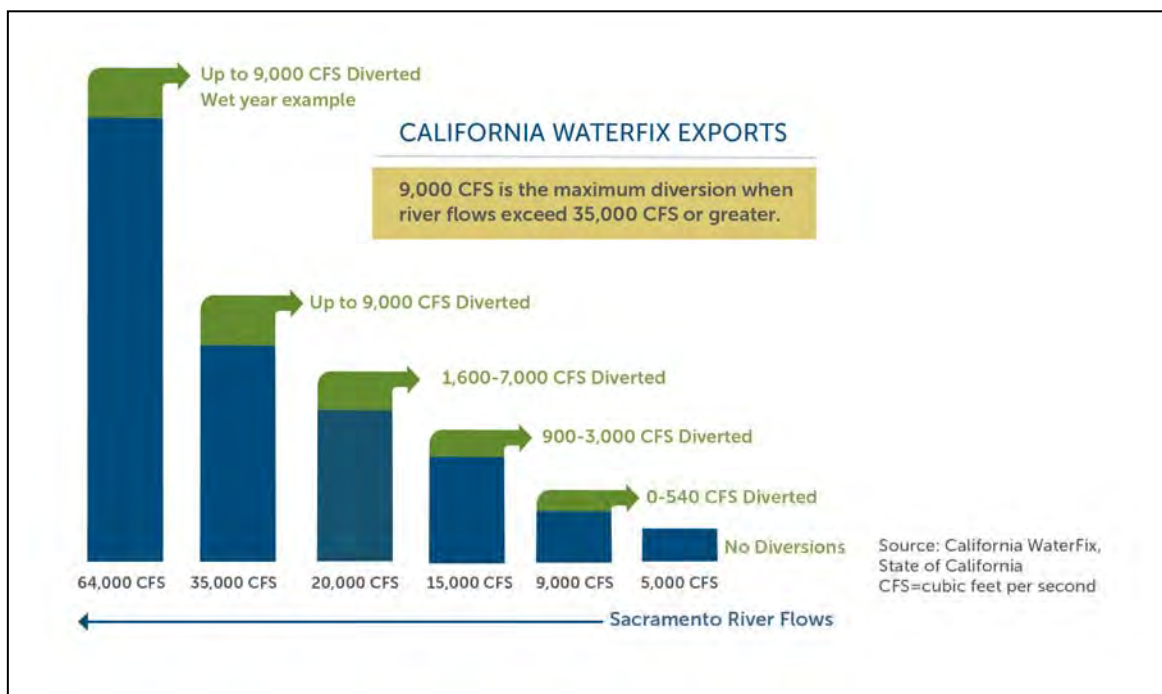


FIGURE 8: NORTH DELTA DIVERSION BYPASS CRITERIA

REDUCING CLIMATE CHANGE RISKS

Climate change will affect Northern California watersheds and the Delta region in a number of ways. Questions remain about the exact timing, magnitude, and regional impacts of temperature and precipitation changes, but climate researchers have identified several areas that could affect water supply availability and the future operation of SWP and CVP facilities. These areas include:

- Reduction in Sierra Nevada snowpack and loss of natural storage from snowpack;
- Increased intensity and frequency of extreme precipitation events;
- Rising sea levels and seawater intrusion into the Bay-Delta.

The past 10 years have heightened the concerns and associated challenges that future climate change may bring. The Northern California watershed in the Sierra and the Delta have already experienced the range of higher temperatures and reduced snowpack that was predicted by climate change scientists. The hot and dry records experienced in the recent drought, followed by the extreme wet conditions in 2016/17, highlighted the challenges that SWP and CVP storage and conveyance facilities face in managing increasingly variable water supplies and conditions.

Current SWP and CVP pumping plant locations in the south Delta are vulnerable to the increased salinity levels that rising sea levels could bring. For example, rising sea levels could increase the pressure on the existing levee system, making the levees more vulnerable to failure. Because of their age and general methods of original construction, many Delta levees are at risk of failure as a result of continued land subsidence, flood conditions, sea level rise, and seismic events. Failure of the Delta levee system would inundate the surrounding islands, allowing saline water from San Francisco Bay to intrude into the Delta and contaminate freshwater supplies that are delivered by the SWP and CVP. If climate change and rising sea levels lead to such a levee failure in the future, California WaterFix would allow continued diversions at the north Delta intakes.

The new northern Delta intakes provided by California WaterFix would greatly improve the reliability of SWP and CVP deliveries under future climate change conditions. California WaterFix would allow for additional water diversions during extreme wet periods or rapid snowmelt events, both of which are predicted to increase in

frequency with climate change. Additionally, the location of the north Delta diversion intakes is less vulnerable to the effects of saltwater intrusion.

REDUCING SEISMIC RISKS

In 2009, DWR released the final Delta Risk Management Strategy (DRMS) Phase 1 Report. The report evaluated the risk and consequences to California and the Delta associated with the failure of Delta levees and concluded that a seismic event is the single greatest risk to levee integrity. The US Geological Survey found a 62 percent probability of a magnitude 6.7 or greater earthquake occurring in the San Francisco Bay Area between 2003 and 2032. The DRMS Phase 1 Report estimated that a major earthquake could result in multiple levee failures that would simultaneously flood 20 or more Delta islands. Under such a scenario, SWP and CVP exports could be interrupted for up to one and a half years.

Implementing California WaterFix would help reduce the risks from a catastrophic seismic event in the Delta. With the uncertainty of where a seismic event might occur, the addition of the new north Delta diversion and conveyance facilities provides redundancy in critical water supply infrastructure. Additionally, all California WaterFix infrastructure would be built to meet current seismic standards, as applicable.

ENHANCE ECOSYSTEM FISHERY HABITAT THROUGHOUT DELTA

The environmental benefits of California WaterFix include reduced south Delta pumping, providing a more natural upstream-to-downstream flow pattern during periods important for fishery protection and less direct fish entrainment in the south Delta diversion facilities. The proposed project also offers mitigation measures that would improve the existing environmental conditions as well as mitigate the effects of the proposed project.

Improved Flow Patterns in the Delta

Current pumping in the south Delta causes water from the Sacramento, Feather and American rivers to be pulled across the Delta into the south Delta. This cross-Delta water movement can confuse migrating salmon heading for the ocean or trying to return to their natal streams. As a result, migrating salmon may take longer to reach the sea or have difficulty finding their spawning grounds. With California WaterFix, south Delta water diversions would be reduced, improving flow and habitat conditions for salmonids.

Reduced south Delta pumping also could lessen direct entrainment in existing south Delta water facilities. For example, when a high turbidity pulse flow comes down the Sacramento River, diversions could be switched to the north Delta. This operational flexibility would help avoid drawing that turbidity, and potentially Delta smelt, toward the south Delta pumping facilities. Conversely, when salmon are migrating out of the upper tributaries and into the Sacramento River, diversions could be switched to the south Delta, away from the main migratory routes. The flexibility of having diversion facilities in the north and the south would provide opportunities to preferentially operate the facilities to minimize effects to sensitive fish species.

Physical Habitat Actions

The California WaterFix biological opinions and the EIR/EIS incorporate a variety of measures designed to mitigate potential construction and operation impacts and to enhance environmental conditions in the Delta.

With the State-directed pivot from the Bay-Delta Conservation Plan (BDCP) to California WaterFix in April 2015, many of the previously proposed BDCP Conservation Measures were no longer applicable to the newly proposed preferred alternative. However, some actions were adopted as part of the California WaterFix alternative. These actions, identified in the Table 4, below, consist primarily of habitat restoration, protection, enhancement, and management activities.

TABLE 4: ENVIRONMENTAL COMMITMENTS UNDER CALIFORNIA WATERFIX

Environmental Commitment 3: Natural Communities Protection and Restoration	
Valley/Foothill Riparian	Up to 103 acres
Grassland	Up to 1,060 acres
Vernal Pool Complex and Alkali Seasonal Wetland Complex	Up to 188 acres
Nontidal Marsh	Up to 119 acres
Cultivated Lands	Up to 11,870 acres
Total:	Up to 13,340 acres
Environmental Commitment 4: Tidal Natural Communities Restoration	Up to 295 acres
Environmental Commitment 6: Channel Margin Enhancement	Up to 4.6 levee miles
Environmental Commitment 7: Riparian Natural Community Restoration	Up to 251 acres
Environmental Commitment 8: Grassland Natural Community	Up to 1,070 acres
Environmental Commitment 9: Vernal Pool and Alkali Seasonal Wetland Complex Restoration	Up to 48 acres
Environmental Commitment 10: Nontidal Marsh Restoration	Up to 832 acres
Environmental Commitment 11: Natural Communities Enhancement and Management	At sites protected or restored under Environmental Commitments 3–10
Environmental Commitment 12: Methylmercury Management	At sites restored under Environmental Commitment 4
Environmental Commitment 15: Localized Reduction of Predatory Fishes	At north Delta intakes and at Clifton Court Forebay
Environmental Commitment 16: Nonphysical Fish Barrier	At Georgiana Slough

[Source: Final EIR/EIS (2016), Table 3-9, Page 3-55]

The final biological opinions add 80 acres of rearing habitat upstream on the Sacramento River and an additional 1,800 acres of tidal habitat restoration in the Delta.

In addition to the enhancement actions identified above, a variety of construction-related environmental commitments, best management practices, and avoidance and minimization measures have been incorporated that would be implemented as part of the construction activities. These actions have been designed to lessen or eliminate potential effects to environmental resources during construction of the new conveyance infrastructure and ancillary facilities. Some measures have been specifically developed to provide enhanced protection to sensitive species and their habitats. These include measures for the following resources: vernal pool crustaceans, California tiger salamander, California red-legged frog, valley elderberry longhorn beetle, Swainson's hawk, California clapper rail, Greater sandhill crane, tricolored blackbird, Suisun song sparrow, yellow-breasted chat, least Bell's vireo, western yellow-billed cuckoo, western burrowing owl, San Joaquin kit fox, riparian woodrat and riparian bush rabbit, salt marsh harvest mouse, and Suisun shrew.

The benefits of the fishery habitat created and restored through California WaterFix include:

- Improved habitat conditions along important juvenile salmon migration routes;
- Restored tidal and non-tidal wetlands;
- Restored native riparian forest habitat;

- Increased food production;
- Increase spawning and rearing areas;
- Natural refuge from predators and changing climate conditions;
- Improved connectivity between existing areas of natural habitat.

These environmental benefits combined with other State-sponsored programs currently underway to restore natural communities and ecological processes throughout the Delta. Three such programs include California EcoRestore, Delta Smelt Resiliency Strategy, and Sacramento Valley Salmon Resiliency Strategy. Highlights of the restoration goals of these programs are outlined below.

In addition to the mitigation activities above, California EcoRestore represents the state's near-term effort to accelerate habitat restoration in the Delta. California EcoRestore is being developed in parallel to California WaterFix, but separate from the mitigation requirements related to the construction and operation of the project. EcoRestore includes the restoration necessary to achieve regulatory requirements of the 2008 and 2009 biological opinions for existing SWP and CVP operations as well as additional projects to help improve the long-term health of the Delta unrelated to the operations of the water projects. In total, EcoRestore seeks to advance at least 30,000 acres of habitat restoration. Those 30,000 acres include:

- 3,500 acres of managed wetlands;
- At least 17,500 acres of floodplain restoration;
- 9,000 acres of tidal and sub-tidal habitat restoration;
- At least 1,000 acres of aquatic, riparian and upland habitat projects and multi-benefit flood management projects.

The state of California also has committed to improving conditions for species through the Delta Smelt Resiliency Strategy and the Sacramento Valley Salmon Resiliency Strategy. These plans contain actions that can be achieved in the near-term to improve the status of the species.

The Delta Smelt Resiliency Strategy was developed by the State in 2016 to voluntarily address the immediate and near-term needs of Delta smelt to promote their resiliency to drought and variable habitat conditions. The primary objective of the Delta smelt strategy is to improve the status of the species through management actions meant to address many of the environmental and habitat stressor of the species. Although specific implementation details are still under development, the actions included in the Delta Smelt Resiliency Strategy include:

- Aquatic weed control;
- North Delta food web adaptive management projects;
- Outflow augmentation;
- Reoperation of the Suisun Marsh salinity control gates;
- Sediment supplementation in the low salinity zone;
- Spawning habitat augmentation;
- Roaring River distribution system food production;
- Coordinated and managed wetland food and drain operations in Suisun Marsh;
- Franks Tract Restoration Feasibility Study;
- Adult fish salvage operation during summer and fall;
- Stormwater discharge management;
- Rio Vista Research Station and Fish Technology Center;
- Near-term Delta smelt habitat restoration.

The Sacramento Valley Salmon Resiliency Strategy has been prepared by the State to voluntarily address the needs of sensitive Chinook and steelhead salmon. The actions included in this strategy represent a variety of habitat restoration management actions necessary to improve the immediate and long-term resiliency of Sacramento Valley salmonids. Although not all known stressors affecting salmonids can be addressed, this strategy is intended to focus on habitat restoration actions critical to improving population resiliency to known and future stressors associated with spawning and rearing habitat, through-Delta survival, and adult fish passage. The actions contained in the Sacramento Valley Salmon Resiliency Strategy include:

- Multiple actions on Battle Creek;
- Provide instream flows to protect Chinook salmon and steelhead on Deer Creek, Mill Creek, Antelope Creek and Butte Creek;
- Restore fish passage and habitat in Upper Sacramento tributaries;
- Implement McCloud reintroduction plan;
- Improve fish habitat by removing Sunset Pumps Rock Dam on Feather River;
- Restore off-channel rearing, streambank, and riparian habitats and migratory conditions along Upper, Middle, and Lower Reaches of the Sacramento River;
- Complete fish screen construction on major diversions along the Sacramento River;
- Improve Sutter Bypass and associated infrastructure to facilitate adult fish passage and improved stream flow monitoring;
- Improve Yolo Bypass adult fish passage;
- Increase juvenile salmonid access to Yolo Bypass, and increase duration and frequency of Yolo Bypass floodplain inundation;
- Construct permanent Georgiana Slough non-physical barrier;
- Restore tidal habitat in the Delta.

California WaterFix would include implementation of portions of both of the resiliency plans.

Consistency with Delta Conveyance Criteria

Recognizing the significance of the supply, and the need to modernize the state's conveyance system, Metropolitan's Board of Directors adopted the Delta Action Plan and Delta Conveyance Criteria ("Conveyance Criteria") in June 2007 and September 2007, respectively. As described in earlier sections of this white paper, and summarized in Table 5, the operational aspects of California WaterFix meet the Board's adopted Delta Conveyance Criteria by providing water supply reliability and improved water quality in an environmentally responsible manner.

TABLE 5: DELTA CONVEYANCE CRITERIA

Board-Adopted Delta Conveyance Criteria	California WaterFix
Enhance Ecosystem Fishery Habitat Throughout Delta	<ul style="list-style-type: none"> Provides extensive restoration of tidal marshes and channel margin habitat.
Allow Flexible Pumping Operations in a Dynamic Fishery Environment	<ul style="list-style-type: none"> Three new intakes in the northern Delta, along with the existing State Water Project intake in southern Delta, create the necessary flexibility to avoid conflicts between different fishery needs. The ability to manage the system using north and south Delta diversion locations, allow for improved flow patterns in the Delta to benefit fish during fish sensitive times.
Provide Water Supply Reliability	<ul style="list-style-type: none"> The California WaterFix proposal is consistent with Metropolitan's IRP.
Improve Export Water Quality	<ul style="list-style-type: none"> Water quality from new northern Delta intakes is improved; salinity, for example, is improved approximately 20 percent.
Reduce Seismic Risks	<ul style="list-style-type: none"> Twin tunnels to convey water from northern Delta would protect future critical supply needs from natural disasters.
Reduce Climate Change Risks	<ul style="list-style-type: none"> Intakes in northern Delta are upstream of predicted long-term salinity intrusion due to climate change.

Considering Delta Communities and Environment

CALIFORNIA WATERFIX IS SIZED TO PROTECT THE DELTA ENVIRONMENT

The proposed California WaterFix was originally planned as a 15,000 cfs diversion facility. In response to consideration by the fishery agencies regarding intake size, and issues raised in the environmental review process that included Delta community concerns, the project was reduced to a 9,000 cfs diversion facility. A 9,000 cfs facility was selected over a smaller facility (i.e., 3,000 cfs) because the smaller facility would not serve the project purposes of a more reliable water supply and protection of the environment. A copy of the letter from the California Natural Resources Agency dated February 19, 2014 and memorandum providing analysis and the need for the importance of a 9,000 cfs facility is available at the following link:

http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Natural_Resources_Agency_Response_Re_NRDC_Portfolio_2-19-14.sflb.ashx

According to the agency, a 3,000 cfs facility would not meet the project purposes because a facility of that reduced size would lack redundancy and would not provide sufficient benefits to justify the cost. A 3,000 cfs facility would also fail to provide fishery benefits because pumping would continue to be predominantly in the south Delta. Operational flexibility to better manage water quality and species concerns would also be largely non-existent with a smaller facility.

CALIFORNIA WATERFIX IS DESIGNED TO AVOID IMPACTS TO DELTA COMMUNITIES

As detailed in the first white paper, numerous refinements over the years have dramatically reduced the short- and long-term project impacts. Switching from a canal to tunnel conveyance design was the largest such modification, which preserves Delta farms, avoids every Delta community, maximizes the use of public lands, and minimizes the need to acquire private property.

California WaterFix was refined to include other important modifications to reduce or avoid impacts to the Delta area:

- Reducing visual impacts near the community of Hood;
- Increase the use of state-owned property;
- Eliminating all pumping plant facilities adjacent to the three proposed intakes and consolidating all necessary pumping at the existing SWP site at Clifton Court Forebay;
- Eliminating numerous permanent power lines in the Delta and reduce power requirements;
- Eliminating tunnel launch facilities on Staten Island, a popular destination for Sandhill Cranes and bird watchers, to protect wildlife habitat;
- Removing planned power transmission lines near the Stone Lakes Wildlife Refuge.

The construction footprint of California WaterFix – less than 2,000 acres – represents about one-third of 1 percent of the acreage in the Delta region. Significant changes to the proposed California WaterFix facilities and operations made throughout the planning process reduced the overall project footprint by one-half of its original size, greatly minimizing community impacts.

California WaterFix Would Protect In-Delta Agricultural and Municipal Water Quality

California WaterFix must adhere to the in-Delta water quality objectives and criteria set by the State Water Board for the protection of urban, agricultural, and fishery beneficial uses. DWR and Reclamation constantly monitor Delta water quality conditions. Their water system operational decisions take into account real-time conditions as well as regulatory requirements.

The state and federal water projects have been in compliance with SWRCB water quality standards in the Delta 98.9 percent of the time over the past 37 years. (Source: J. Leahigh Power Point, SWRCB Hearing Proceedings Regarding Changes in Water Rights for the California WaterFix Project, DWR-4, errata, p. 18). The SWP and CVP exceed water quality standards from time-to-time because of extreme and sometimes uncontrollable circumstances or unforeseen weather conditions. There are some D-1641 standards that are currently met 100 percent of the time, while some are met less often. For example, the agricultural salinity standard at the Old River at Tracy is met less often because of local sources of salinity and because the SWP and CVP are generally unable to control salinity at that location.

With California WaterFix, the SWP would continue to provide fresh water to in-Delta agricultural and municipal diverters by continuing to satisfy the water quality requirements contained in D-1641 to protect each of the beneficial uses defined by the SWRCB.

Modeling of future water quality under California WaterFix generally shows that compliance with D-1641 water quality standards is the same under California WaterFix as compared to the future without the project. The only potential exception is agricultural water quality at the Emmaton compliance location. Under certain limited conditions, modeling shows water quality at Emmaton is somewhat more saline with the project than without. However, as DWR testified before the SWCRB, real-time actions that project operators take to avoid water quality exceedances cannot be modeled. Thus the modeled Emmaton results are modeling anomalies that would not actually occur in the future under actual operations.

Managing Uncertainties

Given the uncertainties involving the effects of water operations on listed species and the ecological benefits from enhanced outflow and habitat restoration, California WaterFix incorporates processes designed to address uncertainty in scientific understanding and reduce risks to sensitive resources and critical water supplies.

Table 6 highlights some of the key uncertainties and mitigation measures associated with the operations of California WaterFix. The addition of north Delta diversions, and the operational flexibility provided by dual conveyance facilities would help to mitigate some of these uncertainties directly. In addition, a commitment to continue collaborative science efforts and a robust Adaptive Management Program would play an essential role in managing many of these future uncertainties.

TABLE 6: KEY UNCERTAINTIES AND MITIGATION MEASURES

Key Uncertainties	Mitigation Measures
Regulatory Uncertainties	<ul style="list-style-type: none"> Adaptive Management Program would inform SWP and CVP operations under existing regulations, inform implementation of California WaterFix initial operational criteria, and inform SWP and CVP operations under future regulations with California WaterFix. North Delta diversions would allow flexibility to minimize fish and water quality impacts. Real-time operations would adjust to observed conditions to limit effects on fisheries.
Fisheries and Ecosystem Uncertainties	<ul style="list-style-type: none"> Adaptive Management Program would inform habitat restoration and other mitigation measures. Collaborative science efforts would continue to advance the field of knowledge surrounding project operations and fisheries. Efforts to restore habitat and decrease other stressors would help improve the health of the Delta ecosystem and fisheries. Real-time operations would adjust to observed conditions to limit effects on fisheries.
Seismic Risks	<ul style="list-style-type: none"> North Delta diversions would be physically isolated from the water quality impacts of a catastrophic levee failure event. Infrastructure would be built to a high seismic resiliency level. Additional conveyance would be available following seismic events to restore supplies to project users.
Climate Change Risks	<ul style="list-style-type: none"> North Delta Diversions would be physically isolated from the impacts of salinity intrusion due to sea-level rise. Additional diversion capacity and operational flexibility would allow for increased diversion to reduce impacts of lost natural storage from snowpack. Additional operational flexibility would allow for increased diversions during high-flow storm events. Increased diversion and storage of high river-flow events would help protect against more frequent and extreme dry conditions.

ADAPTIVE MANAGEMENT

Scientific uncertainty exists regarding the Delta ecosystem, including the needs of protected fish species, the effects of SWP and CVP operations on those species and their habitats, and the related operating criteria and other actions intended to minimize or mitigate those effects. To address these uncertainties, California WaterFix proposes a structured program for conducting collaborative science and adaptive management.

The Adaptive Management Program would be implemented consistent with an agreement between DWR, Reclamation, USFWS, NMFS, CDFW, and water contractors. The Adaptive Management Program would be implemented to enhance application of science to support decision making related to the operations of the SWP and CVP. The California WaterFix Adaptive Management Program includes a collaborative process for decision-making that would be essential to the success of the overall program. Key to this is the establishment of the Interagency Implementation and Coordination Group (IICG). Convened by Reclamation and DWR, the IICG would have primary responsibility for coordinating and implementing the Adaptive Management Program. The IICG would be composed of one representative from each of the “Five Agencies” (DWR, Reclamation, USFWS, NMFS, and CDFW) as well as one each from the participating SWP and participating CVP contractors. Metropolitan would participate in the Adaptive Management Program through its representation by the water contractors.

The Adaptive Management Program’s broad purposes include the ability to (1) undertake collaborative science, (2) guide the development and implementation of scientific investigations and monitoring for both compliance and adaptive management, and (3) apply new information and insights to management decisions and actions. Adaptive management would determine the effectiveness and necessity of the operational criteria based on the best scientific and commercial data available when California WaterFix becomes operational.

The Adaptive Management Program includes monitoring and studies to determine the effectiveness and necessity for the initial operating criteria that would be enacted as part of the federal and state Endangered Species Act authorizations. These scientific investigations may lead to changes in the initial operating criteria prior to or after California WaterFix becomes operational. This approach would help address scientific uncertainty and identify opportunities to better refine operations of the new water conveyance facility to further species needs while improving water supply.

The adaptive management approach for the California WaterFix describes the interrelationship between the identification of uncertainties, development of management questions, objectives, management alternatives, monitoring and research design, synthesis, and decision making. The four-phase process diagram shown in Figure 9 illustrates the major components of the proposed adaptive management process.

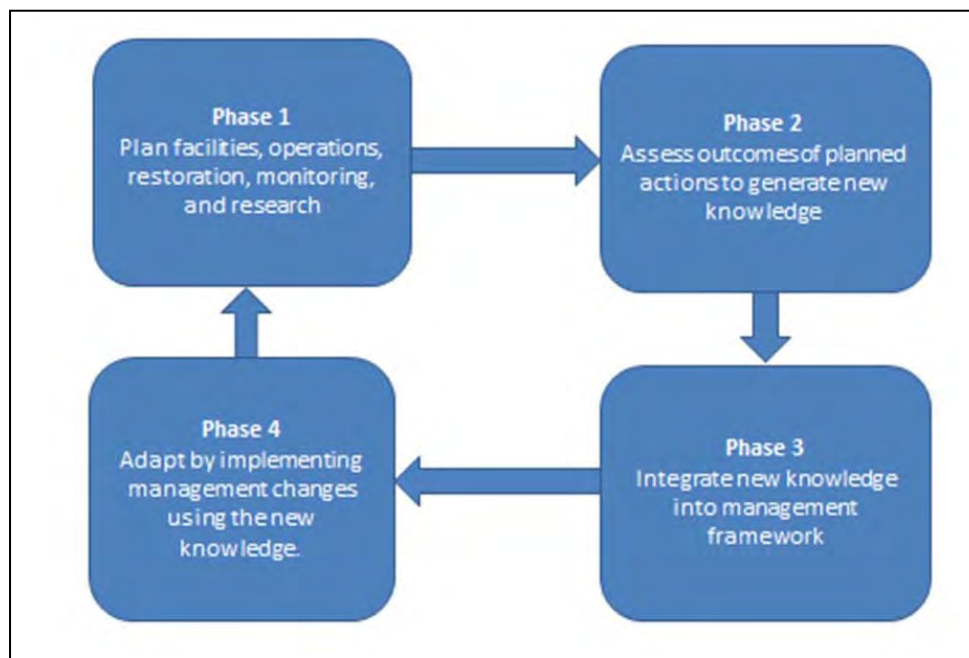


FIGURE 9: ADAPTIVE MANAGEMENT PROCESS

REAL-TIME OPERATIONS

As part of California WaterFix, real-time operations for existing Delta facilities and the new north Delta diversion facilities would be a part of the California WaterFix operating criteria. Real-time operations are meant to provide short-term adjustment to operations in response to observed environmental conditions to enhance endangered species protections while maximizing water supply benefits.

UPDATING SCIENCE TO SUPPORT DELTA FISH

In addition to the efforts of the Adaptive Management Program to advance science associated with operation of the SWP and CVP, Metropolitan would continue its independent science efforts for the Delta. Metropolitan's proactive science efforts supports water supply reliability and ecosystem restoration by reducing scientific uncertainty, driving better management decisions and project operations, and fostering effective policies and regulations.

An example of how such science efforts has resulted in real and meaningful change in the Delta is with respect to nutrients. Nutrient discharges to the Bay-Delta Estuary can affect phytoplankton growth and the composition of the phytoplankton community. Scientific studies addressing nutrient effects on phytoplankton and the food web that supports Delta fish led to more stringent water quality regulatory requirements and to investments to upgrade the Sacramento Regional County Sanitation District wastewater treatment plant.

As another example, Metropolitan participates in the Delta Condition Team process coordinated by the state and federal agencies to closely monitor trawl and turbidity data and evaluate turbidity forecast information as it relates to spawning conditions for Delta smelt. As part of its participation, staff collaborated with other technical scientists and experts to identify water project measures to reduce movement of turbidity toward the export pumps during the first significant storm of the wet season. Taking such measures to reduce the intrusion of turbidity into the south Delta reduced the number of adult Delta smelt spawning near the water project pumps and greatly reduced the need to reduce exports later in the season. This management action allowed more effective operations that protected the fish while at the same time preventing unnecessary restrictions on the SWP and CVP projects.

Conclusion

The reliable delivery of high-quality water through the Delta faces many challenges and risks, including fishery declines, earthquakes, floods, and rising sea levels. Despite previous actions and efforts by local, state, and federal agencies to address these issues, the region's ecosystem has continued to decline. California WaterFix addresses these long-standing issues with increased operational flexibility, new system capacity that provides more assurances, and adaptive management strategies to ensure improved water supply reliability while protecting habitat, species, and the Delta ecosystem. The project has undergone an unprecedented level of public review, comment, and scientific input. Extensive analyses and risk assessments have been conducted to better understand and address risks commonly associated with infrastructure projects of this size. For California WaterFix, the key risk areas have been identified, and tools to mitigate these risks have been incorporated into the project's risk management process and operating criteria.

In addition to meeting the needs of the state, California WaterFix as proposed meets all of the Delta Conveyance Criteria adopted by Metropolitan's Board in 2007. Metropolitan's 2015 Integrated Resources Plan Update, as adopted by Metropolitan's Board in 2016, includes a goal to stabilize SWP supplies, to pursue a successful outcome in California WaterFix, and to establish efforts for long-term average supplies of about 1.2 million acre-feet. The proposed project would achieve this goal. The physical project and the operational criteria meet the attributes of a successful project based on staff analysis, Metropolitan's long-term objectives, and the state's coequal goals.

Note: For additional information on Metropolitan's policies related to California WaterFix, including a policy white paper on infrastructure improvements that would modernize the state's water system, see <http://mwdh2o.com/> or <http://www.mwdh2o.com/DocSvcPubs/WaterFix/>

Attachment to Modernizing the System: California WaterFix Operations

ACRONYM/TERMINOLOGY LIST

ITEM	DESCRIPTION
AMMs	Avoidance and minimization measures
BDCP	Bay Delta Conservation Plan
BiOps	Biological Opinions from the Fish and Wildlife Service and the National Marine Fisheries Service
BMPs	Best management practices
CALSIM	DWR modeling tool used to simulate SWP and CVP operations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFS	Cubic feet per second
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
D-1641	Water Rights Decision-1641, implements the Bay-Delta Water Quality Control Plan (WQCP)
DRMS	Delta Risk Management Strategy
DWR	Department of Water Resources
EC	Electrical Conductivity
ECHO	2015 Delivery Capability Report Existing Conveyance High Outflow scenario
ECLO	2015 Delivery Capability Report Existing Conveyance Low Outflow scenario
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Endangered Species Act
IICG	Interagency Implementation and Coordination Group
IRP	Integrated Water Resources Plan, Metropolitan's blueprint for long-term water supply reliability
MAF	Million Acre-Feet
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
OMR	Old and Middle River
RDEIR	Recirculated Draft Environmental Impact Report

ITEM	DESCRIPTION
Reclamation	Federal Bureau of Reclamation
SDEIS	Supplemental Draft Environmental Impact Statement
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
USFWS	U.S. Fish and Wildlife Service
WQCP	Bay-Delta Water Quality Control Plan
X2	Indicator of the location of the low salinity zone, thought to be biologically important to Delta species

**DESERT WATER AGENCY
MEDIA INFORMATION
JULY 2017**

DATE	PACKET PAGE	MEDIA SOURCE	ARTICLE
07/04/17	1	THE PUBLIC RECORD	CVWD Changes Sewer Rate Structure
07/07/17	2-3	PRESS ENTERPRISE	Bill Would Curb Massive Cadiz Desert Water Project
07/07/17	4-6	THE DESERT SUN	Bill Would Probe Groundwater Plan
07/09/17	7-11	THE DESERT SUN	Do Tribes Have Special Groundwater Rights?
07/21/17	12-13	THE DESERT SUN	Water Districts Rethink Elections

The Public Record

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\$1.50 - PER SINGLE ISSUE

SERVING ALL OF THE DESERT CITIES AND UNINCORPORATED AREAS OF RIVERSIDE COUNTY IN THE COACHELLA VALLEY

The Public Record

BUSINESS NEWS

CVWD CHANGES SEWER RATE STRUCTURE

Coachella Valley Water District's (CVWD) Board of Directors adopted a new sewer rate structure, which simplifies how the rates are calculated and reflects the demand that individual customers place on the sewer system.

The new structure, effective January 1, 2018, is based on industry standards and does not increase revenue received from sewer charges. CVWD has not changed sewer rates since 2010.

For residential customers, changes include elimination of different rates for people living in different cities within CVWD's service area. As a result, homeowners in La Quinta, Thousand Palms and the Salton Sea communities will see a decrease on their sewer bills.

In addition, homeowners in Cathedral City, Palm Desert, Rancho Mirage and Indian Wells will see an increase on their sewer bills of \$1.44 per year, which is billed on annual property tax bills.

For businesses, changes include elimination of the Supplemental Sewer Cleaning Charge and tying rates to actual water use, which translates into demand on the sewer system.

Sewer rates are now based on the estimated amount of wastewater a customer discharges into the sewer system. This is calculated using a customer's average water use over the prior three years and assumptions regarding the amount of water returned to the sewer system as wastewater. The three-year average water use calculation will be updated each year, thereby allowing for those who reduce their water use to lower their monthly sewer bills.

Under this new structure, about 40 percent of businesses will see decreases in their sewer bills (paid monthly with water bills) and about 60 percent of businesses will see increases in their sewer bills. Some of the increases will be significant.

CVWD staff members are available to answer questions about the new rate restructure and how it could affect your business. Please call Assistant Director of Engineering Carrie Oliphant at (760) 398-2661 ext. 2268 for more information or to schedule a meeting.

Revenues from sewer service charges are used to operate and maintain, repair, replace, and upgrade a sewer system that includes 1,129 miles of pipe that lead to five wastewater reclamation plants that treat an average 17 million gallons of wastewater every day.

For general information about rate changes, visit www.cvwd.org/ratechanges or call (760) 398-2651.

The Coachella Valley Water District is a public agency governed by a five-member board of directors. The district provides domestic and irrigation water, agricultural drainage, wastewater treatment and reclamation services, regional storm water protection, groundwater management and water conservation. It serves approximately 109,000 residential and business customers across 1,000 square miles, located primarily in Riverside County, but also in portions of Imperial and San Diego counties.

MOJAVE DESERT

Bill would curb massive Cadiz desert water project

Company calls new reviews a delay tactic

By David Danelski, July 7, 2017

The battle over plans by a Los Angeles company to sell water pumped from aquifers underneath Mojave Desert conservation areas heated up again this week when state legislation was amended to require a new round of state reviews.

The legislation's new language, by Assemblywoman Laura Friedman, D-Glendale, would stop major pumping until state land and wildlife officials determined that groundwater extractions would not harm wildlife or cultural resources.

The legislation is in response to the Cadiz desert water project that has been prioritized by the Trump administration.

Cadiz officials called the legislation a flawed attempt to further delay the project.

Cadiz wants to pump groundwater from wells on land its owns in the Cadiz Valley that is surrounded by the Mojave Trails National Monument. These wells would draw water from connected aquifers below the Cadiz, Bristol and Fenner valleys that supply springs within the monuments as well as the Mojave

National Preserve. The water would be piped more than 40 miles across federal lands along a railroad right of way to the Colorado River Aqueduct. It would then be ferried to water customers in suburban Southern California.

The project has been staunchly opposed by environmental groups and other desert advocates, including Sen. Dianne Feinstein, D-Calif., who sponsored the California Desert Protection Act of 1994 that created the Mojave National Preserve and protected 69 wilderness areas between the Mexican border and the town of Bishop.

If it passes the Legislature and is signed by Gov. Jerry Brown, the law also would be called the California Desert Protection Act.

Contacted by cellphone, Friedman, a first-year legislator, said her aim is to conserve the water below the desert conservation areas that wildlife depends upon.

"This is the water that supports the desert's ecosystem, and it is vitally important," she said.

The law would prohibit taking groundwater from a large swath of the Mojave unless the State Lands Commission, working with the state Department of Fish and Wildlife, finds that pumping "will not adversely affect the natural or cultural resources of those federal and state lands," the bill says.

Friedman said the Cadiz project could go forward under the law if the new state reviews find it does no harm.

The Cadiz company issued a statement Thursday that contends the legislation is designed "to further delay the Cadiz Water Project" by using a "gut and amend" legislative process, which is "universally condemned." (The original bill, AB 1000, pertained to water meter standards.) The company's statement said the project was previously reviewed under state environmental disclosure laws and "found to have no adverse impacts on the environment." Those reviews were done about 17 years ago.

The Cadiz project would “create a safe, sustainable water supply for 400,000 people,” as well as about “\$1 billion economic activity and close to 6,000 jobs,” the company statement added.

The Santa Margarita Water District in southern Orange County plans to buy between 5,000 and 10,000 acre-feet a year, said district spokesman Jim Leach. The project would pump as much as 50,000 acre-feet a year, depending on how the water tables are affected by the extraction, he said.

“We are really disappointed,” Leach said. “We see this legislation as a roadblock to delay the project.” But Feinstein and other critics maintain the Cadiz project is unsustainable.

In May, the senator released a letter from the U.S. Geological Survey that said a 2000 analysis by the agency found that the Cadiz, Bristol and Fenner basins naturally recharged water at rates of 2,000 to 10,000 acre-feet a year — just a fraction the rate water would be pumped out of these basins.

The Trump administration has made moves favorable to the project. In April, it rescinded a 2014 policy directive that was used to find in 2015 that Cadiz needed to obtain a federal right of way permit and thus had to complete comprehensive environmental studies before it could build a water pipeline in the railroad right of way.

The Trump transition team also put Cadiz on a list of priority projects.

“If the federal government is not going to do these environmental reviews, the state has a responsibility to do them,” Friedman said.



BILL WOULD PROBE GROUNDWATER PLAN

Environmentalists worry about impact of selling water

Sammy Roth, The Desert Sun, July 7, 2017

A new bill in the state Legislature would require California to review the environmental impacts of a company's proposal to pump groundwater from beneath the Mojave Desert and sell it to Southern California cities — a controversial plan that was slowed down by President Obama, but which appears to have the backing of the Trump administration.

Cadiz Inc. hopes to pump 16.3 billion gallons of groundwater annually in the heart of the desert, about 75 miles northeast of Palm Springs, on land surrounded by Mojave Trails National Monument and near Mojave National Preserve. Conservation groups say the project would drain a fragile desert aquifer by removing more water from the groundwater basin than nature puts back in, harming ecosystems that depend on that water, including plants and animals within the pre-serve. Cadiz hotly contests those claims, pointing to its own studies showing the project wouldn't harm the environment.

Legislation introduced Wednesday by state Assemblymember Laura Friedman, D-Glendale, would put those competing claims to the test.

Friedman's legislation, AB 1000, singles out Cadiz by requiring state regulators to review projects that seek to transfer groundwater away from desert lands in the vicinity of national monuments, national preserves and other protected spaces. The State Lands Commission, working with the California Department of Fish and Wildlife, would be tasked with ensuring that the transfer "will not adversely affect the natural or cultural resources, including groundwater resources or habitat," of protected lands nearby.

Friedman said she grew up in south Florida and has watched the Everglades slowly deteriorate over the course of her lifetime. She doesn't want to see the same thing happen to the Mojave Desert.

"That area is a very special area, really for everyone in the state ... It's a beautiful area with a very unique and precious ecosystem," Friedman, a first term lawmaker who until recently served on the board of the Metropolitan Water District of Southern California, said in an interview.

"The Trump administration and the Cadiz project are changing the rules by removing requirements for federal environment review," Friedman added. "It's up to California now to protect its own land and waters."

Officials at the federal Interior Department temporarily blocked Cadiz under President Obama, saying a pipeline to carry the groundwater from the project site to the Colorado River Aqueduct couldn't be built under an existing railroad permit granted in 1875. That decision would have required the company to ask the federal government for a new permit, leading to a thorough review under the National Environmental Policy Act.

But the Trump administration took what looked like a first step toward reversing that ruling earlier this year, scrapping an Obama-era guideline that underpinned the Cadiz decision. Conservation groups are convinced a formal decision to allow Cadiz to use the existing railroad right-of-way is

forthcoming. They point out that Trump's presidential transition team included Cadiz on a list of 50 priority infrastructure projects late last year, and that Trump's nominee for deputy Interior secretary, David Bernhardt, works alongside Cadiz CEO Scott Slater at the law firm Brownstein Hyatt Farber Schreck. Bernhardt and Slater are shareholder in the firm, which itself owns shares in Cadiz Inc.

Supporters of Friedman's bill include the National Parks Conservation Association, the California League of Conservation Voters, the Hispanic Access Foundation and U.S. Sen. Dianne Feinstein, a longtime opponent of the groundwater pumping project. David Lamfrom, California desert director for the National Parks Conservation Association, called Cadiz "the single most harmful project proposed in the California desert."

"We have a pretty good idea about where the Trump administration is on this project," Lamfrom said. "The threat is urgent."

Cadiz spokesperson Courtney Degener called Friedman's bill "a thinly-veiled effort to delay and obstruct a fully-reviewed, approved and lawful new water supply for 400,000 people." She also slammed Friedman for introducing the legislation through the controversial (but common) gut-and-amend process, in which the text of a failed bill is replaced by language dealing with an entirely new subject matter, usually after the deadline to introduce new legislation has passed.

Cadiz has long argued its project wouldn't harm desert ecosystems. The company says the groundwater it wants to pump is now flowing downhill and evaporating from two dry lakes — not feeding desert springs that nourish wildlife, as critics have suggested.

"If we can't do an environmentally benign project which takes water away from no one and basically eliminates waste, it sends really bad signals to everybody else who's looking or hoping to try to do things the right way," Slater said in a 2015 interview.

Conservationists have said the company's studies underestimate the impact the project would have on the groundwater basin, pointing to a 17-year-old evaluation from the U.S. Geological Survey that found rainwater replenishes the aquifer far more slowly than Cadiz has calculated. In 2012, the National Park Service said Cadiz's estimates of natural recharge rates "are not reasonable and should not even be considered."

"A state review would confirm what we already know, which is that the project is highly unsustainable and would cause severe impacts to the California desert and the communities that depend on it," Lamfrom said.

The National Park Service's comments came in response to an environmental review conducted by the Santa Margarita Water District in Orange County, which has signed a contract to buy a portion of the 50,000 acre-feet of water Cadiz hopes to pump every year for the next 50 years. Degener pointed to that environmental review as evidence the groundwater project "has already been thoroughly and publicly reviewed." Several courts have upheld the validity of Santa Margarita's analysis.

"The Project will meet any fair test and critical review that is honestly applied," Degener said in an email.

Cadiz has lined up several powerful supporters, including gubernatorial candidate and former Los Angeles Mayor Antonio Villaraigosa, who once lobbied for Cadiz, and at least 18 members of Congress, including four Democrats, who said in a letter to Interior Secretary Ryan Zinke earlier this year that the project would “create nearly \$1 billion in economic stimulus through investments in local businesses and create 5,900 new jobs.”

Friedman’s bill will be reviewed by the state Senate’s Natural Resources and Water Committee on Tuesday, July 11 at 9 a.m.

“It’s very important that there’s careful environmental review of the project, and I don’t see the Trump administration taking that on seriously,” she said.

Even if Trump rescinds the Obama administration ruling holding up Cadiz, the project wouldn’t move forward right away. Lamfrom said the company still needs a deal with the Metropolitan Water District of Southern California to move water through the Colorado River Aqueduct, plus construction permits to build its 43-mile pipeline to the aqueduct.

It’s also not clear if and when Bernhardt will be confirmed as deputy Interior secretary.

The Senate Energy and Natural Resources committee approved Bernhardt’s nomination by a 14-9 margin last month, but he’s still waiting for a vote from the full Senate.

“As far as we can tell, he is just held up by the Senate’s own schedule. No one has a block or a hold that we’ve heard,” said Aaron Weiss, a spokesperson for the Center for Western Priorities, a Denver-based conservation advocacy group that opposes Bernhardt’s nomination. “It’s just that the Senate isn’t getting anything done.”

DO TRIBES HAVE SPECIAL GROUNDWATER RIGHTS?

Water agencies appeal to Supreme Court in landmark case that could define 'shared resource'

Ian James, The Desert Sun, July 9, 2017

The U.S. Supreme Court has never ruled on whether Indian tribes hold special rights to the groundwater beneath their reservations, and the court will now have a chance to settle the question in a case that could redraw the lines in water disputes across the country.

The case revolves around whether the Agua Caliente Band of Cahuilla Indians has a federally established "reserved right" to groundwater on its reservation in Palm Springs and surrounding areas in the desert.

Two water districts have been fighting the tribe in court for four years, and on Wednesday the districts filed petitions to appeal to the Supreme Court. The Desert Water Agency and the Coachella Valley Water District are challenging a decision by the Ninth Circuit Court of Appeals, which ruled the tribe has a right to groundwater that was established when the federal government created the reservation in the 1870s.

Managers of the water agencies argue the aquifer is a public resource and the tribe has the same rights under California law as all other landowners to use water pumped from the aquifer.

"This case is important because it's about the shared resource," said James Cioffi, president of DWA's board of directors. "We think it's our duty to maintain the ownership of the water for everyone."

Cioffi pointed out that the agency has long provided water to the Agua Caliente tribe for its hotels, casinos and golf courses. He said the motivations behind the tribe's lawsuit remain unclear.

"Certainly it's not about access to the water because they along with everyone else in this community has access to all the water they want," Cioffi said. "We have been partners with the tribe on a lot of their projects and will continue to do so."

He and other board members at the water agencies say they worry that if the tribe prevails, its privileged rights could drive up water costs for customers and complicate efforts to manage groundwater.

The Coachella Valley Water District's legal team said in their 47-page petition to the Supreme Court that water scarcity is one of the most pressing problems facing the western U.S. and that if the appeals court's ruling is allowed to stand, Indian reservations "would have preemptive federal rights that override the vigorous and ongoing state and local efforts to ensure the future availability of groundwater in the West."

The Supreme Court hears a small number of the cases that are petitioned for review, and the court is expected to announce in the fall whether it will take up the Agua Caliente case.

The tribe sued the water agencies in May 2013, seeking to assert rights to a portion of the area's groundwater.

The tribe accuses the agencies of imperiling the aquifer by allowing its levels to decline over the years and by using saltier, less pure Colorado River water to replenish the aquifer. The agencies defend their efforts to combat groundwater overdraft and insist that Colorado River water meets all drinking water standards.

Agua Caliente Chairman Jeff Grubbe has said the case is about securing a "seat at the table" for the tribe to have a voice in decisions about how the aquifer is managed.

The water agencies' officials have questioned Grubbe's comments, saying the tribe is welcome to participate in managing the aquifer as one of the community's stakeholders.

"When you say you 'want a seat at the table,' what does that mean? Because they already have it," said John Powell, Jr., president of CVWD's board. "They have just as much a seat as anybody else, if they want it." Grubbe wasn't available to comment on the water agencies' petitions to the Supreme Court this week. He has said previously that the tribe is taking a long-term view and wants to see the aquifer managed sustainably. He has also suggested the agencies should instead treat the imported water before allowing it to seep down to the aquifer.

Leaders of Native American tribes across the West have been closely watching the case.

A list of 35 tribes and five tribal organizations joined the lawsuit last year, backing the Agua Caliente in a "friend-of-the-court" brief. They said Congress has approved "numerous Indian water rights settlements that recognize and confirm tribes' rights to groundwater."

CVWD has spent more than \$1.1 million on legal bills to date, and DWA has spent more than \$1.5 million – a combined total of nearly \$2.7 million.

Powell said if the water districts lose, he fears that would create uncertainty and "dampen economic activity." He said if the agencies are eventually barred from using Colorado River water to recharge the aquifer, they could be forced to treat the water – which he said would be expensive and unnecessary.

If the tribe wins, the case would continue with other phases to determine whether the tribe owns storage space in the aquifer, whether its rights include a water-quality component and how much groundwater the tribe would be entitled to.

An adjudication process for divvying up groundwater between the tribe and all other water users in the valley would be a very costly, lengthy process, Powell said.

"Everybody's going to be fighting for their piece of the pie. And we don't need to do that. People don't need to fight for water. The beauty of the Coachella Valley is that we don't need to do that, and yet we're heading in that direction," Powell said. "It would be extremely damaging to the Coachella Valley, and that's what we're trying to avoid."

The Agua Caliente tribe relies on the water districts to pump groundwater for its reservation, where thousands of homes are built on leased tribal land. The reservation spreads across more than 31,000 acres in a checkerboard pattern that includes parts of Palm Springs, Cathedral City, Rancho Mirage and the Santa Rosa and San Jacinto mountains.

The tribe, which has more than 400 members, owns the Spa Resort Casino in Palm Springs and the Agua Caliente Casino Resort Spa in Rancho Mirage, and has plans for new subdivisions as well as another casino in Cathedral City.

The case has elicited a range of opinions among residents. Outside a Ralphs supermarket on reservation land, retiree Bob Valdez said he thinks it's wasteful for the water districts to be spending so much money fighting the lawsuit.

"Some agencies just get carried away with power," Valdez said, adding that he thinks the tribe's position makes sense.

Walking out of the CVS Pharmacy, Lamelle Edington said he agreed that the tribe should have a right to groundwater.

"It's their water. They should be able to get what they want out of it first. They should get paid for it, too," said Edington, who lives in Desert Hot Springs.

Other people said they don't want to see the tribe gain control over water.

"I think they're trying to be greedy," said Michael Berzenye, a Palm Springs resident. "They want royalties off of something that should be a public resource."

DWA's lawyers made a similar point in their 100-page petition to the Supreme Court. They noted that in its legal complaint, the tribe "alleges that DWA and CVWD are required to compensate the Tribe for importing and storing water into the groundwater basin that the Tribe allegedly 'owns.'" "Thus, the Tribe seeks money from the water agencies rather than wet water for its reservation needs," DWA said in its petition.

The agencies announced plans to appeal to the Supreme Court in March after the appeals court sided with the tribe.

The case is pushing the courts to define more clearly the boundaries between state administered water rights and federal water rights, and to sort out how groundwater fits into laws drawn up more than a century ago, before the widespread use of mechanical pumps that enabled people to easily tap underground water supplies.

Groundwater and surface water have long fallen under separate, different water-rights systems.

With surface water, California and other western states use a "first-in-time, first-in-right" system in which the first party to use water from a stream or river obtained a priority right. With groundwater, in contrast, California law says landowners have a right to pump water from beneath their property, and no one holds priority rights.

One of the questions in the Agua Caliente case centers on state and federal courts' varying interpretations of a 1908 Supreme Court decision, *Winters v. United States*, which affirmed that Indian tribes are entitled to sufficient water supplies for their reservations.

The Ninth Circuit Court of Appeals said the *Winters* doctrine applies to both surface water and groundwater on federally reserved land – including Indian reservations as well as other lands set aside by the government, such as national forests, national parks and military bases.

CVWD said in its petition that in the Winters case, the tribes on the Fort Belknap Indian Reservation in Montana sued because their water supply was “threatened by settlers who had diverted the river upstream of the reservation and claimed rights to the water.”

CVWD said the purpose of the Winters doctrine “has always been to protect tribal reservations from depletion of the water they need for survival.”

The water district argued that the Agua Caliente tribe’s case is different and that federal reserved rights shouldn’t apply to groundwater at all.

“What the Tribe is seeking... is a federal reserved right to groundwater that the Tribe does not need,” CVWD said in its petition.

The U.S. Department of Justice signed on to the lawsuit in support of the tribe in 2014, saying the federal government has an interest in ensuring water rights for the tribe.

Michael Campana, a professor of hydrogeology and water resources at Oregon State University, said when reservations were created for tribes, one of the aims was to make sure they would be self-sufficient. And for reservations with scant water available from streams or rivers, he said, being self-sufficient usually means relying on water from wells.

“My feeling is that the tribes are entitled to the groundwater,” Campana said. “I would like to see their rights upheld.”

If the tribe prevails before the Supreme Court, other tribes across the country would gain legal backing to assert rights to groundwater, which could in turn strengthen their positions in negotiations or court cases.

Campana said in that scenario, he’d expect to see more negotiations between tribes, states and other agencies over water – and more lawsuits, too.

A victory for the Agua Caliente tribe would set an important precedent that other tribes could rely on when they make similar claims, said Daniel Cordalis, a Navajo lawyer who lives in Northern California’s Humboldt County and has worked on water cases for the Yurok and Navajo tribes.

Many tribes are working toward water rights settlements, with various claims pending before the Secretary’s Indian Water Rights Office, an Interior Department office charged with negotiating and overseeing settlements.

“There are a lot of tribes out there trying to figure out how to assert their water rights and kind of just waiting in line to do so. So there’s a big backlog,” Cordalis said. “It’s hard to get your water rights quantified and decreed.”

If the Agua Caliente tribe wins, he said, “this case is going to reverberate through all of them, every single one.”

Cordalis said he hopes the court sides with the tribe so the law will reflect the fact that surface water and groundwater are connected – and that “they need to be treated as a single resource.” In many areas of California, aquifers have been badly depleted due to heavy pumping.

State officials responded during the drought in 2014 by approving the Sustainable Groundwater Management Act, which calls for local agencies to adopt plans for sustainable water use.

Cities and water districts have been taking steps this year to establish locally-controlled “groundwater sustainability agencies.”

As sovereign nations, Indian tribes aren’t subject to the groundwater law and aren’t required to participate.

Sarah Krakoff, a law professor at the University of Colorado, said if the Agua Caliente tribe prevails, that could “force the kind of dialogue, about how to collaborate on sustainable development of groundwater resources, that the tribes and the states just haven’t really had to have up until now.”

In its petition to the Supreme Court, the Coachella Valley Water District argued that if the appeals court decision stands, it will “drastically complicate, and potentially entirely defeat, these state and local efforts to manage groundwater resources efficiently.”

Groundwater levels have declined over the years in much of the Coachella Valley as water has been pumped from the aquifer for expanding subdivisions, golf courses, resorts and farms.

The water agencies have used water from the Colorado River to partially offset those declines, and the water table has risen around groundwater replenishment ponds in Palm Springs and La Quinta. The biggest declines in the aquifer’s levels – in some areas 90-100 feet or more since the 1950s – have occurred away from those ponds in the middle of the valley.

The water agencies say they have viable long-term plans to combat groundwater overdraft, including a plan to replenish the aquifer with Colorado River water at a facility in Palm Desert.

Some residents agree with the water districts that if the tribe gets preferential rights, that would hurt ratepayers.

“The lawsuit can be withdrawn or settled or left in the courts. Do we really want an outsider telling us how to use our water?” said Andy Vossler, president and CEO of Landmark Golf, which manages golf courses. “If the lawsuit is left in the courts, it will be in the courts for many years to come.”

He said he hopes it’s possible to avoid more costly litigation.

Officials at the two water agencies say they’ve long had a good working relationship with the Agua Caliente tribe, supplying water and meeting its infrastructure needs.

Desert Water Agency’s office building stands on reservation land that was sold to the agency decades ago. The property is adjacent to the Agua Caliente tribal headquarters, separated by a chain-link fence.

Cioffi said DWA would be open to negotiating, but there’s a substantial sticking point: “We’re not in a position to negotiate away the shared water right that we all have.”

Water districts rethink elections

Delays to 2018 could boost voter turnout

Jesse Marx, July 21, 2017

In an attempt to boost voter participation, two local water districts are joining Desert Hot Springs and pushing this year's election to November 2018.

Within five years, nearly all of the local elections in Coachella Valley could be aligned with state Assembly and Congressional races in even-numbered years.

The decision to move this year's elections at the Desert Water Agency and Mission Springs Water District was made voluntarily, although after Gov. Jerry Brown signed a bill prohibiting cities, school districts and special districts from holding elections in odd years under certain circumstances.

Local governments are required to submit a plan by Jan. 1, 2018, but there was some confusion over who qualified. The law expects governments with voter turnout of at least 25 percent less than the average of the previous four statewide general elections, but it didn't provide a standard formula to be used in the calculation.

Earlier this year, Desert Water Agency officials took a look at their past election turnout and determined that they were just under the 25 percent threshold and so close enough to warrant the change.

Moving the election will cost about \$20,000, board president James Cioffi said. But there is a possibility that by consolidating local elections, the agency could end up saving money. That depends on how many candidates are on future ballots and how much paper is required.

"The bottom line is that we want people to understand we represent them and their vote counts, and the more people can engage with us, the better the voter turnout," Cioffi said.

There's a common misperception in the community, said DWA spokesperson Ashley Metzger, that the agency — which has customers in Palm Springs and parts of Cathedral City and Desert Hot Springs — is a private utility. "Seeing our agency appear on the ballot during these statewide elections will help us people understand we're a public agency," she said.

In 2015, more than 15,700 ballots were cast in the DWA board race out of 37,315 registered voters. The change in election dates adds an extra year to the terms of sitting representatives at both water districts and the city of Desert Hot Springs. Those who would have normally been on the ballot in 2017 and 2019 are now on the 2018 and 2020 ballots.

Cioffi acknowledged that by moving the elections forward he and his fellow board members were extending their own terms, but he said that didn't change the fact they'll still need to face re-election. The law signed by Brown, he said, was a good and important one for local communities. John Soulliere, spokesperson for Mission Springs Water District, also said his agency welcomed the increased attention. Regardless of whether the agency qualified for the change, the "tone of the

legislation” put in place, he said, was about boosting transparency and participation, especially in disadvantaged communities.

Three people running for the Mission Springs board in 2015 went unchallenged. The 2013 race garnered 3,338 ballots from among 13,121 local registered voters.

The Coachella Valley Water District holds its elections on even years and so it is exempt from the new law. There was also confusion over whether the law applied to charter cities — such as Palm Springs and Rancho Mirage — because those cities are exempt from certain provisions in the elections code. Last week, Attorney General Xavier Becerra’s office responded, yes, the law applies to charter cities.

Both local cities have crunched their numbers and come to different conclusions. Palm Springs will not need to move its elections, because its turnout has been fairly high, even during odd years.

The city will hold a council election on Nov. 7. Incumbents Ginny Foat and Chris Mills have not said whether they’ll seek reelection. By Tuesday, eight other people had pulled papers.

Rancho Mirage, however, will be moving its elections to even years. To get the discussion rolling on Wednesday, City Attorney Steve Quintanilla said he presented council members with the news. Failure to comply, and put a plan in place by next year, could invite a lawsuit.

Even though the Desert Hot Springs City Council won’t be up for grabs until 2018, voters there are still expected to weigh in this fall on two public-safety tax measures.

There are also two seats up for grabs this year on the Desert Recreation District Board of Directors in districts representing La Quinta, Indio and the eastern unincorporated valley.

DESERT WATER AGENCY
OUTREACH & CONSERVATION
ACTIVITIES

JULY 2017

Activities:

7/06/17	Ashley Metzger was on a live segment with KESQ on careers in water.
7/07/17	DWA hosted a KCLB 93.7 live broadcast promoting Water Breaks.
7/13/17	Ashley Metzger was on a live segment with KESQ on fats, oils and grease.
7/14/17	DWA provided water coolers, cups and bottles to the KCLB 93.7 live broadcast at Desert Ice Castles promoting Water Breaks.
7/14/17	DWA provided water coolers, cups and bottles to the Palm Springs Air Museum for its Friday Flick.
7/15/17	DWA provided water coolers, cups and bottles to the Palm Springs Animal Shelter for its Pittie Pool Party.
7/19/17	The Desert Sun interviewed President Cioffi and staff on the change to even year elections.
7/20/17	Vicki Petek completed two turf buy back post-inspections.
7/20/17	Ashley Metzger was on a live segment with KESQ about conservation awards.
7/21/17	DWA provided water coolers, cups and bottles to the KCLB 93.7 live broadcast at Palm Springs Animal Shelter promoting Water Breaks.
7/24/17	The Wall Street Journal interviewed President Cioffi and staff on water rights litigation with the Agua Caliente Band of Cahuilla Indians.
7/25/17	Ashley Metzger did a ride along on a residential water audit with CVWD.
7/26/17	The Desert Sun discussed the Environmental Working Group report with staff. DWA issued a statement.
7/27/17	Ashley Metzger was on a live segment with KESQ on water infrastructure.

Public Information Releases:

July 05, 2017 – Media pitches & website – DWA files petition with US Supreme Court.

July 21, 2017 – Media release & website – DWA and CV Water Counts Honored
Outstanding Water Savers.

July 26, 2017 – Media statement – EWG report irresponsible

Water Conservation Reviews:

Canyon West Estates

Plaza Villas

Centre Court Club

Riviera Gardens Condos

Marabella Estates

Sunrise Palms

Palm Springs Villas II

City of Palm Springs

Water Conservation Reviews are annual mailings sent to large water users. The Reviews include a 5-year consumption report, facility map, and information brochures. The purpose is to help customers save water by summarizing their consumption, and offering suggestions for reducing usage. Occasionally, after viewing, the recipient may contact DWA for assistance in the form of a Mobile Lab Evaluation.



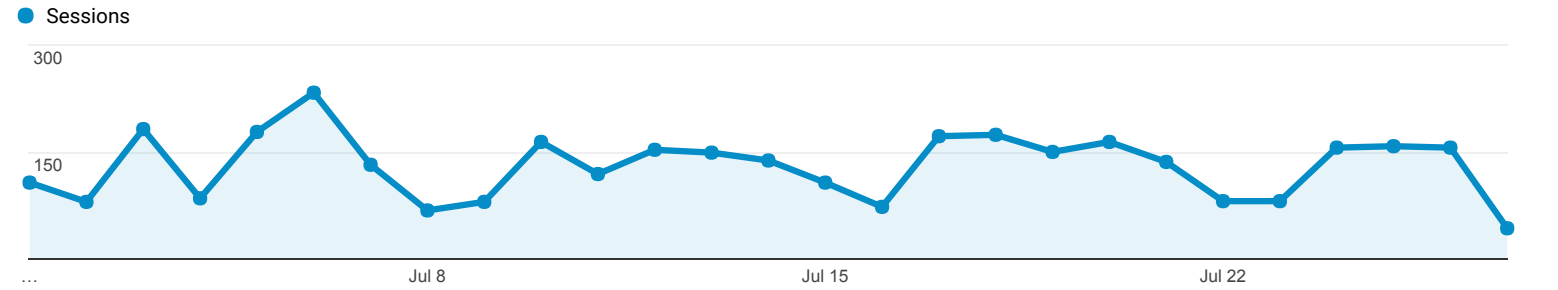
Audience Overview

All Users

100.00% Sessions

Jul 1, 2017 - Jul 27, 2017

Overview



Sessions

3,519

Users

2,774

Pageviews

8,143

Pages / Session

2.31

Avg. Session Duration

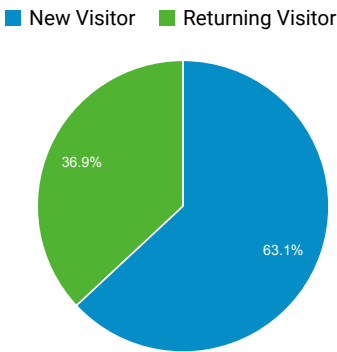
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Bounce Rate

39.30%

% New Sessions

63.03%



Language		Sessions	% Sessions
1.	en-us	3,367	95.68%
2.	en-gb	40	1.14%
3.	en-ca	38	1.08%
4.	ko	12	0.34%
5.	pt-br	7	0.20%
6.	en	6	0.17%
7.	fr	5	0.14%
8.	es-419	4	0.11%
9.	en-au	3	0.09%
10.	id-id	3	0.09%



**Desert Water Agency
Facebook Analytics
July 2017**

Actions on Page

June 29 - July 26

3

Total Actions on Page ▲200%



Page Views

June 29 - July 26

77

Total Page Views ▼14%



Page Previews

June 29 - July 26

40

Page Previews ▲5%



Page Likes

June 29 - July 26

11

Page Likes ▼31%

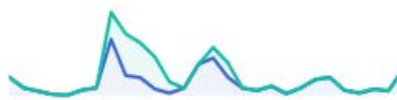


Reach

June 29 - July 26

6,210

People Reached ▼22%



Post Engagements

June 29 - July 26

925

Post Engagement ▼20%



Videos

June 29 - July 26

1,657

Total Video Views ▲52%



Page Followers

June 29 - July 26

11

Page Followers ▼27%





07/26/2017 4:41 pm		Foster puppies are a great way to beat the heat during #DogDays			867		28 27		Boost Post
07/24/2017 11:10 am		For some, it was a sprinkle. For others, a soak! Remember to give			229		7 2		Boost Post
07/20/2017 3:53 pm		Careers in water			502		21 13		Boost Post
07/20/2017 10:50 am		During the drought, our partner, Palm Springs City Government,			323		15 12		Boost Post
07/19/2017 4:01 pm		Ralph's giving you puppy dog eyes because he wants you to help			269		5 13		Boost Post
07/19/2017 1:47 pm		The Palm Springs City Government is a great partner in water conservation			107		10 4		Boost Post
07/14/2017 8:25 am		Skip store bought bottled water & switch to tap. It's more eco (&			409		13 21		Boost Post
07/13/2017 4:13 pm		Desert Water Agency shared Plant California's video.			99		6 3		Boost Post
07/13/2017 11:07 am		Do you keep fats, oils and grease from going down the drain? The			823		8 6		View Results Boosted: \$5.00
07/12/2017 4:03 pm		Selah's smile is enough to cheer anyone up. She's looking for a b			1.5K		37 76		Boost Post
07/11/2017 4:28 pm		Lookin' good out there! Desert landscape is SO Palm Springs.			86		3 3		Boost Post
07/11/2017 11:49 am		This June, our customers used 18% less water than they did in 2			288		9 7		Boost Post
07/07/2017 4:34 pm		It's hot ☀️ We're cool 🧊 DWA, Coachella Valley Water District an			485		22 12		Boost Post
07/07/2017 12:19 pm		Desert Water Agency's cover photo			78		16 3		Boost Post
07/06/2017 4:11 pm		Hi Lyle, we don't sell the water itself. You and your neighbors (inc			0		0 0		Boost Post
07/06/2017 11:04 am		Looking for deals or looking to save water? Do both with conservat			2.3K		26 13		View Results Boosted: \$30.00
07/05/2017 4:05 pm		Say hello to Honey. She's a lovable 6YO mix waiting at Friends o			1.7K		75 57		Boost Post
07/04/2017 10:01 am		Have a safe and happy Fourth of July.			207		8 1		Boost Post



Total Page Likes as of Today: 1,017



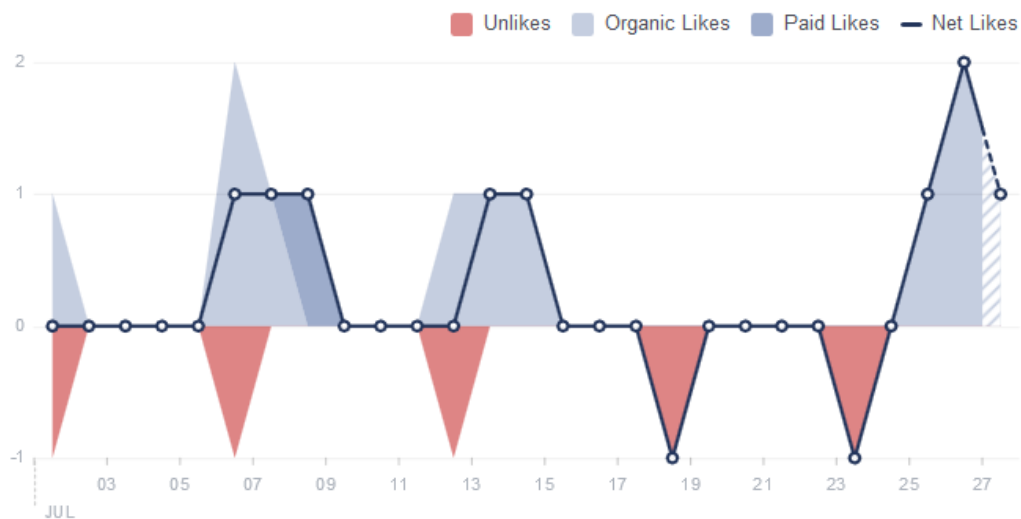
BENCHMARK

Compare your average performance over time.

Total Page Likes

Net Likes

Net likes shows the number of new likes minus the number of unlikes.



BENCHMARK

Compare your average performance over time.

Unlikes

Organic Likes

Paid Likes

Net Likes

WANT MORE LIKES?

Create an ad to get more people to like your Page.

Promote Page



DESERT WATER

TWEETS 1,129 FOLLOWING 1,511 FOLLOWERS 941 LIKES 432 MOMENTS 0

Desert Water Agency
Twitter Analytics
July 2017

Jul 2017 • 26 days so far...

TWEET HIGHLIGHTS

Top Tweet earned 1,419 impressions

Here in the Coachella Valley, we're in that 80%. twitter.com/SFWater/status...

🔗 2 ❤️ 4

View Tweet activity

View all Tweet activity

No new followers in July

Grow your audience and deliver your content to more people on Twitter.

[Learn more about increasing your followers](#)



Top mention earned 22 engagements



City of Palm Springs

@CityofPS · Jul 18

.@DWAwater Board presented a resolution to @CityofPS today recognizing the City's outstanding water savings during the statewide drought.
pic.twitter.com/UQRmKG8Q5e



↩ 3 🔗 2 ❤️ 10

[View Tweet](#)

Top media Tweet earned 856 impressions

👄 Kiss water waste goodbye on #NationalKissingDay by using a conservation coupon at dwa.org/coupons.
pic.twitter.com/byoIFsNz2Y



🔗 3 ❤️ 2

ADVERTISE ON TWITTER

Get your Tweets in front of more people

Promoted Tweets and content open up your reach on Twitter to more people.

Get started



JUL 2017 SUMMARY

Tweets
30

Tweet impressions
10.9K

Profile visits
516

Mentions
17

New followers
7