

MEETING OF THE BOARD OF DIRECTORS OF THE
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Jointly with the
PLANNING & OPERATIONS COMMITTEE

August 5, 2019, 8:30 a.m.

Conference Room 101

P&O Committee:

Director Yoo Schneider, Chair
Director Tamaribuchi
Director Dick

Staff: R. Hunter, K. Seckel, J. Berg,
H. De La Torre, K. Davanaugh,
K. Hubbard

Ex Officio Member: Director Barbre

MWDOC Committee meetings are noticed and held as joint meetings of the Committee and the entire Board of Directors and all members of the Board of Directors may attend and participate in the discussion. Each Committee has designated Committee members, and other members of the Board are designated alternate committee members. If less than a quorum of the full Board is in attendance, the Board meeting will be adjourned for lack of a quorum and the meeting will proceed as a meeting of the Committee with those Committee members and alternate members in attendance acting as the Committee.

PUBLIC COMMENTS - Public comments on agenda items and items under the jurisdiction of the Committee should be made at this time.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED - Determine there is a need to take immediate action on item(s) and that the need for action came to the attention of the District subsequent to the posting of the Agenda. (Requires a unanimous vote of the Committee)

ITEMS DISTRIBUTED TO THE BOARD LESS THAN 72 HOURS PRIOR TO MEETING -- Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection in the lobby of the District's business office located at 18700 Ward Street, Fountain Valley, California 92708, during regular business hours. When practical, these public records will also be made available on the District's Internet Web site, accessible at <http://www.mwdoc.com>.

PRESENTATION ITEM

1. PRESENTATION ON PUBLIC SAFETY POWER SHUT OFF (PSPS)
(Approximate Presentation Time: 10 minutes)

ACTION ITEMS

2. AMENDMENT NO. 8 TO THE SANTIAGO AQUEDUCT COMMISSION (SAC)
JOINT POWERS AGREEMENT (JPA)
3. ADOPTION OF THE ORANGE COUNTY REGIONAL WATER AND WASTEWATER
MULTI-HAZARD MITIGATION PLAN FOR 2019
4. APPROVE \$5,000 INCREASE TO ROSENBERG + ASSOCIATES SOLE SOURCE
CONTRACT

DISCUSSION ITEM

5. POTENTIAL MWDOC AND MWDOC MEMBER AGENCY ACTIONS WITH RESPECT TO SMALL CHRONICALLY NON-COMPLIANT WATER SYSTEMS IN THE STATE

INFORMATION ITEMS (The following items are for informational purposes only – background information is included in the packet. Discussion is not necessary unless a Director requests.)

6. PROPOSED 2020 DIEMER WTP SHUTDOWN
7. STATUS REPORTS
 - a. Ongoing MWDOC Reliability and Engineering/Planning Projects
 - b. WEROC
 - c. Water Use Efficiency Projects
8. REVIEW OF ISSUES RELATED TO CONSTRUCTION PROGRAMS, WATER USE EFFICIENCY, FACILITY AND EQUIPMENT MAINTENANCE, WATER STORAGE, WATER QUALITY, CONJUNCTIVE USE PROGRAMS, EDUCATION, DISTRICT FACILITIES, and MEMBER-AGENCY RELATIONS

CLOSED SESSION

9. CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION.
Significant exposure to litigation pursuant to paragraph (2) of subdivision (d) of Section 54956.9: One case

ADJOURNMENT

NOTE: At the discretion of the Committee, all items appearing on this agenda, whether or not expressly listed for action, may be deliberated, and may be subject to action by the Committee. On those items designated for Board action, the Committee reviews the items and makes a recommendation for final action to the full Board of Directors; final action will be taken by the Board of Directors. Agendas for Committee and Board meetings may be obtained from the District Secretary. Members of the public are advised that the Board consideration process includes consideration of each agenda item by one or more Committees indicated on the Board Action Sheet. Attendance at Committee meetings and the Board meeting considering an item consequently is advised.

Accommodations for the Disabled. Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by telephoning Maribeth Goldsby, District Secretary, at (714) 963-3058, or writing to Municipal Water District of Orange County at P.O. Box 20895, Fountain Valley, CA 92728. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.



PRESENTATION

August 5, 2019

TO: **Planning & Operations Committee**
(Directors Yoo Schneider, Dick, Tamaribuchi)

FROM: **Robert Hunter, General Manager**

Staff Contact: Kelly Hubbard, Director of Emergency Programs

SUBJECT: Presentation on Public Safety Power Shutoff (PSPS)

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee hear presentation.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Following the devastating fires of 2017 and 2018 and the determination that many of these fires were due to electrical line failures, the power utilities have increased their use of what is typically referred to as Public Safety Power Shutoff (PSPS) programs. Power Utilities have always had the authority to shut off power when they believe it is necessary for public safety. However the PSPS programs are being implemented more often with potentially catastrophic impacts to other critical infrastructure needed for response.

In December 2018, the California Public Utilities Commission decided to open a ruling to discuss the power utility's use of these programs and whether or not the CA PUC should implement restrictions, or provide additional required guidance. Kelly Hubbard with the support of legal counsel engaged in the PUC rule hearing process to advocate for the WEROC Member Agencies and mitigate the potential impacts of PSPS events to the water industry.

Staff will provide a presentation on the concerns with the PSPS programs, our success in the process, and recommendations on what the topics of concern are moving into Phase 2 of the PUC hearings.

The presentation does not include specifics on Edison or San Diego Gas and Electric's (SDG&E) specific plans as we are waiting to receive their revised plans based on the ruling. Staff can share these once received.

Attached: PSPS PowerPoint Presentation

Budgeted (Y/N): N	Budgeted amount: \$0	Core X__	Choice __
Action item amount: 0	Line item: NA		
Fiscal Impact (explain if unbudgeted): NA			



Power Shutoff (PSPS) Plans

Authority to Shutoff Power

- CA Public Utilities Code (PU Code) Sections 451 and 399.2(a)
 - Authority to shut off electric power in emergency situations when necessary to protect public safety
- CPUC Resolution ESRB-8
 - Reasonableness
 - Burden to demonstrate is decision was necessary to protect public safety
 - Notification
 - Must provide notice to its customers, to the extent possible and appropriate
 - Mitigation
 - Must provide Mitigation to its customers, to the extent possible and appropriate
 - Reporting requirements
 - Submit a report to the CPUC Safety and Enforcement Division within 10 days

Concerns with PSPS Plans & ESRB-8

- Conditions and transparency in decision making processes
- Effective event notification to stakeholders
- Impact of de-energization on
 - Vulnerable populations
 - Alert and Warning capabilities
 - Water services
- Decision process and timeline for re-energization
- Lack of Power Utility representation within the emergency response structure
- Mitigation to reduce the need for PSPS plans

California Public Utility Commission (PUC) Rule Making Process

Order Instituting Rulemaking (OIR) 18-12-005

- Reviews ESRB-8
- Opened December 2018
- Proceeding focused on the impacts of De-Energization with a focus on first responders and local government.

Process

- Opening comments/briefs on Phase 1 issues filed and served - March 25, 2019
- Reply comments/briefs on Phase 1 issues filed and served - April 2, 2019
- Phase 1 proposed decision - Late April 2019

Rulemaking Phases

Phase 1 –

- Ensure that the Commission has adopted de-energization parameters and protocols in anticipation of the upcoming 2019 wildfire season
- Focus on notice and communication issues

Phase 2 - Comprehensive look at de-energization practices and protocols, including:

- Mitigation measures
- Additional coordination across agencies
- Overarching policies to ensure that de-energization is used as a last resort measure to protect the public safety, and
- Re-energization protocols

OC Water Utility Concerns

Primary:

- Establish the definition of a First Responder as it relates to De-Energization Planning and Notification for all Power Companies, and for that definition to include Water Utilities and Water Utility Workers.

Additional:

- Notification
- Alternate Power
- Accuracy of de-energization zones
- Re-energization process
- Peak charges
- Mitigation
- Representation of Power Utilities to local government

Phase 1 – Success with Definitions

Quoted from Final Ruling

- “The term ‘public safety partners’ refers to first/emergency responders at the local, state and federal level, water, wastewater and communication service providers, community choice aggregators (CCAs), affected publicly-owned utilities (POUs)/electrical cooperatives, the Commission, CalOES and CAL FIRE. Public safety partners will receive priority notification of a de-energization event, as discussed in subsequent sections.”
- “The term ‘critical facilities’ and ‘critical infrastructure’ refers to facilities and infrastructure that are essential to the public safety and that require additional assistance and advance planning to ensure resiliency during de-energization events.”
- *“Facilities associated with the provision of drinking water or processing of wastewater including facilities used to pump, divert, transport, store, treat and deliver water or wastewater”*

Phase 1 – Other Successes

Power Utilities MUST

- Identify First/Emergency Responders, Public Safety Partners and Critical Facilities
- Coordinate with stated Public Safety Partners to identify specific facilities and contacts

Notifications

- MUST notify Public Safety Partners 48-72 hours in advance

Delay of De-Energization

- MUST consider a Public Safety Partner's request to delay shut-off

Coordination during events

- Representation of power utility to local government EOC required when requested

Phase 2 – Concerns Moving Forward

- Alternate Power
 - Who has responsibility? Costs?
 - Should the power companies be required to assist?
- Accuracy of de-energization zones
 - Inaccuracies have occurred
- Re-energization process
 - How quickly can it occur?
 - Greater good of the community
 - Timeline
- Peak charges
- Mitigation
 - Support undergrounding and other mitigation actions to enhance the reliability of the grid
 - Funding for member agencies to invest in alternative backup power supply

Questions

KELLY HUBBARD

DIRECTOR OF EMERGENCY PROGRAMS

KHUBBARD@MWDOC.COM

(714) 715-0283



ACTION ITEM

August 21, 2019

TO: Board of Directors

FROM: **Planning & Operations Committee**
(Directors Yoo Schneider, Dick, Tamaribuchi)

Robert Hunter, General Manager

Staff Contact: Karl Seckel

SUBJECT: Amendment No. 8 to the Santiago Aqueduct Commission (SAC) Joint Powers Agreement (JPA)

STAFF RECOMMENDATION

Staff recommends the Board of Directors authorize the General Manager to execute Amendment No. 8 to the SAC JPA, contingent upon MWDOC, IRWD and EOCWD:

- (1) Working out the hydraulic and water quality issues associated with EOCWD's 10.0 cfs of capacity in Reach 1U of the Baker pipeline;
- (2) Agreeing that the capacity swaps implemented with previously approved Amendment No. 7 to the SAC JPA to align capacities with the Baker Water Treatment Plant do not infringe on EOCWD's capacity.

In the event EOCWD is not satisfied with what is decided, the issue will be brought back to the MWDOC Board for consideration.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

Budgeted (Y/N): n/a	Budgeted amount:	Core ✓	Choice ____
Action item amount: n/a	Line item: MWDOC Staff time and Legal time		
Fiscal Impact (explain if unbudgeted):			

SUMMARY

EOCWD has raised questions regarding their ownership of capacity in Reach 1U of the Baker Pipeline, whether the capacity swaps completed for the Baker Water Treatment Plant infringed on their capacity, and whether the pump-in of Irvine Lake water into Reach 1U of the Baker Pipeline creates an issue for a potential future treatment plant they are considering at the end of Reach 1U. Staff has researched the various issues. They are complicated and involve agreements running back to 1961. Staff has requested input from Legal Counsel to research issues regarding EOCWD's 10.0 cfs of capacity that was assigned to them in 1962 by MWDOC out of MWDOC's capacity in the Santiago Aqueduct Pipeline (later renamed the Baker Pipeline). The issue of commingling water of multiple sources is also being reviewed by Legal Counsel. Staff from IRWD, EOCWD and MWDOC have a meeting coming up on August 15 to discuss these issues. Depending on the outcome of the meeting and whether the questions have been fully addressed to the satisfaction of EOCWD, this issue may be pushed over to a future date.

DETAILED REPORT

Background Regarding SAC and the Baker Pipeline

MWDOC has a position on the SAC Commission representing EOCWD and other interests. SAC was formed as a JPA in 1961 primarily by ETWD and LAWD; MWDOC was included for the purposes of oversizing the pipeline as shown below for Reaches 1 through 5. Note that the original make-up of the Santiago Aqueduct Commission was 3 appointees of ETWD and 3 appointees of LAWD and none for MWDOC.

<u>SECTION 3 - CAPACITY RIGHTS</u>	
The Orange County Municipal Water District shall acquire capacity rights in each reach of the Santiago Aqueduct as follows:	
Reach I - Santiago Lateral to Peters Reservoir	35.5 c.f.s.
Reach II - Peters Reservoir to Little Joaquin Valley	23.0 c.f.s.
Reach III- Little Joaquin Valley to Rattlesnake Reservoir	22.0 c.f.s.
Reach IV - Rattlesnake Reservoir to West Boundary of Los Alisos Water District	13.5 c.f.s.
Reach V - West Boundary of Los Alisos Water District to Los Alisos Service Connection	7.5 c.f.s.

1961 JPA, Page 2

Following is a listing of the JPA Formation, Amendments thereto and related agreements relative to this write-up:

Agreements and Amendments Related to the SAC JPA	
Year	Agreement Topic
1961	SAC JPA formed
1962	MWDOC assigns 10.0 cfs of capacity to EOCWD
1970±	SAC agencies consider emergency storage in Irvine Lake
1974	Amendment #1 to the SAC JPA = Changes make-up of the Commission, Adds MWDOC
1978	Amendment #2 to the SAC JPA – Brings the Baker Pipeline into the AMP, Changes Make-up of the Commission, MWDOC represents EOCWD, Santiago CWD, County of Orange, TIC and Western
1978	Amendment #3 to the SAC JPA – Increases Capacity in Lower Reaches of the AMP
1981	Amendment #4 to the SAC JPA – Settles AMP Bid Issue
1986	Amendment #5 to the SAC JPA – Flexibility in MWDOC Commissioner Appointment
1999	Amendment #6 to the SAC JPA - Flexibility in Appointments of SAC Commissioners
2013	Baker O&M Agreement and Capacity Swaps in the Baker
2014	Amendment #7 to the SAC JPA – Baker Treatment Plant Capacity Swaps
2019	Amendment #8 to the SAC JPA – TIC Capacity to IRWD

In 1962 MWDOC “assigned and set over” 10.0 cfs of capacity to EOCWD (the previously executed JPA between MWDOC, ETWD and LAWD provided MWDOC the right to assign capacity and so ETWD and LAWD did not have to sign off). EOCWD’s acquisition of capacity did not include them acquiring a seat on the Commission. The Agreement between MWDOC and EOCWD was silent on any sort of representation on SAC, likely because MWDOC did not have any representation on the Commission at the time.

In 1974, the make-up of the Commission changed to 9 directors, 3 from ETWD, 3 from LAWD and 3 from MWDOC; MWDOC picked up a larger share of the overall cost, going from 48.5% to 56.35%. Staff is not clear on the logic behind this change and could not find a clear explanation regarding the change.

<u>EXHIBIT A</u>	
<u>AGENCY</u>	<u>PERCENTAGE</u>
El Toro Water District	22.20
Los Alisos Water District	21.45
Municipal Water District of Orange	<u>56.35</u>
TOTAL:	100.00

1974 Amendment 1, Page 6

SAC Amendment #2 occurred in 1978 as a result of construction of the AMP (called the Diemer Intertie in the agreements). This involved downsizing the Baker Pipeline hydraulic capacity starting in Reaches 2U through 5U because agencies were transferring from the untreated Baker Pipeline to the treated AMP. Amendment #2 provided that the Baker Pipeline, including all rights of way, were leased to MWDOC because of the integration between the Baker and AMP. A new make-up of the Commission was called for consisting of 7 members as shown below; it was stated that MWDOC's representation covered EOCWD, County of Orange, TIC and Western. This is the first time where representation of EOCWD was specifically identified.

El Toro Water District;
 Los Alisos Water District;
 Irvine Ranch Water District;
 Santa Margarita Water District;
 Santa Ana Mountains County Water
 District;
 Moulton-Niguel Water District; and
 Municipal Water District of Orange County.

Each member shall have one vote. It is understood that MWDOC will be representing its agency and East Orange, Santiago, the County of Orange, The Irvine Company, and Western. The new Commission shall take over the management and operation of the Aqueduct System on the date of its creation.

1978 Amendment 2, Page 23

By virtue of IRWD taking over Santiago County Water District and consolidating with LAWD, the Commission has been operating with a Commission of 6 members for some time now. Currently, MWDOC still represents EOCWD, TIC and the County of Orange. With the proposed Amendment No.8 which effectively drops TIC from having any ownership in the

Baker Pipeline, MWDOC will only represent EOCWD and the County of Orange on a 6 person Commission.

EOCWD Concerns with the Capacity Swaps for the Baker Treatment Plant

EOCWD has raised an issue as to whether or not the capacity swaps completed to realign and adjust capacity in the Baker Pipeline reaches 1U through 5U for purposes of supplying water to the Baker Treatment Plant infringed on their 10.0 cfs of capacity in Reach 1U. Previously the SAC Commission and all parties to the JPA approved JPA Amendment No. 7 which included the realigned capacities. For purposes of readjusting capacities, a flow test was conducted on the Baker Pipeline and the Hazen Williams flow coefficient was agreed to be set at 140. The calculations were performed in such a way as to utilize as much capacity as could be achieved in reaches 2U through 5U to flow water to the Baker Treatment Plant without impacting capacity owners in Reach 1U. IRWD, who had excess water in Reach 1U, reduced capacity to allow more flow to be taken further south in the pipeline. The calculations were performed by “fixing” EOCWD’s capacity at 10 cfs, TIC’s capacity at 2.5 cfs and the County of Orange’s 1.0 cfs in Reach 1U (these were the only agencies not participating in the Baker Treatment Plant). By inspection, one would conclude the three agencies ended up with the same capacity they previously had, and by way of other agencies taking less water in Reach 1U, the calculations increased the Hydraulic Grade Line (HGL) by 1 foot at the end of Reach 1U, thus providing slightly higher pressure than in the previous capacity allocations.

An argument can be made that by increasing the flow coefficient to 140 (reduces friction factor and increases the capacity of the pipeline slightly) also created more capacity in Reach 1U and EOCWD should/could have been given the opportunity to secure that additional capacity. MWDOC was looking out for EOCWD and at the time was convinced that EOCWD’s capacity was protected at 10.0 cfs and were under the belief that EOCWD was not really in the market for additional capacity - that was the underlying basis for the recommendation and approval by MWDOC of Amendment No. 7 in 2013. Assuming we went back to 2013 and EOCWD was provided an opportunity to secure capacity in Reach 1U, our calculations are that the extra capacity to EOCWD would have been about 0.3 cfs, and they would have had to “pay for the capacity” at a cost of about \$24,355 per cfs. However, potentially confounding this argument is a provision in the original SAC JPA which controlled the assignment of MWDOC capacity to others (this provision is how EOCWD originally acquired their capacity in Reach 1U, by assignment from MWDOC in 1962) that indicates that “all capacity in the Santiago Aqueduct (Baker Pipeline) in excess of that allocated to Orange County Municipal Water District shall be distributed between Los Alisos Water District and El Toro Water District at the downstream end of Reach V in proportion to their respective percentages of ownership in Reaches I through V, inclusively”. Legal Counsel will have to review and make a determination as to whether this provision might still apply.

In staff’s opinion, the questions for Legal Counsel are:

1. Should EOCWD at least have been offered the capacity increase of 0.3 cfs at the agreed upon unit cost for the 2013 Capacity Swaps?, or

2. Do the increases in capacity continue to accrue to the original forming members of SAC (one being ETWD and the other being LAWD which was subsequently consolidated into IRWD)?, or
3. Did the capacity swaps “reset” the ability to change capacity in the pipeline, since the capacity swaps were agreed upon and approved by all owners of capacity including MWDOC on behalf of EOCWD?

At a minimum, staff is comfortable that EOCWD’s 10.0 cfs of capacity was protected and not infringed upon.

MWDOC and EOCWD have an upcoming August 15 meeting scheduled with IRWD staff to further discuss these issues. Staff has submitted the questions noted above to MWDOC’s Legal Counsel. Because there are many agreements to sort through, Legal Counsel may not be ready to provide an opinion prior to the Board meeting. Other issues may also be brought up by way of the August 15 meeting.

There is one additional issue EOCWD is concerned about. They are investigating building a treatment plant at the end of Reach 1U. Irvine Lake water can be pumped into the Baker Pipeline at the end of Reach 1U just upstream of where EOCWD would take water should they decide to build a new treatment plant. The Irvine Lake water requires a higher level of treatment, which the Baker Treatment Plant was designed to treat. EOCWD is concerned that the cost of their treatment plant may be increased by having to potentially treat Baker water that is co-mingled MET water and Irvine Lake water, as opposed to simply treating MET water. The original SAC JPA governing MWDOC’s capacity states “The Commission shall have the right to comingle water so transmitted with other water transmitted in said aqueduct, ...” In addition, there were a number of agreements dating back to 1970 that involved the various SAC agencies working together to secure storage rights in Irvine Lake and to convey Irvine Lake water through the Irvine Lake Pipeline and introduce it into the Baker Pipeline at the end of Reach 1U. This would seem to indicate that alternative sources of water were always reserved to be conveyed in the Baker Pipeline. Interestingly, EOCWD considered, but did not participate in the 1970 agreements with respect to storage in Irvine Lake. Staff will request Legal Counsel to review this issue as well.

BOARD OPTIONS

Option #1

- In the event EOCWD is satisfied with information developed at the August 15 staff meeting, it is recommended that the General Manager be authorized to execute Amendment no. 8 to the SAC JPA.
- In the event there are still outstanding questions or concerns, staff and legal counsel will continue working on the various issues and will report back to the Board.
- One way or another, an amendment is required for the SAC JPA to account for the sale of capacity by TIC, thus eliminating them from the JPA.

Fiscal Impact: No impact to MWDOC, other than time for staff and Legal Counsel.

Business Analysis: MWDOC sits on the SAC Commission and represents EOCWD. We want to be assured that EOCWD is comfortable prior to moving forward.

Option #2

- Ultimately, staff does not feel there are any options to proceeding with some form of Amendment No. 8 and that we need to work through the details with IRWD, EOCWD and possibly the other members of the SAC JPA.

Fiscal Impact: n/a

Business Analysis: n/a

STAFF RECOMMENDATION

Option # 1

Agreement Processing Checklist

Please complete before submitting for filing!

- ① Title: Amendment No. 7 to the Santiago Agueduct
Commission Joint Powers Agreement

- ## ② Authorization

☐ Board Approval (required for contracts \$25,000 or over) → Date: ___/___/___

☐ Action item - OR - ☐ Included in Budget

- OR -

☒ GM Authority (up to \$25,000)

- ### ③ Vendor Selection

☐ Competitive Bidding Process / Proposal (required for amounts \$3,001-\$25,000)☐ Bid / Proposal attached

- OR -

☐ Sole Source Contract

☐ Completed Procurement Justification Form attached

☐ Included in Budget

- ④ Insurance

☒ NOT REQUIRED → General Manager's Initials: KA

- OR -

☐ Required Requested on: ____/____/____ ☐ Received

- (5) ☐ Attorney Signature Attained {Forward to: _____ on: __/__/__}

- OR -

☒ NOT REQUIRED

- ⑥ ☒ General Manager or MWDOC Representative Signature Attained

- ⑦ ☐ Executed copy sent to other parties on: ___/___/___

Comments:

Date Received:

RECEIVED

OCT 20 2015

MWD OF OC

rec'd: 1 Deliver to: MG

SANTIAGO AQUEDUCT COMMISSION
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618
949-453-5300

RECEIVED

OCT 20 2015

MWD OF OC

October 15, 2015

Mr. Fred Adjarian
El Toro Water District
24251 Los Alisos Blvd.
Lake Forest, CA 92630

Mr. Glenn Acosta
Trabuco Canyon Water District
32003 Dove Canyon Drive
Trabuco Canyon, CA 92679

Mr. Scott Colton
Moulton Niguel Water District
27500 La Paz Road
Laguna Niguel, CA 92677

Mrs. Lisa Ohlund
East Orange County Water District
185 N. McPherson Road
Orange, CA 92869-3720

Mr. Jeffery Thomas
Municipal Water District of O.C.
P. O. Box 20895
Fountain Valley, CA 92728

Mr. Jamie Yoshida
Irvine Company
550 Newport Center Drive, 7th Floor
Newport Beach, CA 92660

Mr. Donald Bunts
Santa Margarita Water District
P. O. Box 7005
Mission Viejo, CA 92690-7005

Ms. Jamie Ross
Clerk of the Board of Supervisors
County of Orange
333 W. Santa Ana Blvd., Room 465
Santa Ana, CA 92702-0687

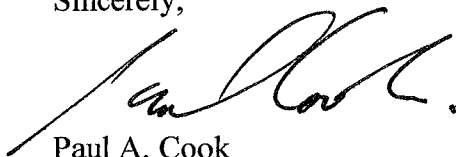
Subject: Amendment No. 7 to the Santiago Aqueduct Commission Joint Powers Agreement

Dear Member Agencies and Represented Agencies:

The Amendment No. 7 to the Santiago Aqueduct Commission Joint Powers Agreement was approved by the Commission at the Santiago Aqueduct Commission meeting on June 19, 2014. Enclosed please find an executed original for your records.

Please let me know if you have any questions.

Sincerely,



Paul A. Cook
General Manager

Enclosure: Executed original – Amendment No. 7 to the Santiago Aqueduct Commission Joint Powers Agreement

cc: Allison Burns, SYC&R
James Reed, SAC Commission
Kevin Burton, IRWD

AMENDMENT NO. 7
TO THE
SANTIAGO AQUEDUCT COMMISSION
JOINT POWERS AGREEMENT

THIS AMENDMENT, made and entered into as of the 19th day of June, 2014, by and among the following agencies who are, on the date hereof, members of the Santiago Aqueduct Commission created by the Joint Powers Agreement entered into as of April 13, 1961, as amended, (the "Joint Powers Agreement") or who have capacity in the Santiago Aqueduct (herein sometimes referred to as the "Baker Pipeline"), as hereinafter described, and are represented by members: MUNICIPAL WATER DISTRICT OF ORANGE COUNTY, also known as ORANGE COUNTY MUNICIPAL WATER DISTRICT in a previous Amendment to this Joint Powers Agreement ("MWDOC"), a public district organized under the Municipal Water District Act of 1911; EAST ORANGE COUNTY WATER DISTRICT ("EOCWD") and TRABUCO CANYON WATER DISTRICT also known as SANTA ANA MOUNTAIN COUNTY WATER DISTRICT in a previous amendment to this Joint Powers Agreement ("TCWD"), each being a County Water District organized and existing under Division 12 of the California Water Code; EL TORO WATER DISTRICT ("ETWD"), IRVINE RANCH WATER DISTRICT, which includes the former territory of the Los Alisos Water District ("Los Alisos"), a previous member agency, which was consolidated with the Irvine Ranch Water District as of January 1, 2001, and the former territory of the Santiago County Water District ("Santiago"), a previous owner of capacity, which was consolidated with the Irvine Ranch Water District as of July 1, 2006 ("IRWD"), SANTA MARGARITA WATER DISTRICT ("SMWD"), and MOULTON NIGUEL WATER DISTRICT ("MNWD"), each being a California Water District, organized and existing under Division 13 of the Water Code; and the COUNTY OF ORANGE ("County"), a body politic and corporate, THE IRVINE COMPANY LLC, a Delaware limited liability company ("TIC"), and the SANTIAGO AQUEDUCT COMMISSION (herein called the "Commission"), created by the Santiago Aqueduct Commission Joint Powers Agreement (as amended, herein called the "Joint Powers Agreement") (herein sometimes referred to as the "existing member agencies and represented agencies").

WITNESSETH:

WHEREAS, the Joint Powers Agreement was entered into as of the 13th day of April, 1961, and Amendments were made thereto as of the 11th day of September, 1961 and the 20th day of December, 1974 (the "1974 Amendment"), Amendment No. 2 was entered into as of the 13th day of January, 1978, Amendment No. 3 was entered into as of the 1st day of November, 1978, Amendment No. 4 was entered into as of the 1st day of September, 1981, Amendment No. 5 was

AMENDMENT NO. 7 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT

entered into as of the 22nd day of October, 1986, and Amendment No. 6 was entered into as of the 8th day of July, 1999; and

WHEREAS, the Joint Powers Agreement, as amended, established certain hydraulic grade lines (HGL) and capacities for the member agencies and represented agencies in the various reaches of the Baker Pipeline; and

WHEREAS, costs of maintenance, capital repairs and capital improvements to the Baker Pipeline are allocated to the member agencies and represented agencies in proportion to their individual capacity ownerships in each reach relative to the total capacity in each reach and the length of such reach in proportion to the length of the Baker Pipeline as a whole; and

WHEREAS, those capacities, over time, have been transferred among various member agencies and represented agencies, with the current capacities being derived from the capacities set forth by Amendment No. 3 to the Joint Powers Agreement and subsequent transactions reported to the Commission as reflected in the letter of "Clarification of the Second and Subsequent Amendments to the Santiago Aqueduct Commission Joint Powers Agreement Tables 12, 13 and 14," issued by MWDOC in 1984, and in the May 16, 1988 and January 25, 2007 Commission "Description of V.P. Baker Aqueduct System" tables; and

WHEREAS, various member agencies have entered into an agreement to construct a water treatment plant (herein called the "Baker Water Treatment Plant") to treat water conveyed by the Baker Pipeline; and

WHEREAS, those member agencies have entered into an agreement dated December 16, 2013 titled "AGREEMENT RELATING TO BAKER PIPELINE CAPACITY TRANSFERS AMONG BAKER WATER TREATMENT PLANT PARTICIPANTS" (herein called the "Transfer Agreement") to transfer capacities in the Baker Pipeline among participants in the construction of the Baker Water Treatment Plant on a pooled basis in order to provide each participant with required "matching" capacity in the Baker Pipeline reaches sufficient to use its Baker Water Treatment Capacity, and have reported or will report those transfers to the Commission; and

WHEREAS, in order to establish the current hydraulic capacity of the Baker Pipeline as a basis for determining the appropriate capacity transfer amounts, an hydraulic analysis was conducted in 2009, which identified some variations between the hydraulic capacities and the current contractual capacities of the Baker Pipeline; and

WHEREAS, pursuant to Section 5.3 of the Transfer Agreement, it is the desire of the member agencies and represented agencies to recognize that the capacities of the agencies not participating in the Transfer Agreement are to remain unchanged as a result of the transfers resulting from the Transfer Agreement; and

AMENDMENT NO. 7 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT

WHEREAS, it is the desire of the member agencies and represented agencies that the transfers of capacity and resulting allocations of cost of maintenance, capital repairs and capital improvements will be effective July 1, 2014.

NOW, THEREFORE, the parties, for and in consideration of the mutual covenants herein contained and as part of the mutual covenants contained in the Joint Powers Agreement hereinabove referred to, agree together as follows:

SECTION 1. In order to effectuate the transfer of capacities among the participating member agencies resulting from the Transfer Agreement, capacities and hydraulic grade lines in the Baker Pipeline as of the effective date of this Amendment shall be as depicted in Exhibit "A", which is attached hereto and by reference made a part hereof. As a result of the transfer of capacities resulting from the Transfer Agreement, allocation of cost of maintenance, capital repairs and capital improvements for each reach of the Baker Pipeline and the Baker Pipeline as a whole shall be as depicted in Exhibit "B" which is attached hereto and by reference made a part hereof. The allocations set forth in Exhibits A and B hereto shall, from and after the effective date of this Amendment, replace and supersede all prior allocations as set forth in the Joint Powers Agreement as previously amended.

SECTION 2. This Amendment shall be executed by all parties in duplicate, each of which shall be considered an original Amendment. The Amendment executed by each of the parties shall be identical to this Amendment, and each Amendment may not be altered or changed without the consent of all the remaining parties.

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AMENDMENT NO. 7 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT

IN WITNESS WHEREOF, each of the parties hereto has caused this Instrument to be executed by its respective officials heretofore duly authorized by the governing body thereof.

EL TORO WATER DISTRICT

By: Frederick G. G. G.
Commissioner

IRVINE RANCH WATER DISTRICT

By: James D. R. R.
Commissioner, Chairman

MOULTON NIGUEL WATER DISTRICT

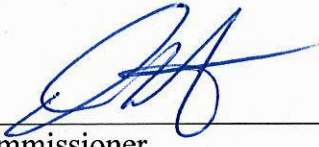
By: [Signature]
Commissioner

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY, formerly known as
ORANGE COUNTY MUNICIPAL WATER DISTRICT

By: Karl W. S. S.
Alt. Commissioner

AMENDMENT NO. 7 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS
AGREEMENT

SANTA MARGARITA WATER DISTRICT

By: _____
Commissioner

TRABUCO CANYON WATER DISTRICT, formerly known as SANTA ANA
MOUNTAINS COUNTY WATER DISTRICT

By: _____
ALT. Commissioner

EXHIBIT A
BAKER PIPELINE CAPACITY OWNERSHIP RIGHTS

Pipeline Capacities						
	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U	
Length (LF)	9,400	10,425	7,950	28,500	6,070	
HGL Elev at End of Reach ¹	816	788	770	703	690	
Agency	CFS	CFS	CFS	CFS	CFS	
East Orange County Water District ²	10.00	-	-	-	-	
The Irvine Company ²	2.50	-	-	-	-	
County of Orange ²	1.00	1.06	1.06	1.06	-	
Irvine Ranch Water District	46.50	14.59	10.54	10.54	10.50	
Santa Margarita Water District	13.00	13.08	13.05	13.05	13.00	
Trabuco Canyon Water District	8.00	8.05	8.03	8.03	8.00	
El Toro Water District	5.00	5.00	5.00	5.00	5.00	
Moulton Niguel Water District	13.00	13.00	13.00	13.00	13.00	
Total Capacity	99.00	54.78	50.68	50.68	49.50	

¹ Beginning HGL elevation of 832 at OC-33
² East Orange County Water District, The Irvine Company, County of Orange proposed pipeline capacities match existing contractual pipeline capacities in each pipeline reach prior to capacity transfers between participants in the Baker Water Treatment Plant.

EXHIBIT B

BAKER PIPELINE MAINTENANCE, CAPITAL REPAIR AND CAPITAL IMPROVEMENT SHARES

Pipeline Capacities -- Maintenance, Capital Repair and Capital Improvement Shares, Total and By Reach												
Length (LF)	Reach 1U		Reach 2U		Reach 3U		Reach 4U		Reach 5U		Total Pipeline	
	Capacity Length	%	Capacity Length	%	Capacity Length	%	Capacity Length	%	Capacity Length	%	Capacity Length	%
East Orange County Water District	94,000	9.53%	-	-	-	-	-	-	-	-	94,000	2.58%
The Irvine Company	23,500	2.38%	-	-	-	-	-	-	-	-	23,500	0.64%
County of Orange	9,400	0.95%	11,051	2.33%	8,427	2.33%	30,210	2.33%	-	-	59,088	1.62%
Irvine Ranch Water District	437,100	47.46%	152,101	26.52%	83,793	20.73%	300,390	20.73%	63,735	21.22%	1,037,119	28.42%
Santa Margarita Water District	122,200	13.35%	136,359	23.65%	103,747	25.61%	371,925	25.61%	78,910	26.26%	813,141	22.28%
Trabuco Canyon Water District	75,200	8.15%	83,921	14.64%	63,839	15.81%	228,855	15.81%	48,560	16.16%	500,375	13.71%
El Toro Water District	47,000	5.05%	52,125	9.13%	39,750	9.87%	142,500	9.87%	30,350	10.10%	311,725	8.54%
Moulton Niguel Water District	122,200	13.13%	135,525	23.73%	103,350	25.65%	370,500	25.65%	78,910	26.26%	810,485	22.21%
Total	930,600	100%	571,082	100%	402,906	100%	1,444,380	100%	300,465	100%	3,649,433	100%

March 21, 2019

Prepared and

submitted by: K. Burton 

Approved by: Paul A. Cook 

SANTIAGO AQUEDUCT COMMISSION

AMENDMENT NO. 8 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT

SUMMARY:

Irvine Ranch Water District (IRWD) and The Irvine Company have executed an agreement to transfer the Irvine Company's 2.5 cubic feet per second (cfs) capacity in Reach 1U of the Baker Pipeline to IRWD. Amendment No. 8 to the Santiago Aqueduct Commission (SAC) Joint Powers Agreement recognizes the transfer of capacity and the resulting allocation of costs of maintenance, capital repairs and capital improvements to the Baker Pipeline. Amendment No. 8 also updates the member and represented agencies of the Santiago Aqueduct Commission following IRWD's consolidation with former member agency Los Alisos Water District and IRWD's capacity transfer with The Irvine Company. Staff recommends that the member agencies of the Santiago Aqueduct Commission approve Amendment No. 8 to the Santiago Aqueduct Commission Joint Powers Agreement.

BACKGROUND:

IRWD and The Irvine Company have executed an *Assignment and Assumption Agreement (Transfer Agreement)* to transfer The Irvine Company's 2.5 cfs capacity in Reach 1U of the Baker Pipeline to IRWD. The Transfer Agreement is attached as Exhibit "A". The transfer of capacity rights and the resulting allocations of maintenance, capital repairs, and capital improvement costs became effective July 1, 2018.

The intent of Amendment No. 8 to the SAC Joint Powers Agreement is to memorialize the effect of the Transfer Agreement and acknowledge that each of the SAC member and represented agencies not participating in the Transfer Agreement will retain the same capacity rights identified in Amendment No. 7 to the SAC Joint Powers Agreement. Additionally, Amendment No. 8 updates the member and represented agencies of SAC following IRWD's consolidation with former member agency Los Alisos Water District and IRWD's capacity transfer with The Irvine Company. Amendment No. 8 is attached as Exhibit "B".

The capacity of each SAC member and represented agency in each reach of the Baker Pipeline is shown in Exhibit "A" of Amendment No. 8. The maintenance, capital repair and capital improvement cost shares for each member and represented agency in each reach, and for the Baker Pipeline as a whole, are shown in Exhibit "B" of Amendment No. 8. The capacities and allocation of costs of maintenance, capital repairs and capital improvements of the non-participating Transfer Agreement SAC member and the represented agencies remain unchanged from Amendment No. 7.

FISCAL IMPACTS:

Effective July 1, 2018 the allocation of costs for maintenance, capital repairs and capital improvements will be allocated between the participating member agencies and represented agencies as shown in Exhibit “B”.

ENVIRONMENTAL COMPLIANCE:

This activity is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15306 which provides exclusion for projects involving basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

RECOMMENDATION:

That the Commission recommend that the member agencies approve Amendment No. 8 to the Santiago Aqueduct Commission Joint Powers Agreement.

LIST OF EXHIBITS:

- Exhibit “A” – Assignment and Assumption Agreement between Irvine Ranch Water District and The Irvine Company
- Exhibit “B” – Amendment No. 8 to the Santiago Aqueduct Commission Joint Powers Agreement

EXHIBIT "A"

ASSIGNMENT AND ASSUMPTION AGREEMENT

This ASSIGNMENT AND ASSUMPTION AGREEMENT ("**Agreement**") is dated July 1, 2018 (the "**Effective Date**") and is between **IRVINE RANCH WATER DISTRICT**, a California water district, organized under Division 13 of the California Water Code ("**IRWD**"), and The Irvine Company LLC, a Delaware limited liability company, as successor-in-interest to The Irvine Company, a Delaware corporation ("**TIC**"). IRWD and TIC are each a "**Party**" and together are the "**Parties**."

On or about April 13, 1961, the Los Alisos Water District, the El Toro Water District, and the Orange County Municipal Water District entered into the Santiago Aqueduct Commission Joint Powers Agreement (the "**JPA**"). The JPA created the Santiago Aqueduct Commission ("**Commission**") to construct, maintain, repair and manage the Santiago Aqueduct ("**Aqueduct**"), which would transmit water to the parties to the JPA.

The JPA was amended seven times, by: Amendment to the JPA (on or about September 11, 1961); Amendment No. 2 to the JPA (on or about January 1, 1978) ("**Amendment 2**"); Amendment No. 3 to the JPA (on or about January 13, 1978) ("**Amendment 3**"); Amendment No. 4 to the JPA (on or about September 1, 1981) ("**Amendment 4**"); Amendment No. 5 to the JPA (on or about October 22, 1986); Amendment No. 6 to the JPA (on or about July 8, 1999); and Amendment No. 7 to the JPA (on or about June 19, 2014). These Amendments, along with all exhibits and attachments thereto, are collectively identified in this Agreement as the "**Amendments**." TIC was not a signatory to the JPA nor any of the Amendments other than Amendment 3 and Amendment 4.

Amendment 2 added IRWD as a party and as a member of the Commission and TIC as a party to the JPA with respect to certain matters. That amendment, and various other leases and subleases issued pursuant to the Amendments, granted the Parties certain rights and obligations with respect to the construction, maintenance, operation of water lines to be constructed parallel to the Aqueduct to supply water to, among others, the Parties. Pursuant to the JPA Amendments, TIC possesses 2.5 cfs capacity in Reach 1U of the Aqueduct, also known as the Baker Pipeline.

The Parties intend by this Agreement to assign and transfer TIC's rights and obligations under the JPA, the Amendments, and any other leases or subleases related thereto, to IRWD for valuable consideration.

The Parties therefore agree as follows:

1. Assignment. In exchange for IRWD's payment to TIC of the sum of \$56,410.00 (the "**Transfer Fee**") concurrent with the delivery of this Agreement, TIC hereby assigns and transfers to IRWD all of TIC's right, title, interest and obligations under the JPA and the Amendments (collectively, the "**TIC Interest**") effective as of July 1, 2018. Upon assignment and transfer of the TIC Interest as set forth in this section, IRWD accepts from TIC all such TIC Interest, subject to the terms and conditions set forth in this Agreement.

2. Assumption. IRWD assumes and agrees to perform and fulfill all the terms, covenants, conditions, and obligations required to be performed and fulfilled by TIC under the JPA and the Amendments.

3. Assignor Representations. TIC represents that, to TIC's knowledge, (a) TIC has not transferred or assigned any portion of the TIC Interest (including the 2.5 cfs capacity in Reach 1U as set forth in the Amendments), (b) TIC has not amended, modified or terminated the JPA or the Amendments except as set forth therein, and (c) TIC has not breached the JPA or the Amendments. As used herein, "to TIC's knowledge" shall mean and refer to the current knowledge of Peter Changala, who is the employee of TIC's affiliate (Irvine Management Company) who is most likely to know about the status of the TIC Interest.

4. As-Is; Where-Is. Except as otherwise set forth in Section 3 above, IRWD acknowledges and agrees that it is accepting the assignment and conveyance of the TIC Interest based solely upon IRWD's inspection and investigation of the same and all documents related thereto, or its opportunity to do so, and the TIC Interest is assigned in an "AS IS, WHERE IS" condition, without relying upon any representation or warranties, express, implied or statutory, of any kind. Notwithstanding anything to the contrary, TIC's aggregate liability in connection with this Agreement shall not exceed the amount of the Transfer Fee.

5. Successors and Assigns. This Agreement will be binding on and inure to the benefit of the Parties, their heirs, executors, administrators, successors in interest, and assigns.

6. Choice of Law and Venue. All matters relating to this Agreement are governed by the laws of the State of California, and venue for any action related to the Agreement shall be the Superior Court of Orange County.

7. Notice. Any notice will be deemed given by depositing it in the United States Mail, first class, return receipt requested, or by courier or overnight delivery service and addressed as follows:

If to IRWD:

Irvine Ranch Water District
16500 Sand Canyon Avenue
P.O. Box 5700
Irvine, CA 92619-7000
Attn: Paul A. Cook, General Manager

If to TIC:

The Irvine Company LLC
550 Newport Center Drive
Newport Beach, CA 92660
Attn: General Counsel

8. Amendment. Any amendment or modification of this Agreement must be written and properly executed by both Parties.

9. Interpretation. Each Party has participated in negotiating and drafting this Agreement, so if an ambiguity or a question of intent or interpretation arises, this Agreement is to be construed as if the Parties had drafted it jointly, as opposed to being construed against a party because it was responsible for drafting one or more provisions of this Agreement.

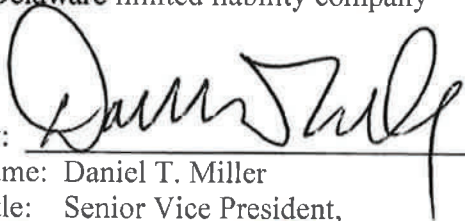
10. Further Assurances. The Parties shall take such actions, or execute, acknowledge and deliver, or obtain the execution, acknowledgment, and delivery of such instruments as are reasonably necessary, appropriate or desirable to give effect to the provisions of this Agreement.


11. Entire Agreement. This Agreement constitutes the entire agreement between the Parties regarding TIC's assignment and IRWD's assumption of all of the TIC Interest. This Agreement supersedes all prior or contemporaneous agreements, commitments, conditions, discussions, instruments, offers, promises and/or proposals between the Parties regarding TIC's assignment and IRWD's assumption of all of the TIC Interest, whether oral or written.

12. Authority. The Parties represent that the individuals executing this Agreement have the legal power, right and actual authority to bind that Party to the terms and conditions of this Agreement.

IRWD and TIC are signing this Agreement to be effective as of the Effective Date.

THE IRVINE COMPANY LLC,
a Delaware limited liability company

By: 
Name: Daniel T. Miller
Title: Senior Vice President,
Entitlement & Public Affairs

By: 
Name: Peter J. Changala
Title: Vice President, Ag Operations

IRVINE RANCH WATER DISTRICT

By: 
Paul A. Cook, General Manager

APPROVED AS TO FORM:
Lewis Brisbois Bisgaard & Smith, LLP

By: 
General Counsel

EXHIBIT "B"

AMENDMENT NO. 8 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT

This Amendment No. 8 to the Santiago Aqueduct Commission Joint Powers Agreement (“**Amendment No. 8**”) is effective March 21, 2019, and is between the following six member agencies of the SANTIAGO AQUEDUCT COMMISSION (the “**Commission**”) created by a Joint Powers Agreement dated September 11, 1961 (as amended, the “**Joint Powers Agreement**”):

EL TORO WATER DISTRICT;
IRVINE RANCH WATER DISTRICT (“**IRWD**”) on its own behalf and as assignee of
The Irvine Company;
MOULTON NIGUEL WATER DISTRICT;
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY (formerly known as Orange
County Municipal Water District) (“**MWDOC**”) on behalf of represented
agencies EAST ORANGE COUNTY WATER DISTRICT (“**EOCWD**”) and the
County of Orange (the “**County**”);
SANTA MARGARITA WATER DISTRICT; and
TRABUCO CANYON WATER DISTRICT (formerly known as Santa Ana Mountains
County Water District).

The member agencies are also sometimes referred to as the “**Parties**.” Together EOCWD and the County are the “**represented agencies**” but are not member agencies.

The Joint Powers Agreement has been previously amended by the following amendments: the first Amendment (December 20, 1974); Amendment No. 2 (January 13, 1978); Amendment No. 3 (November 1, 1978); Amendment No. 4 (September 1, 1981); Amendment No. 5 (October 22, 1986); Amendment No. 6 (July 8, 1999); and Amendment No. 7 (June 19, 2014).

The Joint Powers Agreement (as amended) establishes certain hydraulic grade lines and capacity rights for the member agencies and represented agencies in the various reaches of the Santiago Aqueduct, also known as the Baker Pipeline. The costs of maintenance, capital repairs and capital improvements to the Baker Pipeline are allocated to the member agencies and represented agencies in proportion to each party’s capacity rights in each reach as compared with the total capacity for each reach and in proportion to the length of each reach as compared with the entire length of the Baker Pipeline.

Capacity rights in the Baker Pipeline have been transferred among various member agencies and represented agencies, as previously reflected in the tables set forth in Amendment No. 7.

In 2018, IRWD and The Irvine Company executed an *Assignment and Assumption Agreement* (the “**Transfer Agreement**”) to transfer The Irvine Company’s capacity in the Baker

Pipeline to IRWD. The transfer of capacity rights and the resulting allocations of maintenance, capital repairs, and capital improvement costs became effective as of July 1, 2018. The Parties intend by this Amendment No. 8 to memorialize the effect of the Transfer Agreement and acknowledge that each of the Parties and represented agencies not participating in the Transfer Agreement will retain the same capacity rights identified in Amendment No. 7. The Parties also intend by this Amendment No. 8 to clarify the members of the Commission following IRWD's consolidation in 2010 with former member agency Los Alisos Water District.

Therefore, the Parties amend the Joint Powers Agreement as follows:

SECTION 1. Exhibit A to this Amendment No. 8 depicts the capacities and hydraulic grade lines in the Baker Pipeline resulting from the Transfer Agreement. Exhibit B to this Amendment No. 8 depicts the corresponding allocation of costs of maintenance, capital repairs, and capital improvements for each reach of the Baker Pipeline and the Baker Pipeline in its entirety. Both exhibits are incorporated by reference into the Joint Powers Agreement and shall amend and supersede in their entirety the capacities and hydraulic grade lines in the Baker Pipeline as well as the allocation of costs previously set forth in the Joint Powers Agreement.

SECTION 2. In order to reflect the consolidation of Los Alisos Water District with IRWD, and the transfer of The Irvine Company's capacity to IRWD, the first two paragraphs of Section 3 of the Joint Powers Agreement, as amended by Amendment No. 6, are amended to read as follows:

"The Commission shall consist of six (6) regular members, one (1) regular member to be selected by each of the following member agencies:

El Toro Water District;
Irvine Ranch Water District;
Moulton Niguel Water District;
Municipal Water District of Orange County;
Santa Margarita Water District; and
Trabuco Canyon Water District.

The Commission shall maintain and operate the Baker Pipeline. Each member agency shall have one vote. MWDOC shall represent itself, EOCWD and the County of Orange. Each member agency may appoint two alternate members, designated a first alternate member and a second alternate member, to the Commission."

SECTION 3. Except as modified by this Amendment No. 8, the Parties reaffirm the Joint Powers Agreement as amended by the prior seven amendments described above. The Parties shall execute this Amendment No. 8 in duplicate, each identical duplicate of which will be considered an original.

[Signatures appear on following pages.]

The Parties have executed this Amendment No. 8 on the dates set forth below.

DATED: _____

EL TORO WATER DISTRICT

By: _____
President

By: _____
Secretary

APPROVED AS TO FORM:
Redwine and Sherrill, LLP

By: _____
District Counsel

DATED: _____

IRVINE RANCH WATER DISTRICT

By: _____
President

By: _____
Secretary

APPROVED AS TO FORM:
Lewis Brisbois Bisgaard & Smith, LLP

By: _____
District Counsel

DATED: _____

MOULTON NIGUEL WATER DISTRICT

By: _____
President

By: _____
Secretary

APPROVED AS TO FORM:
Best Best & Krieger LLP

By: _____
District Counsel

DATED: _____

MUNICIPAL WATER DISTRICT OF ORANGE
COUNTY

By: _____
President

By: _____
Secretary

APPROVED AS TO FORM:
Best Best & Krieger, LLP

By: _____
District Counsel

DATED: _____

SANTA MARGARITA WATER DISTRICT

By: _____
President

By: _____
Secretary

APPROVED AS TO FORM:
Best Best & Krieger, LLP

By: _____
District Counsel

DATED: _____

TRABUCO CANYON WATER DISTRICT

By: _____
President

By: _____
Secretary

APPROVED AS TO FORM:
Atkinson, Andelson, Loya, Ruud & Romo, LLP

By: _____
District Counsel

EXHIBIT A

SANTIAGO AQUEDUCT COMMISSION
BAKER PIPELINE
PIPELINE CAPACITIES

	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U
Length (LF)	9,400	10,425	7,950	28,500	6,070
HGL Elevation at End of Reach ¹	816	788	770	703	690
Agency	CFS	CFS	CFS	CFS	CFS
East Orange County Water District	10.00	-	-	-	-
County of Orange	1.00	1.06	1.06	1.06	-
Irvine Ranch Water District	49.00	14.59	10.54	10.54	10.50
Santa Margarita Water District	13.00	13.08	13.05	13.05	13.00
Trabuco Canyon Water District	8.00	8.05	8.03	8.03	8.00
El Toro Water District	5.00	5.00	5.00	5.00	5.00
Moulton Niguel Water District	13.00	13.00	13.00	13.00	13.00
Total Capacity	99.00	54.78	50.68	50.68	49.50

¹ Beginning HGL elevation of 832 at OC-33

Exhibit B

Pipeline Capacities
Maintenance, Capital Repair, and Capital Improvement Share, Total and By Reach

Length (LF)	Reach 1U 9,400		Reach 2U 10,425		Reach 3U 7,950		Reach 4U 28,500		Reach 5U 6,070		Total Pipeline 62,345	
	Capacity Length	%	Capacity Length	%	Capacity Length	%	Capacity Length	%	Capacity Length	%	Capacity Length	%
East Orange County Water District	94,000	9.53%	-	-	-	-	-	-	-	-	94,000	2.58%
County of Orange	9,400	0.95%	11,051	2.33%	8,427	2.33%	30,210	2.33%	-	-	59,088	1.62%
Irvine Ranch Water District	460,600	49.84%	152,101	26.52%	83,793	20.73%	300,390	20.73%	63,735	21.22%	1,060,619	29.06%
Santa Margarita Water District	122,200	13.35%	136,359	23.65%	103,747	25.61%	371,925	25.61%	78,910	26.26%	813,141	22.28%
Trabuco Canyon Water District	75,200	8.15%	83,921	14.64%	63,839	15.81%	228,855	15.81%	48,560	16.16%	500,375	13.71%
El Toro Water District	47,000	5.05%	52,125	9.13%	39,750	9.87%	142,500	9.87%	30,350	10.10%	311,725	8.54%
Moulton Niguel Water District	122,200	13.13%	135,525	23.73%	103,350	25.65%	370,500	25.65%	78,910	26.26%	810,485	22.21%
Total	930,600	100%	571,082	100%	402,906	100%	1,444,380	100%	300,465	100%	3,649,433	100%

Agreement Processing Checklist

Please complete items 2-7 before submitting for filing!

- ① Title: Agreement Relating to Baker Pipeline Capacity Transfers Among Baker Water Treatment Plant Participants

- ② ☒ Board Approval → Date: 11/20/13
 - OR -
☐ GM Authority

- ③ Insurance
☒ NOT REQUIRED → General Manager's Initials: _____
 - OR -
☐ Required Requested on: ____/____/____ ☐ Received

- ④ ☒ Attorney Signature Attained {Forward to: _____ on: ____/____/____}
 - OR -
☐ NOT REQUIRED

- ⑤ ~~Sole~~ Source Agreement
☒ NO
☐ YES— Procurement Justification Form Completed

- ⑥ ☐ General Manager or MWDOC Representative Signature Attained

- ⑦ ☐ Executed copy sent to other parties on: ____/____/____

Comments:

Lesborkowski will send us copy w/all signature pages

RECEIVED

FEB 13 2014

MWD OF OC

Date Received:

RECEIVED

DEC 17 2013

MWD OF OC

rec'd: 1 Deliver to: m6

**AGREEMENT RELATING TO
BAKER PIPELINE CAPACITY TRANSFERS
AMONG BAKER WATER TREATMENT
PLANT PARTICIPANTS**

THIS AGREEMENT ("Agreement"), dated this 16th day of December, 2013 ("Effective Date"), is made and entered into by and among EL TORO WATER DISTRICT ("ETWD"), IRVINE RANCH WATER DISTRICT ("IRWD"), MOULTON NIGUEL WATER DISTRICT ("MNWD"), SANTA MARGARITA WATER DISTRICT ("SMWD"), each of the foregoing a California Water District formed under and existing pursuant to Section 34000 *et seq.* of the California Water Code, and TRABUCO CANYON WATER DISTRICT ("TCWD"), a County Water District formed under and existing pursuant to Section 30000 *et seq.* of the California Water Code, each sometimes individually referred to as a "PARTY" and collectively as the "PARTIES." In addition, the MUNICIPAL WATER DISTRICT OF ORANGE COUNTY ("MWDOC"), a Municipal Water District formed under and existing pursuant to Section 71000 *et seq.* of the California Water Code, shall be a signatory to this Agreement for the limited purposes expressly stated herein.

RECITALS:

WHEREAS, the PARTIES are developing a facility known as the "Baker Water Treatment Plant," or "Baker WTP," pursuant to the Baker WTP Agreement (defined below); and

WHEREAS, the proposed Baker WTP will be supplied with untreated water purchased from The Metropolitan Water District of Southern California and conveyed via the Santiago Lateral to the site of the Baker WTP by means of the 12-mile pipeline, known as the "V.P. Baker Pipeline" or "Baker Pipeline." Under certain hydraulic conditions, the Baker Pipeline can also be supplied, or in other hydraulic conditions could with the addition of certain improvements be supplied, with untreated water from Irvine Lake through the Irvine Lake Pipeline; and

WHEREAS, the Baker WTP Agreement provides that each PARTY, in order to use its Baker WTP capacity, shall have secured, separately from the Baker WTP Agreement and through a means permitted under the SAC Agreement, "matching" rights to capacity or additional capacity through Reaches 1U, 2U, 3U, 4U and 5U of the Baker Pipeline at least sufficient to utilize the nominal flow rate corresponding to such PARTY's Baker WTP capacity; and

WHEREAS, the Baker Pipeline, formerly known as the "Santiago Aqueduct Pipeline," was built and is operated and managed by the Santiago Aqueduct Commission ("SAC"), a joint exercise of powers agency formed by agreement on September 11, 1961, as amended, of which the PARTIES and MWDOC, along with other agencies, are members; and

WHEREAS, on an aggregate basis in each pipeline reach, there are excess Baker Pipeline capacities held by one or more PARTIES sufficient to offset the shortfall amounts of those PARTIES who do not have current capacities sufficient to match their WTP capacity; and

WHEREAS, in lieu of negotiating individual capacity transactions, the PARTIES have decided to initially satisfy the Baker WTP matching-capacity requirement for all PARTIES in a single transaction, by entering into this Agreement to collectively implement Baker Pipeline capacity purchases and sales among themselves on a pooled basis, to report such transactions to SAC, and to request that SAC make its future calculations of Baker Pipeline cost-sharing in a manner as provided herein that will recognize such purchases and sales and will not adversely affect other SAC capacity holders; and

WHEREAS, in order to establish the current hydraulic capacity of the Baker Pipeline as a basis for determining the appropriate capacity transfer amounts to satisfy the matching requirement, the PARTIES conducted an hydraulic analysis in 2009, which identified some variations between the hydraulic capacities and the current contractual capacities of the pipeline reaches; and

WHEREAS, the PARTIES have entered into the Baker Pipeline Capacity Transfer Memorandum of Understanding dated March 25, 2010, (the "MOU") in order to set forth the material terms of their agreement to implement transfers of pipeline capacity; and

WHEREAS, the PARTIES desire to enter into this Agreement to supersede the MOU and set forth the material terms and supplemental terms for the Baker Pipeline capacity transfers; and

WHEREAS, the permanent assignment of Pipeline Capacity as set forth in this Agreement requires MWDOC's prior written approval, which is provided by MWDOC's authorized signature below.

NOW, THEREFORE, in consideration of the promises and covenants herein contained, the PARTIES agree as follows:

AGREEMENT:

Section 1. Definitions.

- 1.1 "Baker Pipeline" shall have the meaning specified in the Baker WTP Agreement.
- 1.2 "Baker WTP" shall have the meaning specified in the Baker WTP Agreement.
- 1.3 "Baker WTP Agreement" means that certain agreement entered into among the PARTIES and MWDOC, entitled "Agreement For Construction, Operation and Maintenance of Baker Water Treatment Plant," dated December 15, 2008, as amended by Amendment No. 1 thereto, dated December 23, 2009, and as may be hereafter amended.
- 1.4 "ENR Index" means, as of any date, the Construction Cost Index value published by the *Engineering News Record* for the Los Angeles Area.
- 1.5 "Pipeline Capacity" means capacity in the Baker Pipeline, identified by reach.

1.6 “SAC” shall have the meaning specified in the Baker WTP Agreement.

1.7 “SAC Agreement” shall have the meaning specified in the Baker WTP Agreement.

1.8 “Sale Date” means the date of the notice of award of the contract for construction of the Baker WTP.

1.9 “WTP Capacity Right” shall have the same meaning as the term “Capacity Right” specified in the Baker WTP Agreement.

1.10 “2009 Study” means the Baker Pipeline hydraulic and capacity valuation analysis, performed by and on behalf of the PARTIES and compiled in a memorandum dated October 23, 2009. The 2009 Study summary table is set forth in Exhibit “1” attached hereto and incorporated herein by this reference.

Section 2. Quantity and Value of Pipeline Capacity Rights To Be Transferred.

2.1 The PARTIES agree that for purposes of this Agreement, the existing contractual capacity rights in the Baker Pipeline, including all SAC participants and reflecting successors in interest to such capacity rights, are as specified in the “Contractual Pipeline Capacities (Existing)” table set forth in Exhibit “2A,” which exhibit is attached hereto and incorporated herein by this reference. The PARTIES acknowledge that such capacities shown in Exhibit “2A” are derived from the capacities set forth by Amendment No. 3 to the SAC Agreement, dated November 1, 1978, with subsequent transactions reported to SAC as reflected in the letter of “Clarification of the Second and Subsequent Amendments to the Santiago Aqueduct Commission Joint Powers Agreement Tables 12, 13, and 14,” issued by MWDOC in 1984, and in the May 16, 1988 and January 25, 2007 SAC “Description of V.P. Baker Aqueduct System” tables. The PARTIES acknowledge that the hydraulic analysis in the 2009 Study has been taken into account to derive the modified existing contractual pipeline capacity rights set forth in Exhibit “2B,” attached hereto and incorporated herein by this reference. It is further acknowledged that the revised pipeline capacity rights with non-participant adjustment have been calculated as shown in Exhibit “2C,” attached hereto and incorporated herein by this reference.

2.2 The PARTIES agree that the Pipeline Capacity sales and purchases herein are being made on a pooled basis, with the amount to be sold or purchased by each PARTY identified by pipeline reach in the “Proposed Pipeline Capacities” table in Exhibit “2D,” attached hereto and incorporated herein by this reference. The PARTIES acknowledge and agree that the purchase and sale amounts set forth in the “Proposed Pipeline Capacities” table have been calculated to produce the minimum transfers necessary to result in all PARTIES’ satisfaction of their current Baker WTP matching-capacity requirements, with adjustments as necessary to hold the capacity flow and percentage values (total and by reach) of those SAC capacity holders and beneficial holders who are not PARTIES at the same levels as their current flow and percentage values with no resultant increase in SAC cost-sharing obligations. Subject to Section 5.3 hereof, the PARTIES acknowledge their mutual intention to enable the transfers made herein to be

accomplished as sales and purchases made by separate transaction affecting only the participating buying and selling parties, and reported to SAC, as permitted by the Capacity Agreement (defined in Section 5.4 hereof).

2.3 The PARTIES agree that Exhibit "3A," attached hereto and incorporated herein by this reference, identifies the Pipeline Capacity prices, by pipeline reach, for purposes of the purchases and sales implemented under this Agreement. Pursuant to the MOU, such prices were derived from the 2009 Study, providing the value, in 2009 dollars, of the Pipeline Capacity in cubic feet per second (CFS) by reach. It is further acknowledged and agreed that the 2009 dollar valuation has been adjusted by the change in the ENR Index from the date of the 2009 Study, agreed to be 9,764, to the ENR Index effective July 1, 2013, agreed to be 10,307. Such ENR Index-adjusted Pipeline Capacity prices, which are to be used to calculate the corresponding purchase and sale prices for each PARTY, are set forth in Exhibit "3A."

Section 3. Purchases and Sales.

3.1 Exhibit "3B," attached hereto and incorporated herein by this reference, sets forth the capacities to be transferred. Each PARTY agrees to sell any and all Pipeline Capacity amounts as to which it is designated as a "seller" in Exhibit "3B," and agrees to purchase any and all Pipeline Capacity amounts as to which it is designated as a "purchaser" in Exhibit "3B". All such sales and purchases are agreed by the PARTIES to be made simultaneously on a pooled basis. All such sales and purchases are agreed by the PARTIES to be made on the Sale Date.

3.2 Exhibit "3C," attached hereto and incorporated herein by this reference, sets forth the aggregated purchase and sale prices, by PARTY, of the capacities to be purchased and sold. Each PARTY purchasing any Pipeline Capacity pursuant to Section 3.1 shall remit to IRWD full payment for its purchase price amount as stated in the Exhibit "3C" table. Payment shall be due in full by the 45th day after the Sale Date. By the 60th day after the Sale Date, IRWD shall remit to each PARTY selling any Pipeline Capacity pursuant to Section 3.1 the sale price amount identified for that PARTY in the Exhibit "3C" table.

3.3 Pursuant to Section 8.1 of the WTP Agreement, IRWD will substitute a new Exhibit 3C/Table C into the Baker WTP Agreement to show the revised Pipeline Capacities resulting from the implementation of this Agreement.

Section 4. Future Changes in WTP Capacity.

4.1 This Agreement is being entered into only to satisfy the WTP Capacity-matching requirements as of the Sale Date, inclusive of any changes in WTP Capacity Rights that occurred under Section 5.9 of the Baker WTP Agreement. If any PARTY subsequently exercises its right to transfer, sell or lease all or a portion of its WTP Capacity Rights pursuant to Section 5.1, 5.2 or 5.3 of the Baker WTP Agreement, such PARTY and the acquiring party (whether or not the acquiring party is a PARTY) shall be responsible for including as a part of their transaction, by separate agreement, any Pipeline Capacity that is necessary for the use of the WTP Capacity Right being transferred, sold or leased and for reporting the same to SAC, and the PARTIES to this Agreement who are not involved in that transaction shall have no responsibility therefor nor right of approval thereof, nor shall there be any need for an amendment to this Agreement.

4.2 If the Baker WTP Agreement is terminated under Section 5.9.5 thereof, this Agreement shall be null and void and shall be deemed not to have taken effect. If the Baker WTP Agreement is terminated other than as provided by Section 5.9.5 thereof, the Pipeline Capacity transfers made hereunder shall remain in effect and shall not be affected thereby, except as may otherwise be mutually agreed to between or among any PARTIES in separate agreement(s).

Section 5. Pipeline Capacity To Be Governed By SAC Agreement; MWDOC Approval.

5.1 Except as expressly otherwise provided herein, the Pipeline Capacity shall not be governed by or subject to any provisions of the Baker WTP Agreement, and shall as to operations, cost responsibilities and in all other respects remain subject to the SAC Agreement and any applicable agreements amending or relating thereto.

5.2 The PARTIES may not consent to or approve any amendment to the SAC Agreement that would materially adversely affect the use of the Pipeline Capacity as contemplated in the Baker WTP Agreement.

5.3 The PARTIES agree that IRWD shall report the sales and purchases effected by this Agreement to SAC, and that SAC is hereby authorized by the PARTIES to recognize the Pipeline Capacity transfers under this agreement. The PARTIES acknowledge and agree that they will seek and support an amendment or letter of clarification to the SAC Agreement to: (1) modify the description of the Baker Pipeline to incorporate the hydraulic analysis from the 2009 Study; and (2) as a matter of information, only, and not required for the validity of the sales and purchases effected by this Agreement, conform the SAC Agreement capacity tables to reflect the sales and purchases effected by this Agreement. The sharing of maintenance and other costs under the SAC Agreement shall recognize the sales and purchases effected by this Agreement, commencing upon the effective date of such amendment or letter of clarification to the SAC Agreement or the date of the filing of a notice of completion for the Baker WTP, whichever first occurs, and it is further agreed by the PARTIES that they will authorize and give direction to SAC to the effect that prorations and adjustments of maintenance and other costs as needed, shall be made as of such date. Exhibits "4A," "4B," "4C" and "4D," attached hereto and incorporated herein by this reference, modify the corresponding tables in Exhibits "2A," "2B," "2C" and "2D," respectively, by applying adjustments to the percentage cost-sharing obligations as necessary to result in no increase in SAC cost-sharing obligations of those SAC capacity holders and beneficial holders who are not PARTIES and thereby deriving the percentages (total and by reach) in Exhibit "4D" that will be used for purposes of calculating all of the SAC percentage-ownership-based cost-sharing obligations.

5.4 The PARTIES (including some of the PARTIES' predecessor agencies), MWDOC and certain other parties entered into an agreement, effective December 29, 1978, entitled "Water Capacity Agreement, Operation and Maintenance of System, Irvine Park To El Toro Reservoir Area" (the "Capacity Agreement"), which provides, among other things, that permanent assignment of any Pipeline Capacity shall be subject to the prior written approval of MWDOC and that any assignee shall sign an assumption of all obligations set forth in the

Capacity Agreement. MWDOC hereby approves the permanent assignment of Pipeline Capacity made pursuant to this Agreement, also referred to herein as "purchases and sales."

5.5 Each PARTY purchasing any Pipeline Capacity pursuant to Section 3.1 hereof hereby agrees to assume all obligations set forth in the Capacity Agreement, the SAC Agreement and all other existing agreements governing the Pipeline Capacity, as they pertain to the Pipeline Capacity so purchased.

Section 6. MOU Superseded.

Upon the Effective Date, this Agreement shall supersede and replace the MOU.

Section 7. Interpretation.

This Agreement shall not be construed against any PARTY preparing it, but shall be construed as if all of the PARTIES prepared it.

Section 8. Successors and Assigns; No Third Party Beneficiaries.

This Agreement shall be binding upon and shall inure to the benefit of each of the PARTIES and MWDOC, and each of their respective successors, assigns, trustees or receivers. All the covenants contained in this Agreement are for the express benefit of each and all such Parties and MWDOC. This Agreement is not intended to benefit any third parties.

Section 9. Severability.

Should any provision of this Agreement be held invalid or illegal, such invalidity or illegality shall not invalidate the whole of this Agreement, but, rather, the Agreement shall be construed as if it did not contain the invalid or illegal part, and the rights and obligations of the PARTIES and MWDOC shall be construed and enforced accordingly, unless that provision declared to be invalid or illegal is so material that its omission deprives any PARTY or MWDOC of the basic benefit of their bargain or renders the remainder of this Agreement meaningless.

Section 10. Governing Law.

This Agreement shall be construed and enforced pursuant to the laws of the State of California. Any action or proceeding brought to enforce this Agreement, or related to this Agreement, shall be brought in Orange County, California, notwithstanding Code of Civil Procedure Section 394.

Section 11. Dispute Resolution.

The PARTIES and MWDOC, referred to in this Section as "SIGNATORIES" or singularly "SIGNATORY," desire to resolve as quickly and as amicably as possible any disputes as to the meaning of any portion of this Agreement, the validity of any determination or calculation, or the rights or obligations of the SIGNATORIES pursuant hereto. Therefore, prior to initiation by a SIGNATORY of any litigation or other proceeding in connection with this

Agreement, the SIGNATORIES shall meet and make good-faith efforts to resolve any such disputes on an informal basis. The SIGNATORY that first raises a claim against another SIGNATORY(IES) in connection with a dispute shall be responsible for providing written notice to such other SIGNATORY(IES) and thereby initiating the informal dispute resolution efforts. Such informal efforts may include mediation of the dispute if agreed by the SIGNATORIES involved in the dispute. Not sooner than thirty (30) days after diligent efforts to resolve a dispute have been initiated, if the SIGNATORIES have been unable to resolve the dispute on such informal basis, any SIGNATORY involved in the dispute may, in its discretion and after providing written notice to the other SIGNATORY(IES) that the informal dispute-resolution efforts are being terminated, proceed to take any and all such action to enforce or protect its rights as permitted by law and/or this Agreement. If a SIGNATORY initiates informal dispute-resolution with respect to a dispute, any statutory limitation for filing of a court action or commencement of any other proceeding shall be tolled for a period of days equal to the number of days that elapsed between delivery of the notice initiating informal dispute-resolution and the notice terminating informal dispute-resolution.

Section 12. Amendments.

Except as provided in this Agreement, this Agreement may be amended or supplemented only by a written agreement among the PARTIES. If the written agreement transfers or assigns any Party's Pipeline Capacity or affects MWDOC's rights and obligations under the Agreement, MWDOC shall also be a signatory.

Section 13. Entire Agreement.

Each PARTY and MWDOC represent, warrant and agree that no promise or agreement not expressed herein has been made to them, that this Agreement contains the entire agreement among them pertaining to the matters described herein, that this Agreement supersedes any and all prior agreements or understandings among them with respect to these matters unless otherwise provided herein, and that in executing this Agreement, each is relying solely on its own judgment and knowledge and no signatory is relying on any statement or representation made by any other signatory or its representatives concerning the subject matter, basis or effect of this Agreement other than as set forth herein.

Section 14. Attorneys' Fees.

If any PARTY to this Agreement or MWDOC is required to initiate or defend any action or proceeding, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorneys' fees. Attorneys' fees shall include attorneys' fees on any appeal, and in addition a PARTY or MWDOC entitled to attorneys' fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation.

Section 15. Notices.

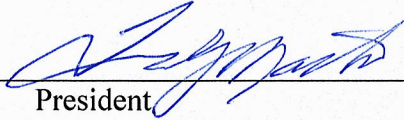
All notices that may or are required to be given pursuant to this Agreement shall be deemed sufficiently given if in writing and if either served personally upon the recipient or mailed by certified or registered mail to:

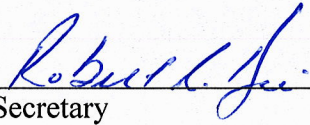
If to ETWD:	El Toro Water District 24251 Los Alisos Boulevard Lake Forest, CA 92630 Attn: General Manager
If to IRWD:	Irvine Ranch Water District 15600 Sand Canyon Ave. P.O. Box 57000 Irvine, CA 92619-7000 Attn: General Manager
If to MNWD:	Moulton Niguel Water District 27500 La Paz Road P.O. Box 30203 Laguna Niguel, CA 92607-0203 Attn: General Manager
If to SMWD:	Santa Margarita Water District 26111 Antonio Parkway P.O. Box 7005 Mission Viejo, CA 92690-7005 Attn: General Manager
If to TCWD:	Trabuco Canyon Water District 32003 Dove Canyon Drive Trabuco Canyon, CA 92679 Attn: General Manager
If to MWDOC:	Municipal Water District of Orange County 18700 Ward Street Fountain Valley, CA 92708 Attn: General Manager

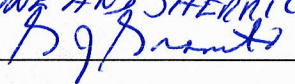
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IN WITNESS WHEREOF, the Parties have executed this Agreement on the date first hereinabove written.

EL TORO WATER DISTRICT

By 
President

By 
Secretary

APPROVED AS TO FORM:
REDWINE AND SHERILL
By 

IRVINE RANCH WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

MOULTON NIGUEL WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date first hereinabove written.

EL TORO WATER DISTRICT

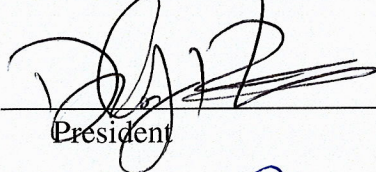
By _____
President

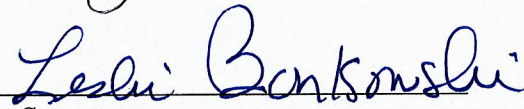
By _____
Secretary

APPROVED AS TO FORM:

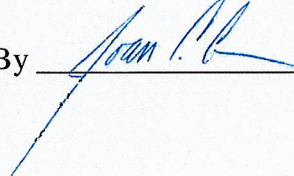
By _____

IRVINE RANCH WATER DISTRICT

By  _____
President

By  _____
Secretary

APPROVED AS TO FORM:

By  _____

MOULTON NIGUEL WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date first hereinabove written.

EL TORO WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

IRVINE RANCH WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:


By _____

MOULTON NIGUEL WATER DISTRICT

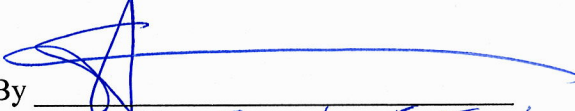
By 
President

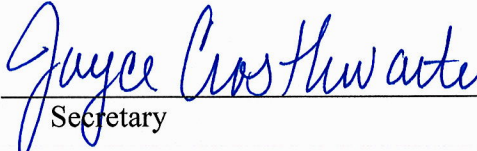
By 
Secretary

APPROVED AS TO FORM:

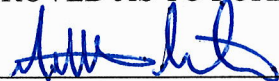
Debie, Arneson Wiles & Giomone
By 

SANTA MARGARITA WATER DISTRICT

By 
President Sandra F. Jacobs

By 
Secretary

APPROVED AS TO FORM:

By _____

TRABUCO CANYON WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

MUNICIPAL WATER DISTRICT OF ORANGE
COUNTY

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

SANTA MARGARITA WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

TRABUCO CANYON WATER DISTRICT

By Ed Mandich
President

By [Signature]
Secretary

APPROVED AS TO FORM:

By [Signature]
BOWIE, ARNISON, WILES & GIANNONE

MUNICIPAL WATER DISTRICT OF ORANGE
COUNTY

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

SANTA MARGARITA WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

TRABUCO CANYON WATER DISTRICT

By _____
President

By _____
Secretary

APPROVED AS TO FORM:

By _____

MUNICIPAL WATER DISTRICT OF ORANGE
COUNTY

By Jan C. Finnegan
President

By Robert Hunter
~~Secretary~~ General Manager
Robert Hunter

APPROVED AS TO FORM:

By David H. Bruner

Exhibit 1

2009 Study – Summary Table

BAKER PIPELINE CAPACITY TRANSFERS

REACH	1U	2U	3U	4U	5U
CAPACITY BY REACH - BASED ON 43.5 CFS TO WTP - MODIFICATION TO STAKEHOLDER CAPACITIES ONLY - WITHOUT HYDRAULIC CONTROL STRUCTURE ON SANTIAGO LATERAL WITH FOREBAY AT BAKER WTP	9,400	10,425	7,950	28,500	6,070
DIAMETER (Inches)	54	39	39	39	39
HGL AT START (Feet)	832	816	788	770	703
HGL AT END (Feet)	816	788	770	703	690

AGENCY	ALLOCATION BY REACH (CFS)				
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Non-Stakeholders to Baker WTP					
East Orange County Water District	Capacity Allocation Per Agreement	10.00	-	-	-
	Revised Capacity Allocation	10.00	-	-	-
The Irvine Company	Capacity Allocation Per Agreement	2.50	-	-	-
	Revised Capacity Allocation	2.50	-	-	-
County of Orange	Capacity Allocation Per Agreement	1.00	1.06	1.06	1.06
	Revised Capacity Allocation	1.00	1.28	1.18	1.18

Stakeholders to Baker WTP										
Santa Margarita Water District	Capacity Allocation Per Agreement	25.39	25.39	25.39	25.39	25.43				
	Revised Capacity Allocation	23.75	30.56	20.28	20.28	31.87				
	Capacity in Baker WTP / Pipeline	13.00	13.00	13.00	13.00	13.00				
	Surplus/Deficit	12.39	17.56	12.39	12.39	18.87				
Irvine Ranch Water District*	Capacity Allocation Per Agreement	57.40	12.50	12.50	12.50	7.51				
	Revised Capacity Allocation	53.70	15.06	13.92	13.92	9.42				
	Capacity in Baker Pipeline	48.50	14.50	10.50	10.50	10.50				
	Surplus/Deficit	7.20	0.55	3.42	3.42	-1.08				
Trabuco Canyon Water District**	Capacity Allocation Per Agreement	8.61	6.55	6.55	6.55	6.55				
	Revised Capacity Allocation	8.06	7.89	7.30	7.30	8.21				
	Capacity in Baker Pipeline	8.00	8.00	8.00	8.00	8.00				
	Surplus/Deficit	0.61	-0.11	-0.70	-0.70	0.21				
El Toro Water District	Capacity Allocation Per Agreement	-	-	-	-	-				
	Revised Capacity Allocation	-	-	-	-	-				
	Capacity in Baker WTP / Pipeline	5.00	5.00	5.00	5.00	5.00				
	Surplus/Deficit	-5.00	-5.00	-5.00	-5.00	-5.00				
Moulton Niguel Water District	Capacity Allocation Per Agreement	-	-	-	-	-				
	Revised Capacity Allocation	-	-	-	-	-				
	Capacity in Baker WTP / Pipeline	13.00	13.00	13.00	13.00	13.00				
	Surplus/Deficit	-13.00	-13.00	-13.00	-13.00	-13.00				
TOTAL - Calculated Revised Allocation		99.00	54.78	50.88	50.88	49.50				

* IRWD capacity in reaches 1U and 2U includes ILP and Ag use

** TCWD capacity includes 6 cfs to Dimension WTP and 2 cfs to Baker WTP

Baker Pipeline Valuation

	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U	TOTAL
Value of Pipeline in each Reach (\$)	\$2,549,672	\$3,439,625	\$2,523,023	\$5,602,030	\$1,235,731	\$15,750,081
Per Agreement Unit Cost by Reach (\$/cfs)	\$25,268.03	\$75,596.15	\$57,646.86	\$127,517.14	\$317,305.51	\$317,305.51
Revised Unit Cost by Reach (\$/cfs)	\$26,764.36	\$62,766.80	\$51,756.57	\$114,483.62	\$24,964.26	\$280,758.62
Total Capacity in each Reach per Agreement dated 5/16/88	104.90	45.50	45.50	45.50	39.50	
Total Capacity in each Reach - Revised	99.00	54.78	50.88	50.88	49.50	

COST BALANCE BASED ON CAPACITY PURCHASES

VALUE CHANGE BY REACH (\$)**										
Stakeholders to Baker WTP										
Per Agreement	\$941,327	\$1,919,386	\$1,463,704	\$3,237,060	\$795,560					
Revised	\$935,954	\$1,918,856	\$1,463,676	\$3,237,597	\$795,511					
Baker Cost	\$347,937	\$916,267	\$972,835	\$1,488,287	\$324,536					
Surplus/Deficit	\$327,717	\$1,102,858	\$790,940	\$1,748,310	\$471,076					\$4,461,532
Non-Stakeholders to Baker WTP	\$1,449,868	\$844,952	\$720,611	\$1,593,954	\$234,545					
	\$1,437,246	\$844,966	\$720,451	\$1,593,972	\$235,163					
	\$1,244,543	\$910,452	\$543,444	\$1,202,076	\$252,125					
	\$192,703	\$34,834	\$177,207	\$391,536	\$26,861					\$765,374
TCWD	\$217,480	\$485,155	\$377,600	\$835,237	\$204,912					
	\$215,453	\$485,411	\$377,823	\$835,730	\$204,957					
	\$214,115	\$492,318	\$414,053	\$915,969	\$199,714					
	\$1,338	\$8,807	\$36,230	\$60,158	\$5,242					
ETWD	-	-	-	-	-					
	-	-	-	-	-					
	-	-	-	-	-					
	\$133,822	\$313,949	\$258,783	\$572,418	\$124,821					
MINWD	-	-	-	-	-					
	-	-	-	-	-					
	-	-	-	-	-					
	\$347,937	\$916,267	\$972,835	\$1,488,287	\$324,536					
	\$347,937	\$916,267	\$972,835	\$1,488,287	\$324,536					
NET DIFFERENCE										\$0

** Negative Values = Paid By, Positive Values = Paid To

Exhibit 2A

Contractual Pipeline Capacities (Existing)

and

Exhibit 2B

Pipeline Capacity Rights (Modified By 2009 Study Hydraulic Analysis)

EXHIBIT 2
BAKER PIPELINE CAPACITY OWNERSHIP RIGHTS

EXHIBIT 2A Contractual Pipeline Capacities (Existing) (per Section 2.1 of this Agreement)							
	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U		
Length (LF)	9,400	10,425	7,950	28,500	6,070		
HGL Elev at End of Reach ¹	815	786	765	723	715		
Agency	CFS	CFS	CFS	CFS	CFS		
East Orange County Water District	10.00	-	-	-	-		
The Irvine Company	2.50	-	-	-	-		
County of Orange	1.00	1.06	1.06	1.06	-		
Irvine Ranch Water District	57.40	12.50	12.50	12.50	7.51		
Santa Margarita Water District	25.39	25.39	25.39	25.39	25.43		
Trabuco Canyon Water District	8.61	6.55	6.55	6.55	6.55		
El Toro Water District	-	-	-	-	-		
Moulton Niguel Water District	-	-	-	-	-		
Total Capacity	104.90	45.50	45.50	45.50	39.49		

¹ Beginning HGL elevation of 832 at OC-33

EXHIBIT 2B Pipeline Capacity Rights (Modified by 2009 Study Hydraulic Analysis)							
	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U		
Length (LF)	9,400	10,425	7,950	28,500	6,070		
HGL Elev at End of Reach ¹	816	788	770	703	690		
Agency	CFS	CFS	CFS	CFS	CFS		
East Orange County Water District	10.00	-	-	-	-		
The Irvine Company	2.50	-	-	-	-		
County of Orange ²	1.00	1.28	1.18	1.18	-		
Irvine Ranch Water District	53.70	15.05	13.92	13.92	9.42		
Santa Margarita Water District	23.75	30.56	28.28	28.28	31.87		
Trabuco Canyon Water District	8.05	7.89	7.30	7.30	8.21		
El Toro Water District	-	-	-	-	-		
Moulton Niguel Water District	-	-	-	-	-		
Total Capacity	99.00	54.78	50.68	50.68	49.50		

¹ Beginning HGL elevation of 832 at OC-33

² County of Orange capacities over-allocated in reach 2U, 3U, and 4U from existing contractual pipeline capacities as defined in Exhibit 2A. See Exhibit 2C for adjustment to match existing contractual pipeline capacities.

Exhibit 2C

Revised Pipeline Capacities With Non-Participant Adjustment

and

Exhibit 2D

Proposed Pipeline Capacities

EXHIBIT 2
BAKER PIPELINE CAPACITY OWNERSHIP RIGHTS

EXHIBIT 2C Revised Pipeline Capacities With Non-Participant Adjustment ¹						
	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U	
Length (LF)	9,400	10,425	7,950	28,500	6,070	
HGL Elev at End of Reach ²	816	788	770	703	690	
Agency	CFS	CFS	CFS	CFS	CFS	
East Orange County Water District	10.00	-	-	-	-	
The Irvine Company	2.50	-	-	-	-	
County of Orange ³	1.00	1.06	1.06	1.06	-	
Irvine Ranch Water District ⁴	53.70	15.11	13.95	13.95	9.42	
Santa Margarita Water District ⁴	23.75	30.69	28.35	28.35	31.87	
Trabuco Canyon Water District ⁴	8.05	7.92	7.32	7.32	8.21	
El Toro Water District	-	-	-	-	-	
Moulton Niguel Water District	-	-	-	-	-	
Total Capacity	99.00	54.78	50.68	50.68	49.50	

¹ Non-participant (East Orange County Water District, The Irvine Company, County of Orange) existing contractual pipeline capacities remain unchanged in each pipeline reach as defined in Exhibit 2A.

² Beginning HGL elevation of 832 at OC-33

³ County of Orange capacity rights in Reach 2U, 3U, and 4U adjusted from modified pipeline capacity rights as defined in Exhibit 2B to match existing contractual pipeline capacities as defined in Exhibit 2A.

⁴ Pipeline capacity in pipeline reach 2U, 3U, and 4U for Irvine Ranch Water District, Santa Margarita Water District, and Trabuco Canyon Water District adjusted from revised pipeline capacity allocation totals as defined in Exhibit 1 to include County of Orange over-allocation as defined in Exhibit 2B.

EXHIBIT 2D Proposed Pipeline Capacities						
	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U	
Length (LF)	9,400	10,425	7,950	28,500	6,070	
HGL Elev at End of Reach ¹	816	788	770	703	690	
Agency	CFS	CFS	CFS	CFS	CFS	
East Orange County Water District ²	10.00	-	-	-	-	
The Irvine Company ²	2.50	-	-	-	-	
County of Orange ²	1.00	1.06	1.06	1.06	-	
Irvine Ranch Water District ³	46.50	14.59	10.54	10.54	10.50	
Santa Margarita Water District ³	13.00	13.08	13.05	13.05	13.00	
Trabuco Canyon Water District ³	8.00	8.05	8.03	8.03	8.00	
El Toro Water District ⁴	5.00	5.00	5.00	5.00	5.00	
Moulton Niguel Water District ⁴	13.00	13.00	13.00	13.00	13.00	
Total Capacity	99.00	54.78	50.68	50.68	49.50	

¹ Beginning HGL elevation of 832 at OC-33

² Non-participant (East Orange County Water District, The Irvine Company, County of Orange) proposed pipeline capacities match existing contractual pipeline capacities in each pipeline reach as defined in Exhibit 2A.

³ Proposed pipeline capacity in pipeline reach 2U, 3U, and 4U for Irvine Ranch Water District, Santa Margarita Water District, and Trabuco Canyon Water District adjusted from revised pipeline capacity allocation totals as defined in Exhibit 1 to include County of Orange over-allocation as defined in Exhibit 2B.

⁴ Total capacity in each pipeline reach match totals as defined in Exhibit 1 for El Toro Water District and Moulton Niguel Water District.

Exhibit 3A

Pipeline Capacity Valuation Analysis (2009 and July 1, 2013)

EXHIBIT 3A

PIPELINE CAPACITY VALUATION ANALYSIS (2009 AND JULY 1, 2013)

REACH	1U	2U	3U	4U	5U	TOTAL
LENGTH (ft)	9,400	10,425	7,950	28,500	6,070	62,345
PROPOSED CAPACITY ALLOCATION (cfs)	99.00	54.78	50.68	50.68	49.50	-
PIPE DIAMETER	54	39	39	39	39	-
YEAR INSTALLED	1963	1981	1981	1963	1963	-
2013 Construction Cost	\$5,358,252	\$4,291,827	\$3,272,904	\$11,733,053	\$2,498,934	\$27,154,971
2013 Undepreciated Value	\$7,233,641	\$5,793,967	\$4,418,421	\$15,839,621	\$3,373,561	\$36,659,211
2013 Depreciated Value	\$2,411,214	\$3,321,874	\$2,533,228	\$5,279,874	\$1,124,520	\$14,670,710
2013 Depreciated Value per cfs	\$24,355.69	\$60,640	\$49,985	\$104,181	\$22,718	\$261,879

Assumptions include the following:

	2009	2013
Pipeline Useful Life (Years):	75	75
Pipe Unit Cost (per inch-diameter-foot)	\$10.00	\$ 10.56 (Adjusted for July 2013 LA ENR)
Design/Contingency Factor:	1.35	1.35

Formulas for Calculating Cost are as follows:

2013 Construction Cost = Pipe Length * Pipe Diameter * 2013 Pipe Unit Cost
 2013 Undepreciated Value = 2013 Construction Cost * Design/Contingency Factor
 2013 Depreciated Value = 2013 Undepreciated Value * [(Pipeline Useful Life - Years in Service)/(Pipeline Useful Life)]
 December 2009 LA ENR = 9,764
 July 2013 LA ENR = 10,307

Exhibit 3B

Summary of Pipeline Capacity Transfers, By Reach

EXHIBIT 3B

SUMMARY OF PIPELINE CAPACITY TRANSFERS, BY REACH

REACH		1U	2U	3U	4U	5U
LENGTH (ft)		9,400	10,425	7,950	28,500	6,070
PROPOSED CAPACITY ALLOCATION (cfs)		99.00	54.78	50.68	50.68	49.50
AGENCY	BAKER PIPELINE CAPACITY ALLOCATION (cfs) ¹					
East Orange County Water District	Existing Pipeline Capacity ²	10.00	-	-	-	-
	Proposed Pipeline Capacity ⁴	10.00	-	-	-	-
	Surplus/(Deficit)	0	-	-	-	-
The Irvine Company	Existing Pipeline Capacity ²	2.50	-	-	-	-
	Proposed Pipeline Capacity ⁴	2.50	-	-	-	-
	Surplus/(Deficit)	0	-	-	-	-
County of Orange	Existing Pipeline Capacity ²	1.00	1.06	1.06	1.06	-
	Proposed Pipeline Capacity ⁴	1.00	1.06	1.06	1.06	-
	Surplus/(Deficit)	0	0	0	0	-
Irvine Ranch Water District	Modified Pipeline Capacity ³	53.70	15.11	13.95	13.95	9.42
	Proposed Pipeline Capacity ⁴	46.50	14.59	10.54	10.54	10.50
	Surplus/(Deficit)	7.20	0.52	3.41	3.41	(1.08)
Santa Margarita Water District	Modified Pipeline Capacity ³	23.75	30.69	28.35	28.35	31.87
	Proposed Pipeline Capacity ⁴	13.00	13.08	13.05	13.05	13.00
	Surplus/(Deficit)	10.75	17.61	15.30	15.30	18.87
Trabuco Canyon Water District	Modified Pipeline Capacity ³	8.05	7.92	7.32	7.32	8.21
	Proposed Pipeline Capacity ⁴	8.00	8.05	8.03	8.03	8.00
	Surplus/(Deficit)	0.05	(0.13)	(0.71)	(0.71)	0.21
El Toro Water District	Modified Pipeline Capacity ³	-	-	-	-	-
	Proposed Pipeline Capacity ⁴	5.00	5.00	5.00	5.00	5.00
	Surplus/(Deficit)	(5.00)	(5.00)	(5.00)	(5.00)	(5.00)
Moulton Niguel Water District	Modified Pipeline Capacity ³	-	-	-	-	-
	Proposed Pipeline Capacity ⁴	13.00	13.00	13.00	13.00	13.00
	Surplus/(Deficit)	(13.00)	(13.00)	(13.00)	(13.00)	(13.00)

¹ Positive Values indicate Baker Pipeline Capacity to be sold. Negative Values indicated Baker Pipeline Capacity to be purchased.

² Contractual pipeline capacities (existing) per Exhibit 2A.

³ Pipeline capacity rights per Exhibit 2B.

⁴ Proposed pipeline capacities per Exhibit 2D.

Exhibit 3C

Pipeline Capacity Purchase and Sale Prices, By Party

EXHIBIT 3C

PIPELINE CAPACITY PURCHASE AND SALE PRICES, BY PARTY

AGENCY	CAPACITY PURCHASES (PAYMENTS)	CAPACITY REVENUE (RECEIPTS)	CAPACITY TRANSFER NET COST
East Orange County Water District	\$ -	\$ -	-
The Irvine Company	\$ -	\$ -	-
County of Orange	\$ -	\$ -	-
Irvine Ranch Water District	\$ (24,535)	\$ 732,598	708,063
Santa Margarita Water District	\$ -	\$ 4,117,110	4,117,110
Trabuco Canyon Water District	\$ (117,341)	\$ 5,988	(111,352)
El Toro Water District	\$ (1,309,395)	\$ -	(1,309,395)
Moulton Niguel Water District	\$ (3,404,426)	\$ -	(3,404,426)

Footnotes:

- (1) Positive Values indicate net payments to the Agency.
Negative Values indicate net payments from the Agency.

Exhibit 4A

Contractual Pipeline Capacities (Existing) -- Maintenance Shares, Total and By Reach

and

Exhibit 4B

**Pipeline Capacities (Per 2009 Study Hydraulic
Analysis) -- Maintenance Shares, Total and By Reach**

EXHIBIT 4
BAKER PIPELINE MAINTENANCE SHARES

Exhibit 4A Contractual Pipeline Capacities (Existing) – Maintenance Shares, Total and By Reach¹										
	Reach 1U		Reach 2U		Reach 3U		Reach 4U		Reach 5U	
Length (LF)	9,400		10,425		7,950		28,500		6,070	Total Pipeline
	Capacity * Length	%	Capacity * Length	%	Capacity * Length	%	Capacity * Length	%	Capacity * Length	%
East Orange County Water District ¹	94,000	9.53%	-	-	-	-	-	-	-	2.80%
The Irvine Company ¹	23,500	2.38%	-	-	-	-	-	-	-	0.70%
County of Orange ¹	9,400	0.95%	11,051	2.33%	8,427	2.33%	30,210	2.33%	-	1.76%
Irvine Ranch Water District	539,560	54.72%	130,313	27.47%	99,375	27.47%	356,250	27.47%	45,586	19.02%
Santa Margarita Water District	238,666	24.21%	264,691	55.80%	201,851	55.80%	723,615	55.80%	154,360	64.39%
Trabuco Canyon Water District	80,934	8.21%	68,284	14.40%	52,073	14.40%	186,675	14.40%	39,759	16.59%
El Toro Water District	-	-	-	-	-	-	-	-	-	12.73%
Moulton Niguel Water District	-	-	-	-	-	-	-	-	-	-
Total	986,060	100%	474,339	100%	361,726	100%	1,296,750	100%	239,705	100%
¹ The Baker Pipeline maintenance share, by capacity holder, is based upon the percentage of the sum of the capacity * length in each pipeline reach divided by the total capacity * total length of the Baker Pipeline. Capital improvement and replacement costs are determined by the maintenance share percentage in each pipeline reach where capital improvements or replacement costs occur, as defined by the SAC Agreement.										

Exhibit 4B Pipeline Capacities (Per 2009 Study Hydraulic Analysis) – Maintenance Shares, Total and By Reach¹										
	Reach 1U		Reach 2U		Reach 3U		Reach 4U		Reach 5U	
Length (LF)	9,400		10,425		7,950		28,500		6,070	Total Pipeline
	Capacity * Length	%	Capacity * Length	%	Capacity * Length	%	Capacity * Length	%	Capacity * Length	%
East Orange County Water District	94,000	10.10%	-	-	-	-	-	-	-	2.58%
The Irvine Company	23,500	2.53%	-	-	-	-	-	-	-	0.64%
County of Orange	9,400	1.01%	13,344	2.34%	9,381	2.33%	33,630	2.33%	-	1.80%
Irvine Ranch Water District	504,780	54.24%	156,897	27.47%	110,664	27.47%	396,720	27.47%	57,179	19.03%
Santa Margarita Water District	223,250	23.99%	318,588	55.79%	224,826	55.80%	805,980	55.80%	193,451	64.38%
Trabuco Canyon Water District	75,670	8.13%	82,253	14.40%	58,035	14.40%	208,050	14.40%	49,835	16.59%
El Toro Water District	-	-	-	-	-	-	-	-	-	12.99%
Moulton Niguel Water District	-	-	-	-	-	-	-	-	-	-
Total	930,600	100%	571,082	100%	402,906	100%	1,444,380	100%	300,465	100%
¹ Based on pipeline capacity rights as defined in Exhibit 2B per the 2009 Hydraulic Analysis										

Exhibit 4C

**Revised Pipeline Capacities With Non-Participant
Adjustment -- Maintenance Shares, Total and By Reach**

and

Exhibit 4D

Proposed Pipeline Capacities -- Maintenance Shares, Total and By Reach

EXHIBIT 4
BAKER PIPELINE MAINTENANCE SHARES

Exhibit 4C Revised Pipeline Capacities With Non-Participant Adjustment -- Maintenance Shares, Total and By Reach										
Length (LF)	Reach 1U		Reach 2U		Reach 3U		Reach 4U		Reach 5U	Total Pipeline
	Capacity *	%	Capacity *	%	Capacity *	%	Capacity *	%	Capacity *	Capacity *
	Length		Length		Length		Length		Length	Length Total
East Orange County Water District ¹	94,000	9.53%	-	-	-	-	-	-	-	94,000
The Irvine Company ¹	23,500	2.38%	-	-	-	-	-	-	-	23,500
County of Orange ²	9,400	0.95%	11,051	2.33%	8,427	2.33%	30,210	2.33%	-	59,088
Irvine Ranch Water District	504,780	54.24%	157,522	27.58%	110,902	27.53%	397,575	27.53%	57,179	1,227,958
Santa Margarita Water District	223,250	23.99%	319,943	56.02%	225,383	55.94%	807,975	55.94%	193,451	1,770,002
Trabuco Canyon Water District	75,670	8.13%	82,566	14.46%	58,194	14.44%	208,620	14.44%	49,835	474,885
El Toro Water District	-	-	-	-	-	-	-	-	-	-
Moulton Niguel Water District	-	-	-	-	-	-	-	-	-	-
Total	930,600	99.22%	571,082	100.39%	402,906	100.24%	1,444,380	100.24%	300,465	3,649,433

¹ Adjustment ³ 0 0.78% 0 -0.39% 0 -0.24% 0 -0.24% 0 0% 0% 0%

¹ East Orange County Water District and The Irvine Company proposed pipeline capacities and maintenance shares in Reach 1U held to existing contractual pipeline capacities as defined in Exhibit 2A and existing maintenance shares as defined in Exhibit 4A.

² County of Orange pipeline capacities and maintenance shares in Reach 1U, 2U, 3U, and 4U held to existing contractual pipeline capacities as defined in Exhibit 2A and existing maintenance shares as defined in Exhibit 4A.

³ Adjustment is the difference from holding the County of Orange existing contractual pipeline capacities and maintenance shares in reach 1U, 2U, 3U, and 4U, and the East Orange County Water District and The Irvine Company existing contractual pipeline capacities and maintenance shares in reach 1U as defined in Exhibit 2B and Exhibit 4B to existing contractual pipeline capacities and maintenance shares as defined in Exhibit 2A and Exhibit 4A. Adjustment is proportionally distributed among Irvine Ranch Water District, Santa Margarita Water District, and Trabuco Canyon Water District.

Exhibit 4D Proposed Pipeline Capacities -- Maintenance Shares, Total and By Reach										
Length (LF)	Reach 1U		Reach 2U		Reach 3U		Reach 4U		Reach 5U	Total Pipeline
	Capacity *	%	Capacity *	%	Capacity *	%	Capacity *	%	Capacity *	Capacity *
	Length		Length		Length		Length		Length	Length Total
East Orange County Water District ¹	94,000	9.53%	-	-	-	-	-	-	-	94,000
The Irvine Company ¹	23,500	2.38%	-	-	-	-	-	-	-	23,500
County of Orange ¹	9,400	0.95%	11,051	2.33%	8,427	2.33%	30,210	2.33%	-	59,088
Irvine Ranch Water District	437,100	47.46%	152,101	26.52%	83,793	20.73%	300,390	20.73%	63,735	1,037,119
Santa Margarita Water District	122,200	13.35%	136,359	23.65%	103,747	25.61%	371,925	25.61%	78,910	813,141
Trabuco Canyon Water District	75,200	8.15%	83,921	14.64%	63,839	15.81%	228,855	15.81%	48,560	500,375
El Toro Water District	47,000	5.05%	52,125	9.13%	39,750	9.87%	142,500	9.87%	30,350	311,725
Moulton Niguel Water District	122,200	13.13%	135,525	23.73%	103,350	25.65%	370,500	25.65%	78,910	810,485
Total ²	930,600	100%	571,082	100%	402,906	100%	1,444,380	100%	300,465	3,649,433

¹ Non-participants (East Orange County Water District, The Irvine Company, County of Orange) proposed maintenance share percentages match existing maintenance share percentages in each pipeline reach as defined in Exhibit 4A. Proposed total maintenance share percentages match revised total maintenance share percentages as defined in Exhibit 4C.

² Total capacity * length in each pipeline reach held at revised pipeline capacities in Exhibit 4B.

**AGREEMENT BETWEEN
EL TORO WATER DISTRICT
AND IRVINE RANCH WATER DISTRICT
PROVIDING FOR DOMESTIC WATER
INTERCONNECTION**

This AGREEMENT PROVIDING FOR DOMESTIC WATER INTERCONNECTION ("Agreement") is entered into the 16 day of December, 2013, by and between the EL TORO WATER DISTRICT ("ETWD") and the IRVINE RANCH WATER DISTRICT ("IRWD"), each, a California water district formed and existing under Section 34000 *et seq.* of the California Water Code (each, a "Party" and together, the "Parties").

RECITALS:

A. ETWD and IRWD, along with other parties, have entered into an agreement, entitled "Agreement For Construction, Operation and Maintenance of Baker Water Treatment Plant," dated December 15, 2008, as amended by Amendment No. 1 thereto, dated December 23, 2009, and as may be hereafter amended (the "Baker WTP Agreement"), providing for the development of a facility known as the "Baker Water Treatment Plant," or "Baker WTP."

B. The Baker WTP will be equipped to provide for delivery of product water from the Baker WTP to IRWD via a connection directly into IRWD's distribution system (the "IRWD Baker Connection"). The IRWD Baker Connection is not metered, but the flow delivered through the IRWD Baker Connection can be measured by subtraction, using other Baker WTP metered flows.

C. The Baker WTP will be equipped to provide for delivery of product water from the Baker WTP to the Baker WTP Agreement parties other than IRWD via delivery through the Product Water Facilities (as that term is defined in the Baker WTP Agreement) to the South County Pipeline ("SCP Delivery").

D. Due to the proximity of ETWD's and IRWD's distribution systems, it is also possible to deliver Baker WTP product water to ETWD through the IRWD Baker Connection and then through an interconnection between IRWD's and ETWD's distribution systems ("Interconnection Delivery").

E. The Baker WTP Agreement recognizes that ETWD's primary method of taking delivery of Baker WTP product water is Interconnection Delivery under separate arrangements between IRWD and ETWD, and, to the extent IRWD is not able to deliver water to ETWD by Interconnection Delivery, then by SCP Delivery.

F. ETWD and IRWD desire to set forth the terms for Interconnection Delivery to be used by ETWD in conjunction with the SCP Delivery available to ETWD under the Baker WTP Agreement.

AGREEMENT:

1. Relationship To Baker WTP Agreement. This Agreement shall serve as the separate agreement between ETWD and IRWD contemplated in Section 4.3.1 of the Baker WTP Agreement.

2. Interconnection.

2.1. Existing Facilities and Property. IRWD shall quitclaim to ETWD, at no cost (i) the existing interconnection located near the intersection of El Toro Road and 2nd Street, between IRWD's Lake Forest Zone 1 distribution system and ETWD's Zone R-6 distribution system; (ii) the existing 10-inch pipeline and meter; (iii) the site on which the facilities described in (i) and a portion of the facilities described in (ii) are located, consisting of the property and easements for ingress and egress and water and sewer transmission granted to IRWD's predecessor in interest, Los Alisos Water District, by instruments recorded May 15, 1973, in Book 10697, page 58, and Book 10697, Page 62 of Orange County Official Records, and easements reserved for water line purposes by map of Tract No. 8076 recorded May 11, 1973, in Book 322, page 27 of Miscellaneous Maps, Orange County Official Records; and (iv) an existing fire hydrant at the end of Front Street and a portion of IRWD's existing 8-inch pipeline that delivers flow to the existing fire hydrant, all as depicted on Exhibits "A-1," "A-2" and "A-3," attached hereto and incorporated herein by this reference.

2.2. Demolition and Construction. IRWD will, at its expense, disconnect the pipeline referred to in clause (iv) of Section 2.1 from IRWD's water system and connect it to ETWD's water system. Except as provided in the preceding sentence, ETWD will be solely responsible for all costs associated with the facilities and property quitclaimed pursuant to Section 2.1 and for the Interconnection, as defined below. ETWD will have sole responsibility for design and construction of a new pump station to be connected to the interconnection and any required improvements to the suction and/or discharge pipelines into and out of the pump station and the installation of an influent meter to the pump station (collectively, the "2nd Street Pump Station"); and for demolition of any of the existing interconnection facilities as necessary in connection therewith. The interconnection and the 2nd Street Pump Station, together with meter(s), valve(s), vault(s), piping and isolation valves are collectively referred to herein as the "Interconnection." ETWD will cause the 2nd Street Pump Station to be designed with all necessary equipment for, and operated to provide, continuous transmission of pump station operating information including, but not limited to, flow and pressure data, to IRWD's SCADA system. ETWD will design the influent metering and communications facilities in accordance with IRWD standards and requirements. ETWD will provide an opportunity for IRWD to review the design of the influent metering and communications

facilities to confirm that IRWD's requirements are included. ETWD will also conduct a transient surge analysis for the proposed Interconnection to determine if any surge protection facilities are required to protect IRWD's distribution system from surge events associated with the operation of the Interconnection, and will include any such identified surge protection facilities in the design and construction of the Interconnection. ETWD will accomplish any environmental review and certification under the California Environmental Quality Act relating to the Interconnection and the activities described herein.

2.3. IRWD Controls. IRWD agrees to add controls and metering to its existing pressure reducing valve at the Lake Forest Zone 2 East Pump Station, to permit the monitoring of the back feed of Lake Forest Zone 2 water to IRWD's Lake Forest Zone 1 El Toro Road Tanks as necessary to maintain a minimum water level in the tanks as defined in the Dudek Engineering memo dated November 16, 2011. The parties acknowledge that as described in the Dudek memo dated July 27, 2011, it is anticipated that approximately 500 gpm will need to be back fed from the Lake Forest Zone 2 system to the Lake Forest Zone 1 system to support Interconnection Delivery of 5 cfs flow to ETWD during low demand periods. This condition is anticipated to occur when the IRWD Lake Forest service area demands are less than 10.5 cfs, which is anticipated to be about a 3.5 month period (January to mid-April) annually.

3. Ownership, Maintenance and Operation; Vault and Site Access. ETWD shall, at its sole cost, own, operate, maintain and replace the Interconnection and the capacity therein. ETWD hereby grants IRWD rights of access to the Interconnection metering and communications facilities, including any secured gates and doors.

4. Water Pressure, Quality and Flow Requirements.

4.1. Water Supply. The Interconnection is anticipated to be designed to supply a flow of five (5) cubic feet per second (cfs), provided, however, that IRWD makes no guarantee as to any specified water flow rate, quantity, pressure, or quality of the water that may be delivered from its system to ETWD's system through the Interconnection for any purpose; provided, the foregoing shall not be deemed to limit any responsibility IRWD may have with respect to quality of Baker WTP product water under the Baker WTP Agreement, subject to Section 10.1.1 thereof.

4.2. System Modifications. Although IRWD's Lake Forest service area is predominantly built-out and IRWD does not anticipate major modifications to its Lake Forest distribution system, IRWD is unable to make assurances to ETWD that future changes to the system will not preclude or inhibit Interconnection Delivery. If IRWD makes future modifications to its distribution system that may preclude or inhibit Interconnection Delivery, IRWD will coordinate such modifications with ETWD. If feasible and if so requested by ETWD, IRWD agrees, at ETWD's expense, to incorporate in the design and construction of such modifications any features that would maintain the capability for Interconnection Delivery without interfering with IRWD's reasonable use of its

distribution system. If ETWD does not elect to have IRWD incorporate such features at ETWD's cost, this Agreement shall terminate upon IRWD's notice to ETWD that IRWD will proceed with the future modifications to its distribution system without such features.

5. Operational Limitations.

5.1. Product Water. The production of product water from the Baker WTP is governed by, and subject to all of the limitations of, the Baker WTP Agreement.

5.2. Interconnection Delivery. Subject to Section 5.1, IRWD agrees to use its best efforts to operate its water distribution system in a manner that will allow ETWD to operate the Interconnection to deliver all of ETWD's Baker WTP product water to its R-6 Zone distribution system by Interconnection Delivery, except in the event of an AMP outage, a significant fire event in IRWD's Lake Forest service area, an extended maximum day demand scenario in IRWD's Lake Forest service area, a planned outage for maintenance of storage tank(s) and/or distribution system piping/facilities in IRWD's Lake Forest service area, low pressure events in IRWD's Lake Forest service area, or a pipeline break, pump station failure, significant power outage, or other an unplanned outage in IRWD's Lake Forest service area. If a planned activity is anticipated to interrupt or reduce Interconnection Delivery, IRWD agrees to coordinate the activity in advance with ETWD to the extent reasonably feasible. IRWD agrees to use its best efforts to avoid planned maintenance during the summer and other high demand periods. IRWD will notify ETWD whenever it is aware that Interconnection Delivery is or will be unavailable.

5.3. SCP Delivery. In the event Interconnection Delivery is not available, ETWD will receive SCP Delivery. ETWD acknowledges that SCP Delivery is not provided for by this Agreement and shall be governed by the Baker WTP Agreement.

6. No Dedication of Capacity. ETWD acknowledges and agrees that this Agreement provides only for transmission of water through Interconnection Delivery, and nothing herein creates any implied dedication of any facilities or capacity in facilities, or any other right or entitlement in or to water or capacity in IRWD's water system.

7. Term and Termination of Agreement. ETWD may, at its option, terminate this Agreement by providing 30 days' prior written notice to IRWD. Unless earlier terminated by ETWD as provided in this Section, or by IRWD as provided in Section 4.2, this Agreement shall be in effect for as long as ETWD remains a Party to the Baker WTP Agreement, and shall terminate automatically upon the termination of ETWD's participation in the Baker WTP Agreement. Unless the Parties, by mutual agreement, provide for the conversion of the Interconnection to an emergency interconnection, upon termination, ETWD shall properly disconnect the Interconnection from IRWD's water distribution system or otherwise take the Interconnection out of service, at ETWD's sole cost.

8. Metering. The Interconnection meters shall be used for the purpose of measurement, invoicing and payment of water supplied through the Interconnection.

9. Invoicing and Payment.

9.1. Baker WTP Product Water. The water supplied to ETWD through Interconnection Delivery shall be considered Baker WTP product water, up to the amount of ETWD's allocated share of Baker WTP product water for each applicable billing period under the Baker WTP Agreement. Such quantity of product water supplied to ETWD through Interconnection Delivery, together with any quantity of product water that is delivered to ETWD through the SCP Delivery under the Baker WTP Agreement, will be billed to ETWD for each billing period under the Baker WTP Agreement, and no amount shall be due to IRWD for such quantity of water under this Agreement. To the extent any water is supplied to ETWD through the interconnection in excess of ETWD's allocated share of Baker WTP product water for an applicable billing period under the Baker WTP Agreement, such excess quantity of water will be invoiced as provided in Section 9.2.

9.2. Water Other Than Baker WTP Product Water. Except for water deemed to be Baker WTP product water under Section 9.1, any water supplied through the interconnection shall be invoiced by IRWD to ETWD. The water supplied will be charged at the prevailing rate paid by IRWD for full-service Metropolitan Water District treated water or equivalent, plus any incremental increase in readiness-to-serve charges paid by IRWD and attributable to the water supplied. Each invoiced amount shall be due and payable within thirty (30) days of mailing of the invoice. Alternatively, IRWD may, at its election, include any such invoiced amounts with amounts billed by IRWD to ETWD for water, operation and maintenance under the Baker WTP Agreement.

9.3. Energy Costs. ETWD shall pay to IRWD, upon invoice including supporting calculations, the actual cost of energy required to back feed from the Lake Forest Zone 2 system to the Lake Forest Zone 1 system to support Interconnection Delivery, as described in Section 2.3. The controls and metering described in Section 2.3 will be used by IRWD to totalize the volume of flow that is back fed and will serve as the basis for billing such actual energy costs. Each invoiced amount shall be due and payable within thirty (30) days of mailing of the invoice. Alternatively, IRWD may, at its election, include any such invoiced amounts with amounts billed by IRWD to ETWD for water, operation and maintenance under the Baker WTP Agreement.

9.4. Fixed Operation and Maintenance Costs. ETWD shall pay to IRWD, upon invoice, fixed administration, operation and maintenance costs of Interconnection Delivery. Annually, by April 1 of each year, IRWD shall prepare a budget for such costs during the next budget year (July 1 – June 30) for approval by ETWD, and shall provide ETWD with a copy of the budget. The budgeted fixed costs for the budget year shall be payable by an advance deposit made annually by ETWD, and shall be due upon presentation of an invoice by IRWD. In the second and each subsequent budget year, any excess/shortfall from the preceding budget year's deposits shall be subtracted from/added to the second

annual deposit. If and for so long as the ETWD fails to approve a budget for fixed costs, the Parties' obligations under this Section shall continue to be performed as though the prior year's budget were in effect for the current budget year, and IRWD may reduce the use of the Interconnection as necessary to operate within such budget. IRWD and ETWD acknowledge that the foregoing process is intended to be patterned on the comparable process under Section 4.2 of the Baker WTP Agreement, in order to permit the parties to carry both processes out concurrently. For this purpose IRWD may use a single set of budget documents and invoices submitted to ETWD under both agreements, and such invoices shall be due as provided in the Baker WTP Agreement

9.5. Facility Costs. ETWD shall pay to IRWD, upon invoice, the capital cost of adding controls and metering pursuant to Section 2.3.

10. Indemnification.

10.1. Water Supply. ETWD shall indemnify and hold IRWD harmless from and against any and all claims arising from IRWD's inability or failure to provide Interconnection Delivery or arising from any condition of flow, pressure or quality of the water supplied. Said indemnification and hold-harmless obligations shall include, without limitation, all costs and attorneys' fees incurred in the defense of any claim or any action or proceeding brought against IRWD; provided, the foregoing shall not be deemed to limit any responsibility IRWD may have with respect to quality of Baker WTP product water under the Baker WTP Agreement, subject to Section 10.1.1 thereof. For claims *other than* as described in this paragraph 10.1, the following paragraphs shall apply.

10.2. Indemnification by IRWD. IRWD shall indemnify, defend and hold ETWD, its officers, agents, employees harmless from any expense, liability or claim for death, injury, loss, damage or expense to persons or property which may arise or is claimed to have arisen out of the performance of this Agreement, save and except to the extent such expense, liability or claim is proximately caused in whole or in part by any act, omission, or negligence of ETWD, its officers, agents or employees or by any act or omission for which ETWD, its officers, agents or employees are liable without fault.

10.3. Indemnification by ETWD. ETWD shall indemnify, defend and hold IRWD, its officers, agents, employees harmless from any expense, liability or claim for death, injury, loss, damage or expense to persons or property which may arise or is claimed to have arisen out of the performance of this Agreement, save and except to the extent such expense, liability or claim is proximately caused in whole or in part by any act, omission, or negligence of IRWD, its officers, agents or employees or by any act or omission for which IRWD, its officers, agents or employees are liable without fault.

11. Amendment. This Agreement may be amended only by a writing executed by both parties.

12. Notice. Any notice or other document and all billings and payments required or permitted to be given by either party hereto to the other party shall be deemed received upon delivery in person to the recipient or within two (2) business days after the date of deposit in the United States mail in the State of California, with postage prepaid, and addressed to the party for whom intended at the following address:

If to ETWD: El Toro Water District
24251 Los Alisos Boulevard
Lake Forest, CA 92630
Attn: General Manager

If to IRWD: Irvine Ranch Water District
P.O. Box 57000
15600 Sand Canyon Avenue
Irvine, California 92619-7000
Attention: General Manager

13. Severability. If any portion, provision or part of this Agreement is held, determined or adjudicated to be invalid, unenforceable, or void for any reason whatsoever, each such portion, provision, or part shall be severed from the remaining portions, provisions, or parts of this Agreement, and shall not affect the validity or enforceability of such remaining portions, provisions or parts.

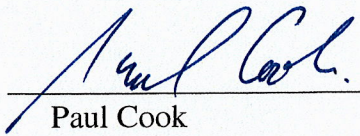
14. Entire Agreement. This Agreement contains the entire understanding and agreement between the parties with respect to the compromise set forth herein. No other representations, covenants, undertakings or other prior or contemporaneous oral agreements respecting such matters which are not specifically incorporated herein shall be deemed in any way to exist or bind either of the parties. The parties, and each of them, acknowledge that they have not executed this Agreement in reliance on any such promises, representations, or warranties.

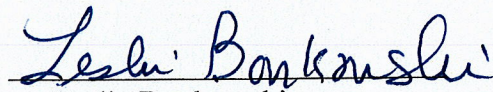
15. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the successors and assigns of the Parties.

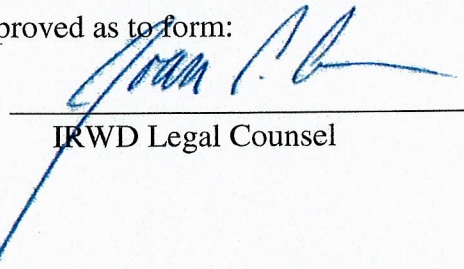
16. No Third Party Beneficiaries. No person or entity other than ETWD and IRWD shall be deemed to be a third party beneficiary hereof, and nothing in this Agreement, either express or implied, is intended to confer upon any person or entity, other than the parties and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement.

17. Authority. The representative of each party signing this Agreement warrants and represents that he/she has the full authority to execute the Agreement on behalf of the party on whose signature he/she so executes and he/she is acting within the express scope of such authority.

IRVINE RANCH WATER DISTRICT

By 
Paul Cook
General Manager

By 
Leslie Bonkowski
Secretary

Approved as to form:
By: 
IRWD Legal Counsel

EL TORO WATER DISTRICT

By _____
General Manager

By _____
Secretary

Approved as to form:
By: _____
ETWD Legal Counsel

IRVINE RANCH WATER DISTRICT

By _____
Paul Cook
General Manager

By _____
Leslie Bonkowski
Secretary

Approved as to form:

By: _____
IRWD Legal Counsel

EL TORO WATER DISTRICT

By _____
General Manager

By _____
Secretary

Approved as to form:

By: _____
ETWD Legal Counsel

EXHIBIT A-1

Exhibit "A-1" Vicinity Map

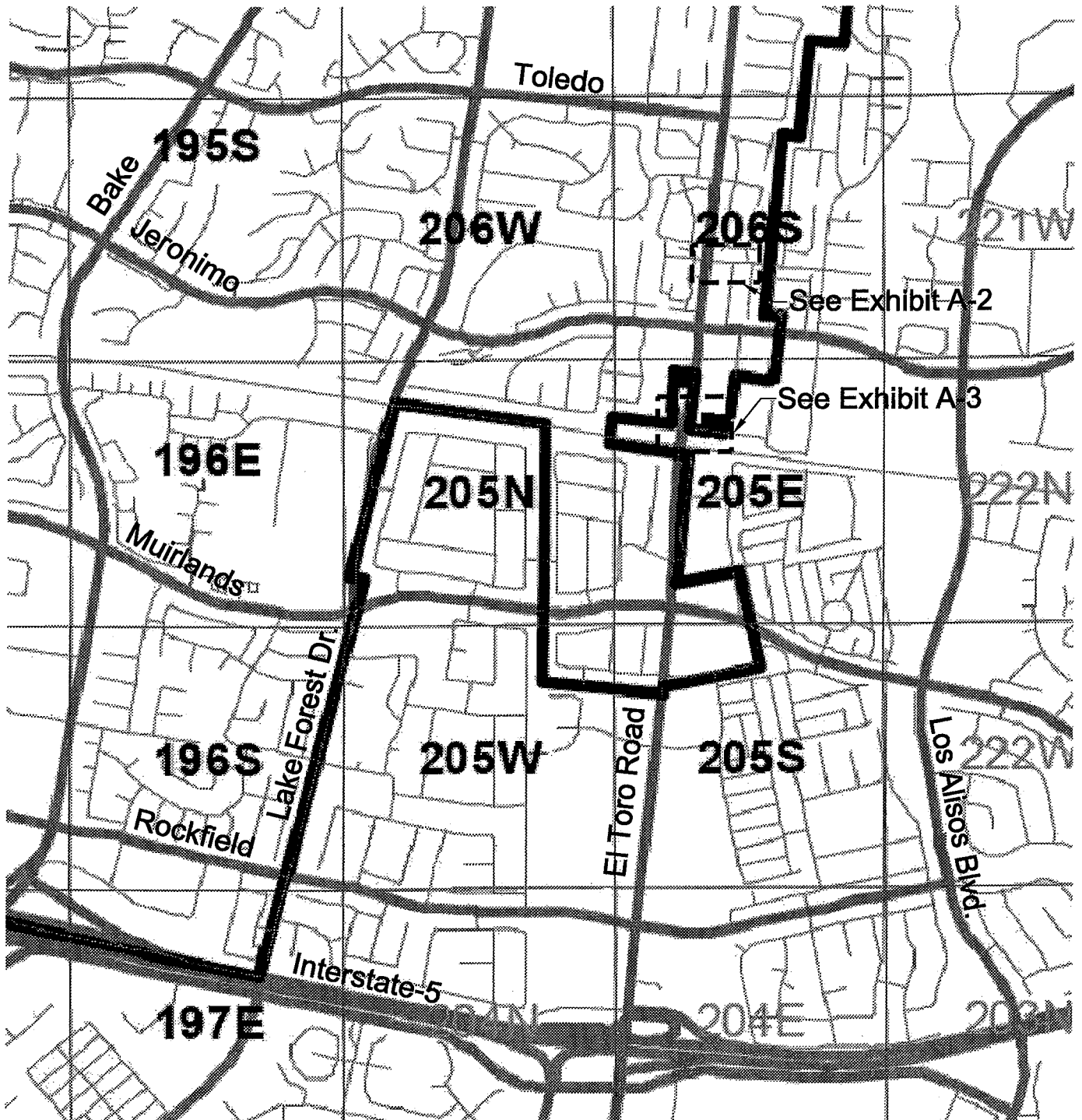
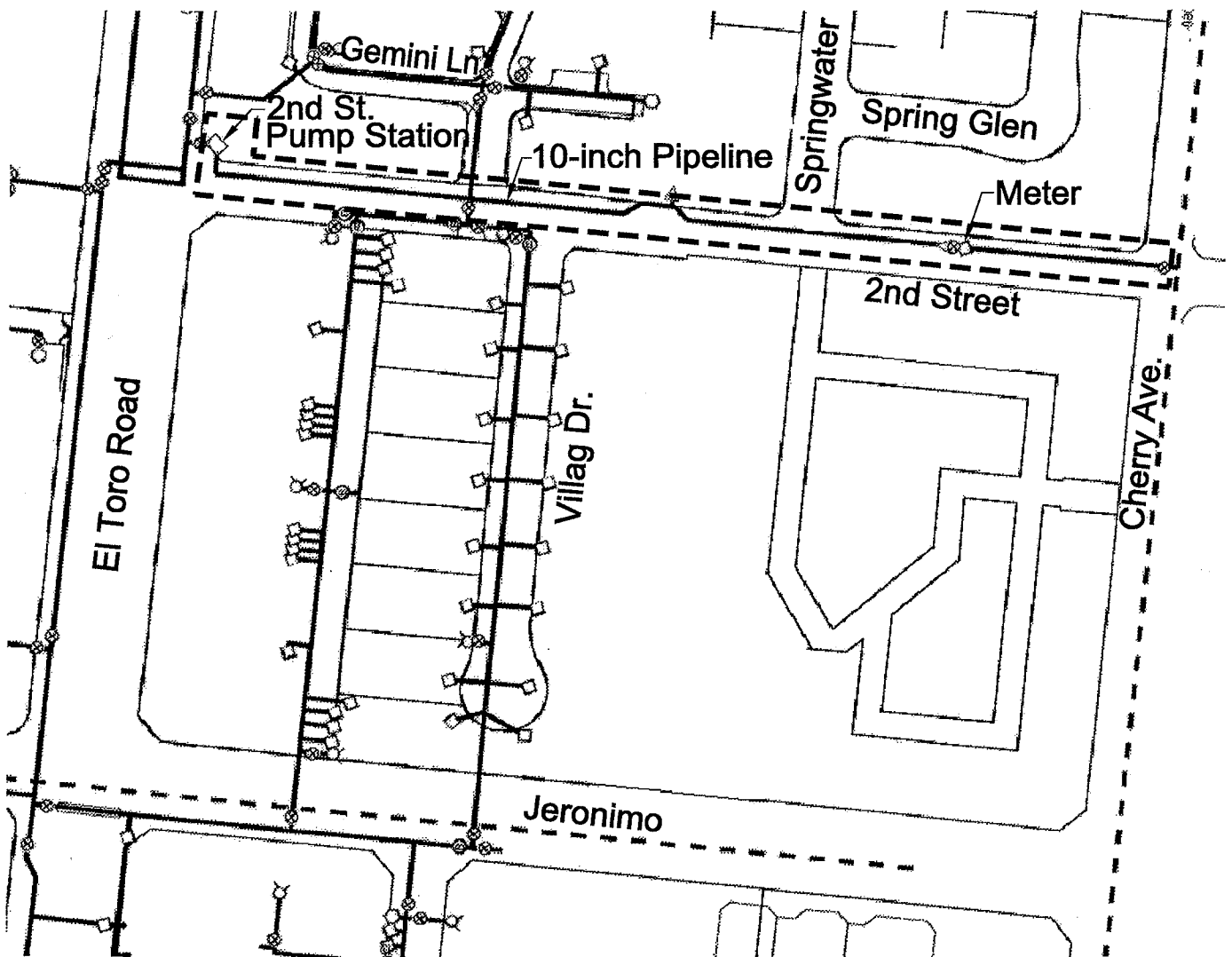


EXHIBIT A-2

Exhibit "A-2"
2nd Street Pump Station,
Existing 10-inch Pipeline, and Meter




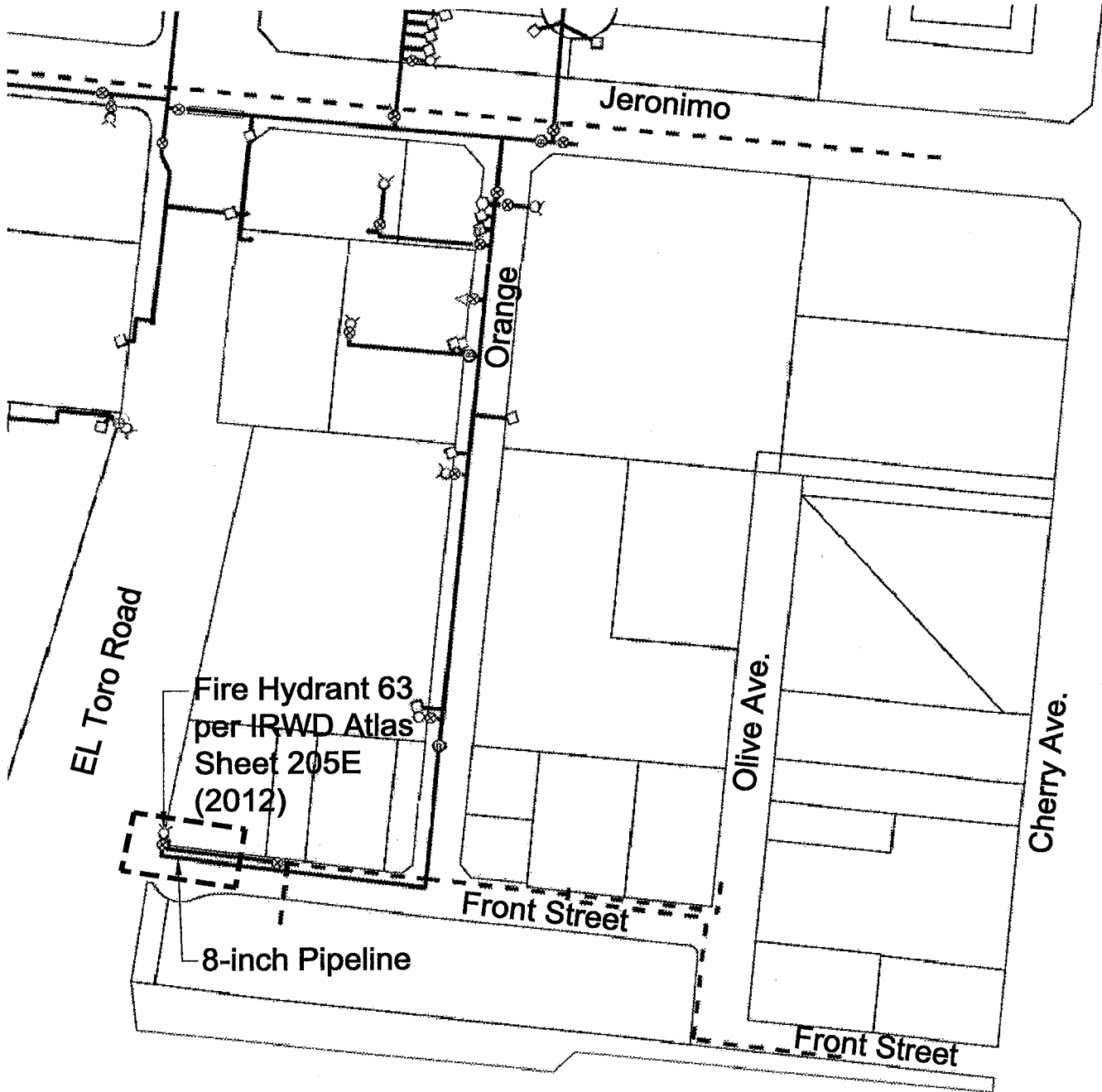
 General limits of facilities to be quitclaimed from IRWD to ETWD.

EXHIBIT A-3

Existing Fire Hydrant on Front Street and Existing 8-inch Pipeline



General limits of facilities to be quitclaimed from IRWD to ETWD.



ACTION ITEM
August 21st, 2019

TO: Board of Directors

FROM: **Planning & Operations Committee**
(Directors Yoo Schneider, Dick, Tamaribuchi)

Robert Hunter, General Manager Staff Contact: Kelly Hubbard

SUBJECT: **Adoption of the Orange County Regional Water and Wastewater Multi-Hazard Mitigation Plan for 2019**

STAFF RECOMMENDATION

Staff recommends the MWDOC Board of Directors adopt by resolution (attached) the 2019 Orange County Regional Water and Wastewater Multi-Hazard Mitigation Plan.

***Please note, due to the size of the Plan, it has been posted on https://www.mwdoc.com/wp-content/uploads/2019/05/OC-Regional-Water-and-Wastewater-MJHMP_Revised-Draft_050119.pdf and a copy is available at the MWDOC Administrative Front Office for review.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

MWDOC and 19 other participating water and wastewater utilities (see full list below) have updated the Orange County Regional Water and Wastewater Multi-jurisdictional Hazard Mitigation Plan, which was last approved in 2012. Hazard mitigation plans form the foundation for a community's long-term strategy to identify vulnerability to natural and man-made hazards. The plans also aim to reduce disaster losses by breaking the cycle of disaster damage, reconstruction, and repetitive damage. According to the federal Disaster Mitigation Act of 2000, State and local governments are required to develop hazard mitigation plans and update them every five years as a condition for receiving certain types of nonemergency disaster assistance, including grant funding for mitigation projects.

Budgeted (Y/N):	Budgeted amount:	Core __	Choice __
Action item amount:	Line item:		
Fiscal Impact (explain if unbudgeted):			

The plan is structured to have a base plan and appendixes that reflect information that is generic to all participating agencies, such as the planning process, risk assessment, mitigation strategy, and plan maintenance. In addition, there are Annexes that are specific to each agency, including a description of physical infrastructure assets, potential disaster impacts, and the mitigation goals and actions for each participating agency.

MWDOC in coordination with the Water Emergency Response Organization of Orange County (WEROC), has worked with Michael Baker International to lead the process to update the plan. The process included five planning meetings, individual agency meetings for assistance, public outreach, and plan approval. Public outreach is an essential element in the process, which included inviting the public to review the plan via the MWDOC website and social media accounts. The plan was approved by the California Office of Emergency Services and tentatively approved (pending governing body approval) by the Federal Emergency Management Agency (FEMA). Before FEMA can give final approval, each participating agencies' governing body must approve the plan by resolution. Once approved by the governing body, the plan will be resubmitted to FEMA for final approval.

Participating Water and Wastewater Utilities:

- Municipal Water District of Orange County
- Orange County Water District
- Orange County Sanitation District
- South Orange County Wastewater Authority
- City of Buena Park (Utilities Division)
- El Toro Water District
- City of Garden Grove (Water Division)
- Garden Grove Sanitary District
- City of La Habra (Water Division and Wastewater Division)
- Laguna Beach County Water District
- Mesa Water District
- Moulton Niguel Water District
- City of Newport Beach (Utilities Department)
- City of Orange (Water and Wastewater Division)
- Santa Margarita Water District
- Serrano Water District
- South Coast Water District
- Trabuco Canyon Water District
- City of Westminster (Water Division)
- Yorba Linda Water District

DETAILED REPORT

Background on Local Hazard Mitigation Plans

Beginning in 2004 FEMA began restricting grant applications for pre- and post-disaster hazard mitigation funds for any agencies not covered by an approved Hazard Mitigation

Plan. FEMA funds are available for the purpose of mitigating damage to public facilities due to a natural disaster – fire, flood, earthquakes, landslides, etc. For example, a structural retrofit of a water treatment plant to protect against earthquakes would be eligible, but only if a Hazard Mitigation Plan has been previously prepared that identified earthquakes as a risk and the need to evaluate facilities for seismic safety and therefore retrofit. The plans are extensive documents that require a significant amount of staff time to prepare and update. The benefits of completing a plan include:

- Preparation of these plans ultimately helps an Agency to save money through grants and by preparing to protect assets rather than waiting for disasters to strike and then repeatedly rebuilding assets.
- Qualifies agencies to submit for Hazard Mitigation Implementation Grants. FEMA allocates funding every year for these types of grants.
- During disaster recovery efforts, Hazard Mitigation elements can be added into the recovery work and can be submitted for funding by FEMA. Without the plan, disaster recovery is limited to what was already there.
- Going through the process of reviewing the water and wastewater system operations and impacts from natural hazards are good business practice and allow an agency to anticipate what might happen in the future to be better prepared.

Background on OC Water and Wastewater Mitigation Plan

In 2005, WEROC started to work with its member agencies, CalOES and FEMA to fund the first multi-jurisdictional plan through a Hazard Mitigation Planning Grant. In 2007, with the assistance of the Mitigation Grant, the Municipal Water District of Orange County (MWDOC) along with 19-member agencies prepared a Multi-Jurisdictional Hazard Mitigation Plan (HMP or Plan) that identified critical water and wastewater facilities in the county, and mitigation actions in the form of projects and programs to reduce the impact of natural and manmade hazards on these facilities. The vision of a plan that takes into consideration regional and local infrastructure and how it works together while building it stronger supported other planning efforts such as the South Orange County Reliability Study and later the Orange County Reliability Study.

This plan builds on the original 2007 Plan and a previous update approved in 2012. MWDOC was joined in this current update by 19 participating water and wastewater utilities. The Plan was prepared with input from county residents, orange county emergency managers, and with the support of the California Governor's Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA).

Several sections of the 2019 Plan update have been modified and reorganized from the original 2007 Plan and 2012 Plan update, including the use of annexes for each of the participating jurisdictions. Changes made to specific sections of the Plan are summarized on Page 14. Here are some of the major modifications:

- *Section One:* Section One has been significantly modified to move profile information specific to each participating jurisdiction to the Jurisdictional Annexes. The text has also been modified to clarify the multi-jurisdictional involvement and why OC water utilities felt it was important to participate in a joint planning process.
- *Section Two:* Section Two now documents the Planning Process.

- *Section Three:* Section Three now comprises the Risk Assessment. The hazards have been updated to reflect hazards that affect the planning area, as determined by the Planning Team.
- *Section Four:* Section Four now documents the Mitigation Strategy. This section was renamed and includes overarching hazard mitigation goals for the planning area. It was determined through the Planning Team meetings that some mitigation goals are similar for all participating jurisdictions and therefore one set of regional goals were developed.
- *Section Five:* Section Five now documents the Plan Maintenance process.
- *Section Six:* Section Six now documents the Plan references and has been updated to reflect references used in the preparation of the 2019 Plan update.
- *Jurisdictional Annexes:* The Jurisdictional Annexes are new to the Plan update. An annex is provided for each Agency and includes updated components of the hazard mitigation plan that are specific to each jurisdiction.
- *Appendices:* The Appendices have been completely updated to include 2019 Plan update materials.

Risk Assessment

Risk Assessment requires the collection and analysis of hazard-related data to enable local jurisdictions to identify and prioritize appropriate mitigation actions that will reduce losses from potential hazards. The Planning Team went through a 4-step process for Risk Assessment:

1. Hazard Identification
2. Hazard Prioritization
3. Hazard Profile
4. Vulnerability Assessment

The Risk Assessment process is conducted on both a Regional and Agency level. The Regional Assessment is reflected in Section 3 of the Plan, and the Agency specific assessment is reflected in each Agency's respective Annex. MWDOC's specific information is located within Annex A-MWDOC Annex.

Hazard Identification

The Planning Team reviewed the list of FEMA-identified hazards, the 2012 Plan, as well as other relevant information to determine the extent of hazards with the potential to affect the planning area. A discussion of potential hazards during the first Planning Team meeting resulted in the identification of the natural and human-induced hazards that pose a potential risk to all or a portion of the County and individual Agency. This discussion resulted in the removal of tornados and extreme heat (included in the 2012 plan) and the addition of power outage and climate change into this Plan. Additionally, for this plan update, some of the hazards were reorganized or combined under a primary heading, such as Geologic Hazards, which includes expansive soils and land subsidence and Seismic Hazards, which include fault rupture, ground shaking, and liquefaction.

Hazard Prioritization

The Planning Team used a Microsoft Excel-based tool to prioritize the identified hazards by assigning each hazard a ranking based on probability of occurrence and the potential impact. These rankings were assigned based on a group discussion, knowledge of past

occurrences, and familiarity with each Agency's vulnerabilities. Four criteria were used to establish priority:

- Probability (likelihood of occurrence)
- Location (size of the potentially affected area)
- Maximum Probable Extent (intensity of damage)
- Secondary Impacts (severity of impacts to the community)

Regional Hazard Rankings

Hazard Type	Hazard Planning Consideration
Power Outage	High
Wildfire	High
Seismic Hazards – Ground Shaking	High
Seismic Hazards – Liquefaction	High
High Winds/Santa Ana Winds	Medium
Drought	Medium
Dam/Reservoir Failure	Medium
Flood	Medium
Earthquake Fault Rupture	Medium
Landslide/Mudflow	Medium
Contamination	Low
Human Cause Hazards – Terrorism	Low
Human Caused Hazards – Hazardous Materials	Low
Urban Fire	Low
Geological Hazards – Land Subsidence	Low
Geological Hazards – Expansive Soils	Low
Tsunami	Low

Hazard Profile

Each hazard profile addresses the following:

- **Description (Nature) of the Hazard:** Describes the hazard and its characteristics.
- **History/Past Occurrences:** Provides a history of the hazard and identifies previous occurrences. Where an occurrence is specific to an Agency, this information is provided.
- **Location/Geographic Extent:** Describes the location (geographic) area affected by the hazard. If the hazard affects the entire planning area, it is noted. For geographically specific hazards, the specific Agency's affected by the hazard are identified and discussed further in the Jurisdictional Annexes.
- **Magnitude/Severity:** Describes the extent (magnitude or severity) of each hazard. If a hazard has a uniform extent for all the Agencies, it is noted. For geographically specific hazards, mapping is provided that illustrates the extent of the hazard for the entire planning area. Mapping for applicable hazards specific to an Agency is provided in the Jurisdictional Annexes.
- **Probability of Future Occurrences:** Provides a discussion of the probability of future occurrences of the hazard based on the history of past occurrence, location, and severity. If the likelihood of occurrence is the same for all jurisdictions or varies amongst the jurisdictions, it is noted.

Hazard Vulnerability

In preparation of the 2019 Plan update, infrastructure mapping for each of the Agency's was completed. An independent consultant working directly with MWDOC (who coordinated with all of the WEROC Member Agencies), updated water and wastewater infrastructure information for each Agency. As part of the 2019 Plan update, these critical facilities were overlaid with mapped hazard areas to determine which physical infrastructure assets are in each hazard area and to assess overall vulnerabilities.

Mitigation Strategy

The mitigation strategy and actions were developed by the Planning Team based upon an in-depth review of the vulnerabilities and capabilities described in the Plan. The mitigation actions described in the Jurisdictional Annexes represent each Agency's risk-based approach for reducing and/or eliminating the potential losses as identified in the Risk Assessment. Additionally, it was determined that there are some overarching regional mitigation goals that are the same for all of the Agencies:

1. Minimize vulnerabilities of critical facilities and infrastructure to minimize damages and loss of life and injury to human life caused by hazards.
2. Minimize security risks to water and wastewater infrastructure.
3. Minimize interruption to water and wastewater utilities.
4. Improve public outreach, awareness, education, and preparedness for hazards in order to increase community resilience.
5. Eliminate or minimize wastewater spills and overflows (Wastewater agencies).
6. Protect water quality and supply, critical aquatic resources and habitat to ensure safe water supply.
7. Strengthen Emergency Response Services to insure preparedness, response, and recovery during any major or multi-hazard event.

Ongoing Mitigation Planning

The Plan is a working document that will grow and change as our communities and the participating agencies do. This means at times participating agencies may identify a higher priority than noted in this Plan or redirection of goals based on current information or updated decisions. In consideration of this concept, there may be projects or policies that need to be considered that were not included in this document. These changes will be documented during the Plan implementation and formal updates to the Plan will be made every five years as required.

BOARD OPTIONS

Option #1

Staff recommends the MWDOC Board of Directors adopt by resolution (attached) the 2019 Orange County Regional Water and Wastewater Multi-Hazard Mitigation Plan.

Fiscal Impact: None

Business Analysis: Maintain MWDOC's eligibility for Hazard Mitigation Grants

Option #2

Take no action and provide staff with additional guidance.

Fiscal Impact: Unable to apply for Hazard Mitigation grants.

Business Analysis: MWDOC would be ineligible for grant funding, Member agencies are not impacted and would still be eligible as long as they adopt the plan.

STAFF RECOMMENDATION

Option # 1

Staff recommends the MWDOC Board of Directors adopt by resolution (attached) the 2019 Orange County Regional Water and Wastewater Multi-Hazard Mitigation Plan.

Attachment A: A RESOLUTION OF THE Municipal Water District of Orange County APPROVING AND ADOPTING THE ORANGE COUNTY REGIONAL WATER AND WASTEWATER HAZARD MITIGATION PLAN

Attachment B: Orange County Regional Water & Wastewater, Multi-Jurisdictional Hazard Mitigation Plan Update PowerPoint

**Exhibit A
Resolution**

**RESOLUTION NO. XX
A RESOLUTION OF THE Municipal Water District of Orange County APPROVING
AND ADOPTING THE ORANGE COUNTY REGIONAL WATER AND WASTEWATER
HAZARD MITIGATION PLAN**

WHEREAS, the United States Congress passed the Disaster Mitigation Act of 2000 emphasizing the need for pre-disaster mitigation of potential hazards; and

WHEREAS, the Disaster Mitigation Act of 2000 requires all cities, counties and special districts to develop and adopt a Hazard Mitigation Plan (HMP) to be eligible to receive federal grants pertaining to disaster preparedness; and

WHEREAS, MWDOC recognizes that the threat from natural hazards poses a risk to water and wastewater utilities and the individuals they serve, and impacts can result in regional economic and public health consequences; and

WHEREAS, by planning for natural and manmade hazards and implementing projects that mitigate risk, utilities can reduce costly damage and improve the reliability of service following a disaster; and

WHEREAS, the Municipal Water District of Orange County, and 19-other member agencies participated in the development of the HMP in conjunction with a consultant; and

WHEREAS, the resources and information within the HMP will allow MWDOC and the member agencies to identify and prioritize future mitigation projects, meet the requirements of federal assistance programs and grant applications, and encourage coordination and collaboration in meeting mitigation goals; and

WHEREAS, a Planning Team was formed to participate in the FEMA-prescribed mitigation planning process to prepare the HMP; and

WHEREAS, a public outreach strategy was employed as a required component of developing the HMP, including posting information on member agency websites, email and social media distribution, community survey, and presentations at the Orange County Business Council and Orange County Emergency Management Organization meetings; and

WHEREAS, the HMP was made available for public review from August 10, 2018, to September 10, 2018, and

WHEREAS, on October 15, 2018, the HMP was provided to the California Department of Emergency Services (CalOES) for review; and

WHEREAS, the HMP was revised based on CalOES feedback and was submitted to the Federal Emergency Management Agency (FEMA) for review on February 20, 2019; and

WHEREAS, the HMP received FEMA Approval Pending Adoption on July 8, 2019 subject to the member agencies adopting resolutions approving and adopting the HMP; and

WHEREAS, the MWDOC Board of Directors has reviewed the HMP; and

WHEREAS, the HMP identifies and assesses hazards most likely to affect MWDOC and its Member Agencies and provides actions to mitigate them.

NOW, THEREFORE BE IT RESOLVED by the MWDOC Board of Directors that the ORANGE COUNTY REGIONAL WATER AND WASTEWATER HAZARD MITIGATION PLAN is hereby approved and adopted by MWDOC.

APPROVED, SIGNED, AND ADOPTED on this 21st day of August, 2019
by the following roll call vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

Maribeth Goldsby, District Secretary
Municipal Water District of Orange County



ACTION ITEM
August 21, 2019

TO: Board of Directors

FROM: **Planning & Operations Committee**
(Directors Yoo Schneider, Dick, Tamaribuchi)

Robert Hunter, General Manager Staff Contact: Charles Busslinger

SUBJECT: **Approve \$5,000 Increase to Rosenberg + Associates Sole Source Contract**

STAFF RECOMMENDATION

Staff recommends the Board of Directors approve a \$5,000 increase to the sole source contract with Rosenberg + Associates (from \$25,000 to \$30,000) for Construction Management services relating to the Computer Room Air Conditioner Replacement Project.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Staff is seeking Board authorization to increase the contract amount with Rosenberg + Associates to an amount not to exceed \$30,000 for construction management services for the Computer Room Air Conditioner Replacement Project.

DETAILED REPORT

Staff informed the Board at the January 21, 2019 PAL Committee that recent issues with the computer room air conditioner led to an investigation that determined the air conditioner had reached the end of its service life and needed to be replaced soon. Rather than taking additional time to select a consultant via an RFP process and add several months to the project, we had already been working with Rosenberg + Associates Consulting Engineers on a proposal to analyze the sizing of the South EOC air conditioning system. We combined the two efforts into a single sole source contract to provide technical services, prepare

Budgeted (Y/N): Y	Budgeted amount: \$5,000	Core X	Choice __
Action item amount:		Line item: 19-881	
Fiscal Impact (explain if unbudgeted):			

plans, specifications, and bid documents for the replacement of the Computer Room Air Conditioner, and to analyze and design a replacement air conditioning system for the South EOC, on a time & materials basis not to exceed \$25,000 (\$15,000 for the Computer Room and \$10,000 for the South EOC).

Issues surfaced (mainly ventilation in the transformer room, which was not directly related to the air conditioner, but required HVAC expertise which was not included in the electrical transformer replacement contract) during the City of Fountain Valley building permitting process. This required unanticipated additional mechanical engineering design and plan check services which used the remaining contract funds budgeted for Construction Management services. Given Rosenberg + Associates familiarity with the project, staff recommends that the Board approve a \$5,000 increase to the existing contract to an amount not to exceed \$30,000, rather than bidding out the small amount of remaining work.

BOARD OPTIONS

Option #1

- Authorize an increase in the sole source contract amount with Rosenberg + Associates by \$5,000 to an amount not to exceed \$30,000.

Fiscal Impact: Increases the cost by up to \$5,000, however, Rosenberg has always been efficient in their level of expenditures.

Business Analysis: Familiarity with the project eliminates the need for additional time and cost to review the technical requirements of the project during construction.

Option #2

- Do not authorize the increase, delay the project until competitive bids can be obtained.

Fiscal Impact: Will likely increase the contract by a larger amount to bring someone else into the effort and delay installation.

Business Analysis: There is not a good business case to bid this work out.

STAFF RECOMMENDATION

Option #1



DISCUSSION ITEM

August 5, 2019

TO: Board of Directors

FROM: **Planning & Operations Committee**
(Directors Yoo Schneider, Dick, Tamaribuchi)

Robert Hunter, General Manager

Staff Contact: Karl Seckel

SUBJECT: Potential MWDOC and MWDOC Member Agency Actions with Respect to Small Chronically Non-Compliant Water Systems in the State

STAFF RECOMMENDATION

Staff recommends the Board of Directors discuss and provide direction to staff regarding MWDOC activities related to the small non-compliant water systems and the SWRCB needs assessment.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Previously, the Board had provided direction to staff to develop and bring back information relative to the small non-compliant water systems in the State of California. The purpose was to help determine what could be done to help move the State Water Resources Control Board (SWRCB) away from a water tax and onto a path to help the chronically non-compliant agencies move into compliance or merge with other agencies to achieve compliance. At least for now, the water tax is off the table. Staff has been discussing with a number of agencies and consultants, including staff at the SWRCB, to determine options for

Budgeted (Y/N): No	Budgeted amount:	Core ✓	Choice __
Action item amount: \$140,000		Line item: Previously authorized for Brown & Caldwell study; recommended to transfer for other efforts as outlined.	
Fiscal Impact (explain if unbudgeted):			

an appropriate role for MWDOC and/or the retail agencies in Orange County to take on this issue. Previously, the Board had approved a budget of \$140,000 to work with Brown & Caldwell to better understand the needs of non-compliant agencies and to understand with previous grant funds what had worked and what had not. The contract with Brown & Caldwell was cancelled both because the SWRCB has begun on a study which will supply the same or similar information and also because of data availability issues with CUWA.

Staff also attended the ACWA Region 10 meeting on the Human Right to Water where many of these issues were discussed.

Those associated with these issues have generally indicated:

- The issues are complex
- There is no “one size fits all” program that can be implemented
- It will be expensive to fix the issues causing the non-compliance, and it will require both capital and O&M funding to accomplish
- It will take about two years for the SWRCB to complete their “needs” assessment. At the end of this effort, the SWRCB should have a fairly good understanding of the costs involved to bring agencies into compliance. Staff’s guess is that this effort may take another five to ten years to complete.
- The non-compliant agencies may not want help or they may want only certain types of help
- There is more needed to be done than can be completed only by the efforts of the SWRCB, so they need all the help they can get

Key summary points from the ACWA Region 10 meeting were:

1. During the fight over the water tax, the water industry said to “let us help” and so now there is an onus to perform. This includes a moral and professional responsibility to help, especially in the form of Technical, Managerial and Financial (TMF) assistance to help resolve issues with non-compliant agencies throughout the state. Governance issues for these agencies may also need to be addressed.
2. The process is further complicated by requiring water to be “affordable”, based on a metric relative to the state or federal poverty level. This almost surely requires an “on-going” stream of revenue from the State to enable this provision to be met.
3. Many legislative pieces have been adopted to help with governance issues, AB 134 is winding its way along which may help on the financial side; the Low Income Rate Assistance (LIRA) must also be dealt with.
4. Options for helping discussed at the Region 10 meeting:
 - a. Provide funding or technical assistance (is there a gift of public funds?)
 - b. Participate in the ACWA Advisory Group which is charged with providing input to the SWRCB as it moves forward in developing the needs assessment
 - c. Engage with agencies in need of help – the question was brought up regarding how to identify the agencies in need of help, especially those interested in receiving help?

- d. Participation through the IRWMP organizations. The IRWMP's have examined Disadvantaged Communities (DAC) within their service areas to determine the outstanding needs and this likely overlies well with the small non-compliant service areas.
- e. Bring these agencies into ACWA to open up more TMF options.
- f. MET's IRP may provide an opportunity to focus TMF energy on the issues.
- g. A future requirement is to identify "systems at risk of failure" to get to them before they become non-compliant.

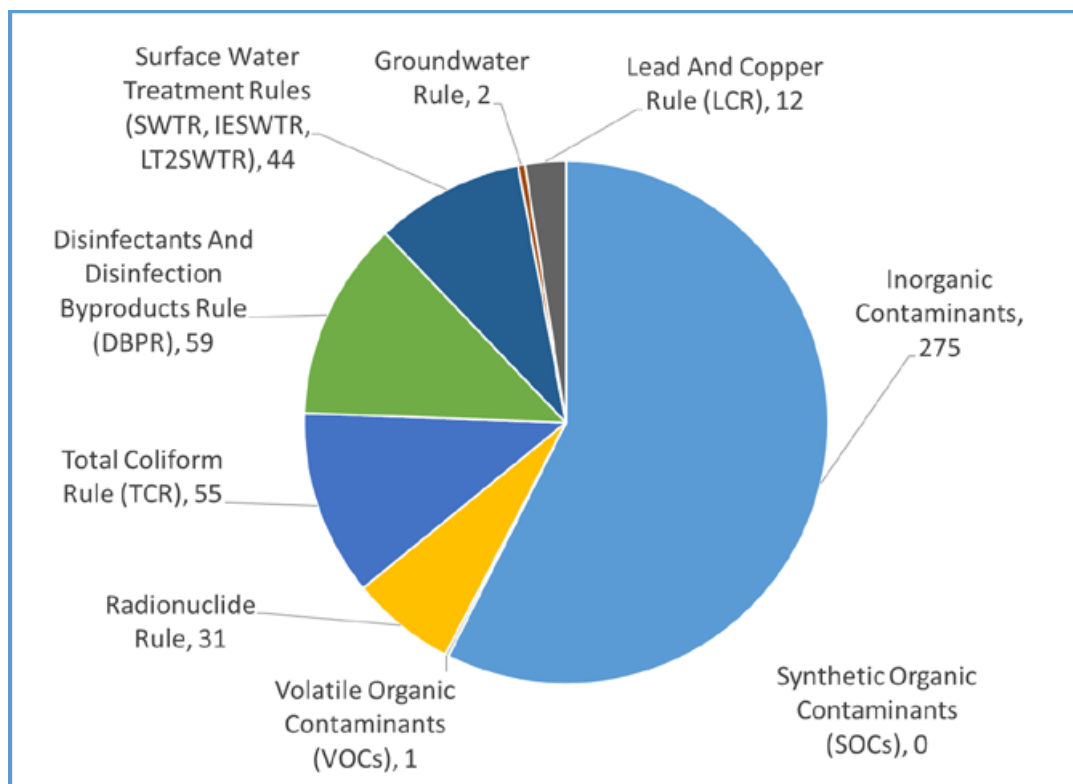
At the Region 10 meeting, SMWD discussed a partnership in which they are involved. Other OC agencies involved included Mesa Water and EOCWD. The Community Water System Alliance (Alliance) was formed to begin exploring options with agencies in need of additional TMF capability. The Alliance is a statewide initiative of well operated and viable water districts and municipal water utilities serving disadvantaged and income limited communities in California. The concept involves a process of learning what agencies with limited income communities need to improve their performance and to determine what other agencies, such as the three noted, could do to help the communities in need.

Staff's observation is that there are many opportunities to provide assistance. It is recommended that initially, MWDOC and other OC water agencies group together to help bring TMF capabilities to agencies in need of assistance. The steps in the process would be to (1) offer to conduct discussions with agencies who are interested, (2) conduct one or more meetings to ascertain the general scope and needs of the community in need of help, and (3) bring information back to our agencies to look at developing more formal partnerships. The efforts would be documented and referenced as examples of what could be done. The scope and cost of the assistance would be provided by MWDOC and its member agencies. Consultants could be employed in the process as the need for technical assistance is required. Staff is in the process of discussing various options and needs with a number of consultants and the SWRCB staff. Some potential efforts could include:

- Brain-storming. The goal would be to brainstorm ideas on how to help small water systems. We could initially solicit input from the water systems that volunteer, those which have previously been identified or those with known problems that might fit better with technical assistance organized by OC agencies. After identifying projects, a selection of one or more projects could be pursued.
- Assist small systems in the OC area that might be flagged (or that volunteer) as to having potential sustainability issues in the future. Currently there are no systems in the OC area listed as out of compliance. However, there may be some of the smaller private or mutual organizations that might be looking for additional TMF assistance.
- Select a specific area to help. For example the Antelope Valley area has several systems that are listed on the Human Right to Water website. The goal would be to address the issues in the small water systems and help bring them up to industry standards. This could be set up as a demonstration project.
- Nitrate Affordability paper. An existing nitrate treatment process is being considered from a Proposition 50 funded project. Part of the project is to evaluate affordability of

treatment. Work proceeded on the affordability approach and documentation of such. The paper is in a final draft phase, but funding was reprioritized to construction of the treatment units. Using the example treatment costs, the paper would be completed on how to complete the affordability loop.

- MWDOC and its agencies could provide funding for solicited RFP's for potential projects. We could set up a review and selection process and tailor it to our financial resources to select what we think are the most appropriate projects, likely nitrate or arsenic treatment. The figure below shows the number of violations of all types in 2017.



Number of Public Water Systems (not necessarily only small systems) with an MCL or Treatment Technique Violation in 2017 - Inorganic contaminants were primarily nitrate and arsenic.

The MWDOC Board had previously authorized a study effort with Brown & Caldwell in the amount of \$140,000 for examination of solutions required for non-compliant water systems. Since this effort did not move forward, staff recommends that same level of funding be made available for efforts identified by MWDOC and our agencies. The logic in using OC resources is that providing participation and assistance from OC will help to efficiently resolve the problems identified, it keeps us involved and at the table to influence the process for creating solutions and it can reduce future water agency liability if the SWRCB moves again with implementation of a water tax.

Furthermore, to stay involved in the process, it is recommended that staff volunteer to participate in the ACWA Advisory Process with the SWRCB. This will provide another voice and perspective in the process to help the SWRCB work through the various issues.

BOARD OPTIONS

Option #1

- It is recommended that MWDOC staff, member agency staff and consultants selected by MWDOC provide an offer of assistance to areas in need and conduct meetings to gain a full understanding of the needs of a particular area or areas. It is recommended that the approved \$140,000 study be transferred for these efforts.
- It is also recommended that staff volunteer to participate in the ACWA Advisory Process with the SWRCB.

Fiscal Impact: The fiscal impact is the transfer of the \$140,000 plus staff time.

Business Analysis: The recommendation fits with MWDOC's role as a leader in helping to solve problems.

Option #2

- Proceed only with the staff volunteering to participate in the ACWA Advisory Process with the SWRCB and **not** proceed with the \$140,000 effort.

Fiscal Impact: The fiscal impact is limited to the expenditure of staff time.

Business Analysis: The recommendation fits with MWDOC's role as a leader in helping to solve problems, but in less of a fashion than Option #1.

Option #3

- Do not proceed in any manner.

Fiscal Impact: No costs to MWDOC.

Business Analysis: MWDOC would not be fulfilling its role as a problem solver.

STAFF RECOMMENDATION

Option # 1



INFORMATION ITEM

August 2, 2019

TO: Planning & Operations Committee
(Directors Yoo Schneider, Dick, Tamaribuchi)

FROM: Robert Hunter, General Manager

Staff Contact: Karl Seckel

SUBJECT: Proposed 2020 Diemer WTP Shutdown

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee receive and file the report.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Staff held a meeting with MET staff on July 11, 2019 to review a draft FY 2019-20 MET shutdown schedule. The draft schedule includes a complete shutdown of the Robert B. Diemer Water Treatment Plant (Diemer) in March 2020 to accommodate four construction projects at the facility. MWDOC staff informed MET that the draft schedule would likely pose operational difficulties for MWDOC member agencies and alternative options are currently under consideration. Attached are slides from MET regarding the work they would like to pursue during a Diemer Plant Shutdown.

DETAILED REPORT

Scheduled Construction

MET staff reported during a meeting on July 11, 2019 that there are four pending construction projects at Diemer which require the complete shutdown of the facility in order for these projects to be completed:

Budgeted (Y/N):	Budgeted amount:	Core __	Choice __
Action item amount:	Line item:		
Fiscal Impact (explain if unbudgeted):			

1. Diemer Ozone Generator Open Loop Cooling Water System Improvements
2. Diemer Plant Influent Flowmeter
3. Diemer Plant Rejection Weir Modification
4. Wash Water Reclamation Plant (WWRP) Influent Flow Meter Replacement

The total duration for the projects are at minimum; five days of construction work, one day to dewater, and one day to rewater - totaling a minimum shutdown of 7 days.

PFAS Impacts to MWDOC Member Agency Supply

As indicated in OCWD's presentation at the July 24, 2019 MWDOC/OCWD Board Joint Planning Committee on the group of chemicals known as Per- and Polyfluoroalkyl Substances (PFAS); the California State Water Resources Control Board Division of Drinking Water (DDW) has indicated that it will likely reduce the current Response Level triggers for two PFAS chemicals (PFOA and PFOS) in October 2019 from the current combined trigger of 70 nanograms per liter (ng/L) to single chemical Response Level triggers of 10 ng/L for PFOA and 40 ng/L for PFOS.

This pending reduction in Response Level triggers by DDW will likely result in some MWDOC member agencies that produce water from the OC Basin essentially being forced (see information below) to shut down a number of groundwater wells (OCWD estimates from 39 to 71 of the 200 wells in the basin will be affected). As the science behind the health impacts, treatment, and mitigation measures of PFAS are still evolving; these impacts are likely to extend for a number of years until affected groundwater wells can be returned to service.

Given these likely impacts on groundwater production, some MWDOC member agencies will not have sufficient storage or groundwater production capability to accommodate a 7 day shutdown of imported water supply. MWDOC is currently meeting with affected agencies, as well as agencies neighboring those most affected, to identify options.

Background on Notification and Response Levels*

(*Excerpts From DDW Drinking Water Notification Levels and Response Levels: An Overview July 13, 2018)

The predecessor to the Division of Drinking Water, the Drinking Water Program of the California Department of Public Health (CDPH); and earlier, the California Department of Health Services (CDHS), established health-based advisory levels, called "notification levels" as needed since the early 1980s. These have been used to provide information to public water systems and others about certain non-regulated chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than these levels, certain requirements and recommendations apply.

Chemicals for which notification levels are established may eventually be regulated by MCLs (through a formal regulatory process), depending on the extent of contamination, the levels observed, and the risk to human health. Most, however, have not proceeded to MCLs. To date, of the 93 chemicals for which notification levels have been established; 40 now have MCLs. Of the remaining 53 chemicals, 29 are chemicals with current notification levels and 24 are chemicals with archived advisory levels (AALs). Notification levels are advisory in nature and not enforceable standards.

Health and Safety Code §116455 requires a drinking water system to notify the governing body of the local agency in which users of the drinking water reside (i.e., city council and/or county board of supervisors) when a chemical in excess of a notification level is discovered in a drinking water source.

Table 1. Drinking Water Notification Levels

Notes	Chemical	Notification Level (Milligrams per liter)
22	Perfluorooctanoic acid (PFOA)	0.000014
23	Perfluorooctanesulfonic acid (PFOS)	0.000013

Response Levels

DDW recommends that the drinking water system take the source out of service if a chemical is present at levels considerably higher than its notification level. The level at which the recommendation occurs is called the "Response Level." The specific recommendation depends on the toxicological endpoint that provided the basis for the notification level. DDW recommends source removal when the chemical's concentration is:

- 10 times the notification level, if it is based on non-cancer endpoints. A level greater than 10 times the notification level reduces the margin of safety provided.
- 100 times the notification level, if it is based on cancer risk and established at the 10^{-6} risk level. A level 100 times the notification level corresponds to a theoretical lifetime risk of up to one excess case of cancer in 10,000 people, the upper value of the 10^{-6} to 10^{-4} risk range typically allowed by regulatory agencies.
- For PFOS and PFOA, the response level has been adjusted to be consistent with US EPA's [70-ppt] health advisory for these chemicals.

Table 2. Response Levels*

Chemical	Toxicological Endpoint	Notification Level (Milligrams per liter)
PFOS and PFOA	Non-cancer	5 times the NL

Additional Notification When Water Is Served above the Response Level:

When a drinking water system does not take a source out of service despite the presence of a contaminant in drinking water at a level confirmed to be greater than the response level, DDW recommends the following:

- Notification of the local governing body (i.e., city council or board of supervisors, or both) that indicates water is being provided that exceeds the chemical's response level, and the reason for the continued use of the source.
- Notification of the water system's customers and other water consumers that the contaminant is present in their drinking water at a concentration greater than its response level, the level at which source removal is recommended, and the reason for the continued use of the source.
- Whenever such a public "right-to-know" notice occurs, it should be provided to customers and to the water-consuming population in the affected area that would not directly receive such information, including renters, workers and students.

- Notification should be provided directly to consumers, for example by posted notices, hand-delivered notices, and water bill inserts.
- A press release from the water system should also be issued to the local media.

Attached are slides from MET regarding the work they would like to pursue during a Diemer Plant Shutdown.



Robert B. Diemer Water Treatment Plant

March 2020 Shutdown
Briefing

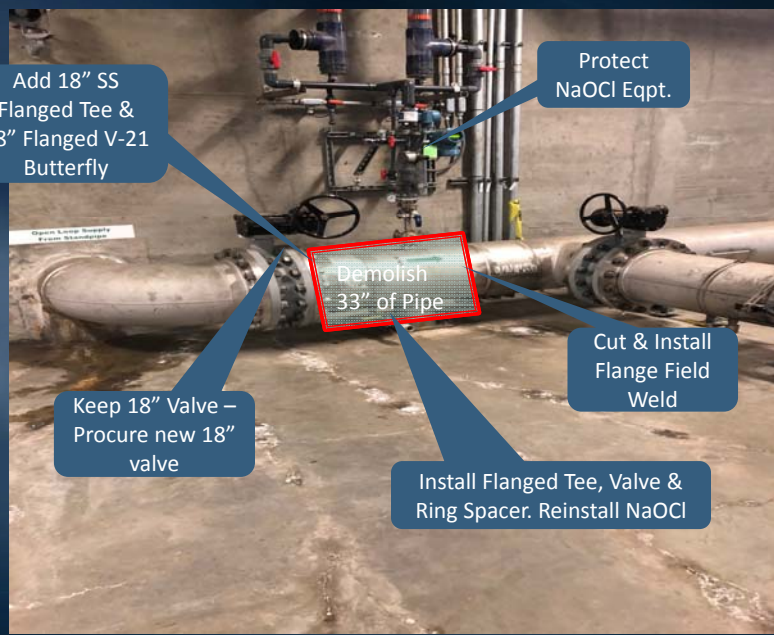
Diemer Construction Plan 2019-2020



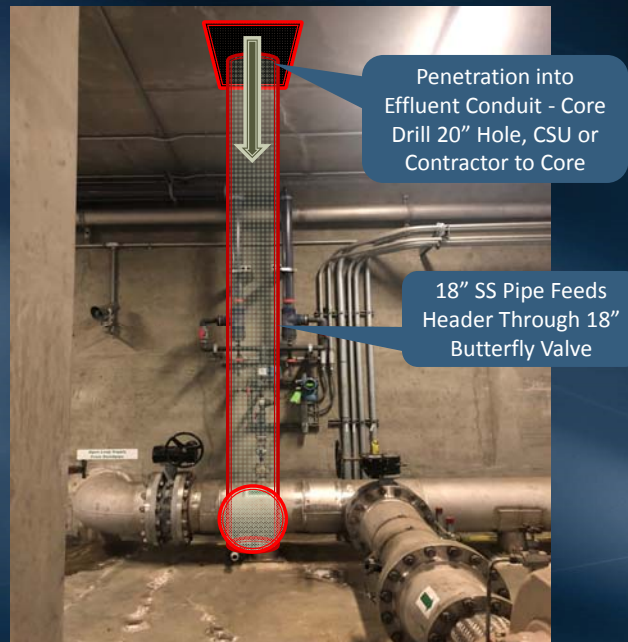
1. Diemer Ozone Generator Open Loop Cooling Water System Improvements

- Cooling water system will be modified to add a new water supply line, to be used as the main source for the ozone generator open loop cooling water
- Construction work in two steps:
 - 12-hr Ozone Shutdown in Fall 2019
 - Full-Plant Shutdown in March 2020
- Project status
 - 100% drawings underway
 - Approval for procurement & construction in process
- Construction by Diemer Met Forces

Diemer 12-hr Ozone Shutdown

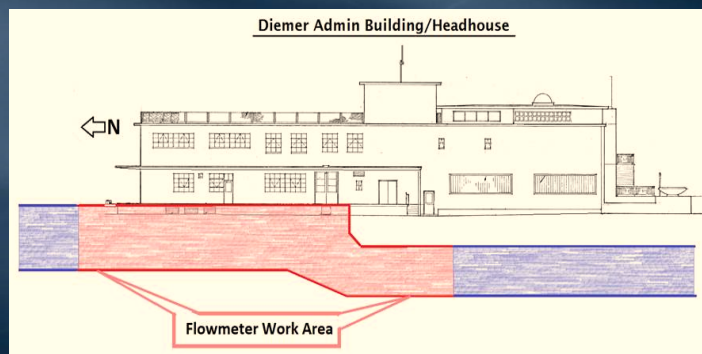


Diemer Full-Plant Shutdown Work

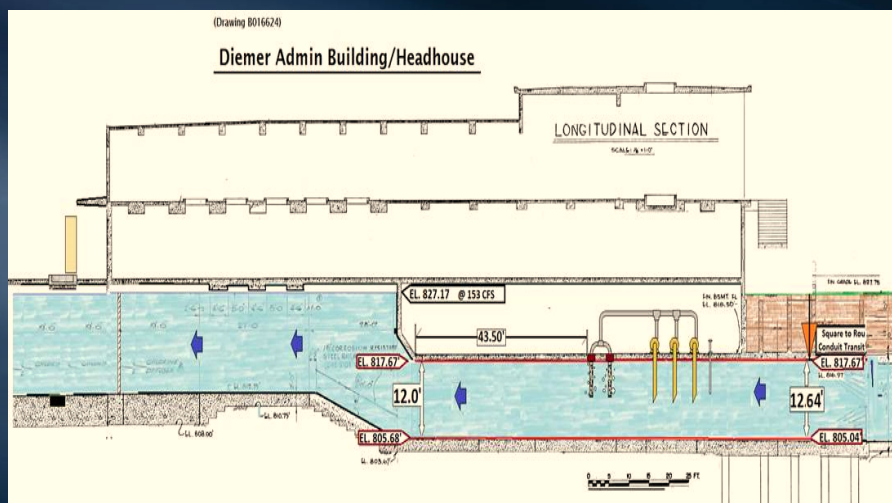


2. Diemer Plant Influent Flowmeter

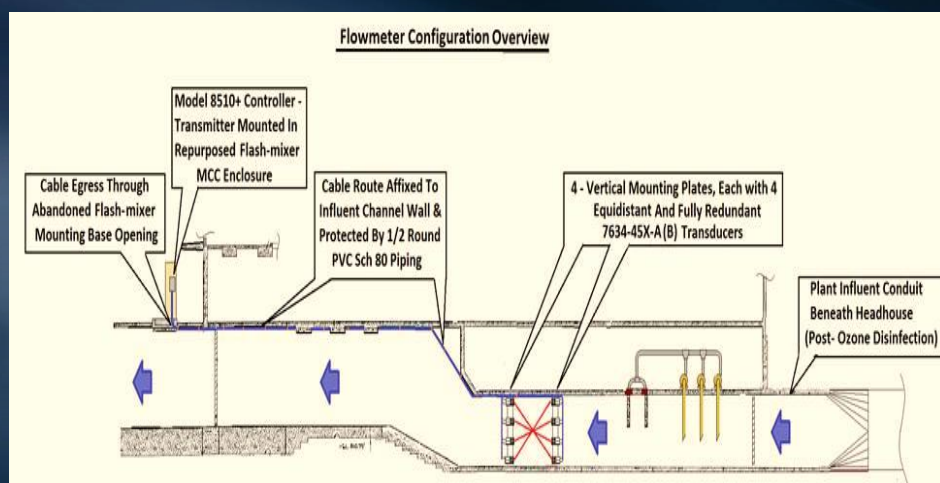
- New ultrasonic flowmeter in a section of plant influent conduit under the Diemer plant's headhouse
- Alternative means of measuring plant flow
- Project status
 - Vendor's field visit complete — Quote submitted
 - Minor Capital — CIP submitted for approval



2. Flowmeter Location



2. Flowmeter Configuration

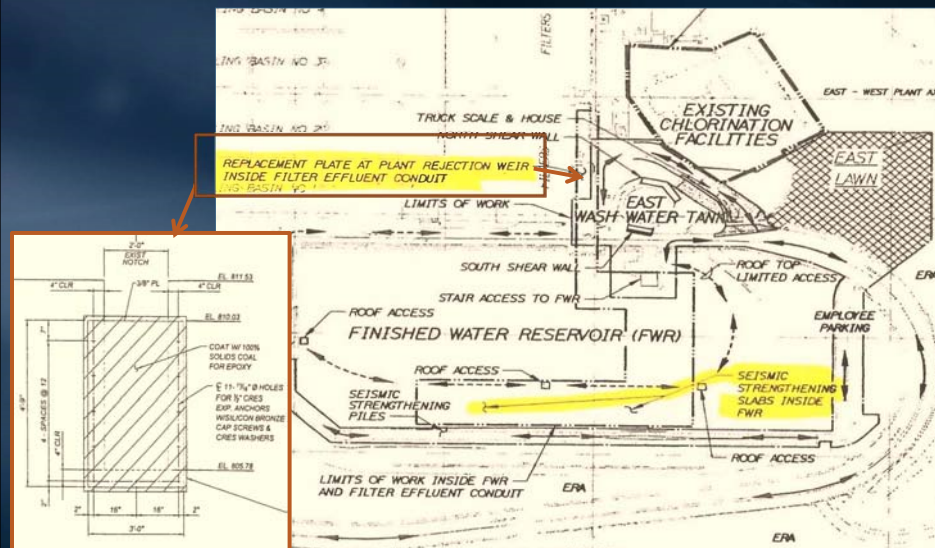


3. Diemer Plant Rejection Weir Modification

- Ongoing CIP project (funds available)
- Final element of the FWR Seismic Upgrade project
- Construction by CSU



3. Diemer Plant Rejection Weir Modification



3. Plant Rejection Weir Modification

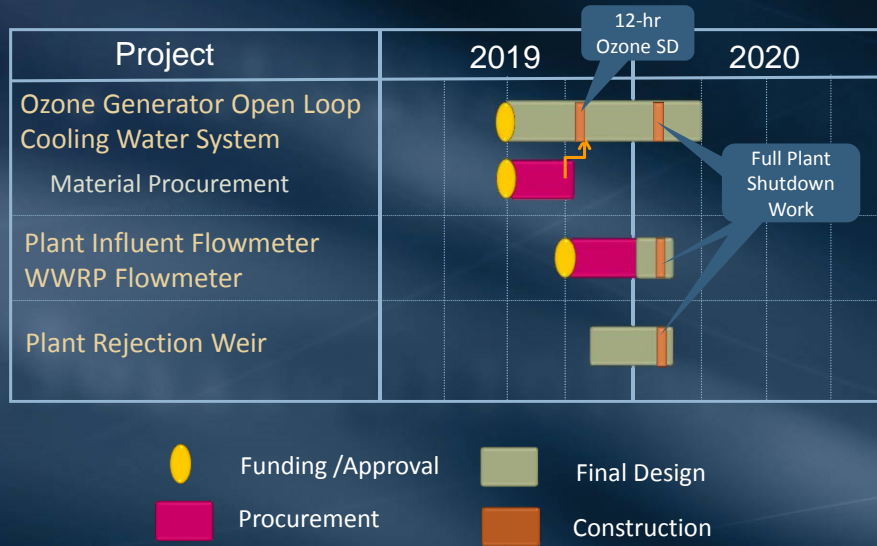


4. WWRP Influent Flow Meter Replacement

- Ongoing CIP project (funds available)
- Construction by CSU



Schedule



ENGINEERING & PLANNING

<p>Doheny Ocean Desalination Project</p>	<p>On June 27, 2019 the South Coast WD (SCWD) Board certified the Final Environmental Impact Report (FEIR) for the Phase I Local Doheny Ocean Desalination Project, which would produce up to 5 million gallons per day (MGD) of new, drinking water supplies for the area.</p> <p>SCWD subsequently filed its Notice of Determination and is beginning the permitting process with various permitting agencies.</p> <p>In March 2018, SCWD was awarded a \$10 million grant from the State Department of Water Resources for the Doheny Ocean Desalination Project.</p> <p>In April 2019, U.S. Representative Mike Levin announced that SCWD is set to receive more than \$8.3 million in US Bureau of Reclamation (USBR) WaterSMART Desalination Construction Program grant funding for the Project. The grant is subject to pending federal appropriations and needs to be included in the E&W Appropriations list of projects for which the Secretary of Interior intends to award grants. Congressman Levin is acting as the lead office on this request in the House.</p> <p>On July 11, 2019 South Coast WD's Board adopted a resolution pursuing a second year (round) of the USBR WaterSMART Desalination Construction Program grant funding. SCWD is eligible to receive a cumulative total of \$20 million for the Project from USBR. Approximately two to six awards are expected to be made by USBR with up to \$12 million available in this round. The recipient must provide at least 75% of the total project costs.</p> <p>Next Steps:</p> <ol style="list-style-type: none"> 1. Alternative Power Supply Management Study –SCWD staff is currently reviewing a proposal from engineering consultant Burns & McDonnell for a 6 month detailed study of alternative power alternatives. The study would include a District-wide assessment and Conceptual Management Plan including studying a community choice aggregation option. 2. Legislative – SCWD is working on AB 1752 to allow the District to proceed with a DBO Contract while maintaining access to State funding for the Project (both DWR grant money and SRF loans). A vote is anticipated in mid-October. 3. Project Delivery – Beginning work on the development of several documents including; Request for State of Qualifications (SOQ) for potential bidders, contract documents, and a RFP package. 4. Peer Review Cost Estimate – California American Water (CalAm), who developed the 6.4 MGD Monterey Ocean Desal Project using slant well technology, is completing a peer review cost estimate. A Board workshop, tentatively scheduled for August 22, 2019, will present the assumptions, costs, and lessons learned. 5. Slant Well Risk Evaluation – A second workshop will be scheduled to get CalAm's perspective on the risks of slant well technology.
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	<p>6. SCWD Local Potable Water System Integration – Updated hydraulic modeling and surge analysis of the SCWD system.</p> <p>7. Project Partners – continuing to discuss partnering opportunities with interested agencies</p> <p>8. High Level Schedule –</p> <table border="0"> <tr> <td>a. Environmental permitting</td><td>Summer 2020</td></tr> <tr> <td>b. DBOM Contract Develop/Award</td><td>Fall 2020</td></tr> <tr> <td>c. Funding</td><td>Fall 2020</td></tr> <tr> <td>d. Final Design</td><td>Dec. 2020</td></tr> <tr> <td>e. Construction</td><td>Late 2022</td></tr> </table>	a. Environmental permitting	Summer 2020	b. DBOM Contract Develop/Award	Fall 2020	c. Funding	Fall 2020	d. Final Design	Dec. 2020	e. Construction	Late 2022
a. Environmental permitting	Summer 2020										
b. DBOM Contract Develop/Award	Fall 2020										
c. Funding	Fall 2020										
d. Final Design	Dec. 2020										
e. Construction	Late 2022										
<p>Future Operating Strategies for OC Regional Distribution System</p>	<p>One of the findings of the 2018 OC Water Reliability Study was the need for additional study regarding integration of new local water supply sources into the OC regional distribution system. MWDOC staff has been working to develop regional integration strategies of potential future local supply projects including Ocean Desalination projects at Doheny and/or Huntington Beach, impacts of various phases of the San Juan Watershed Project, and emergency pump-in to EOCF#2.</p> <p>The 2018 Reliability Study concluded that base-loading projects over 10 MGD in South OC may have operational issues during low demand months, while base-loaded projects over 20 MGD in South OC may pose operational issues in the remaining portions of the year in the long run.</p> <p>The 2018 Reliability Study also found that integration of a 50 MGD Ocean Desalination project in the North OC Basin area could result in imported treated water demands for the North OC Basin area dropping to as low as 5 MGD if the full 50 MGD plant capacity is integrated only for the OCWD groundwater basin. Further, MET indicated that the existing Diemer Water Treatment Plant has problems operating below 70 MGD, and substantial retrofits of the chemical feed and control systems would be needed to operate Diemer consistently below 70 MGD.</p> <p>Additionally, observations of low levels of imported water deliveries, as has been seen during recent low demand months in certain OC distribution pipelines, have the potential to result in low chloramine residuals and water quality deterioration (e.g. nitrification).</p> <p>Planning considerations for a number of regional distribution system operational issues are also needed:</p> <ul style="list-style-type: none"> • Pumping emergency groundwater into the EOCF#2 to be conveyed to South OC during emergency outage events. • Potential extended shutdowns of the AMP for the upcoming re-lining of approximately 9 miles of Prestressed Concrete Cylinder Pipe (PCCP). • PFAS impacts to groundwater wells and the operations of the retail agencies. 										

	<ul style="list-style-type: none"> • Integration/mixing of desalinated seawater with other sources of water, and impacts to chloramine residual and other water quality characteristics which may vary on daily, monthly and seasonal bases. • Potential Impacts on Diemer WTP operations, stranding of assets, and operation strategies for unexpected outages of local supply systems. • Technical support for an acceptable resolution with MET for integration of local supply sources in the EOCF#2. • Control of hydraulic transients during loss of power. <p>Black & Veatch and Hazen & Sawyer were hired to review the above issues, and to identify and prioritize how best to address these issues over time. The consultants completed two White Papers which included literature reviews covering potential water quality and changed operational issues related to integrating new local supplies.</p> <p>The White Papers summarized key issues/strategies identified by the consultants:</p> <ol style="list-style-type: none"> 1. Operational Scenarios 2. Potential Impacts to Water Quality and Piping Materials 3. Development of a Hydraulic and Water Quality Model <p>Black & Veatch was then hired to complete an “Investigation Phase” to develop a specification, cost estimate and recommendations for development of a hydraulic model of the regional pipeline system in OC, including water quality modules. The Investigation Phase is currently in progress and includes developing scopes of work required for successful model implementation and recommendations on software selection. Key aspects of the Investigative Phase include meetings with our agencies and MET water quality staff.</p>
MET 2019-20 Shutdown Schedule	On July 11, 2019 MWDOC and MET staff held a meeting to review the MET 2019-2020 Shutdown Schedule. One of the proposed shutdowns involves the complete shutdown of the Diemer Water Treatment Plant to accommodate four construction projects at the plant. More information concerning this item is included in the Information Item in this packet.
South Orange County Emergency Service Program	NO NEW INFORMATION
Strand Ranch Project	NO NEW INFORMATION
Poseidon Resources	NO NEW INFORMATION
SMWD Rubber Dams Project (San Juan Watershed)	NO NEW INFORMATION

Project) and Other Projects	
Meetings	
	Charles Busslinger and Karl Seckel continue to participate in meetings of the Buried Utilities Coalition (BUC) regarding Air Quality Management District permitting of Asbestos Emissions from Demolition/Renovation Activities (Proposed Amended Rule 1403). AQMD adopted several recommendations made by the BUC into the July 25, 2019 draft of the Proposed Amendment to Rule 1403, but a few technical issues remain to be worked out. A Public Workshop has been scheduled for September 5, 2019.
	Charles Busslinger continues to participate in meetings with the CalDesal Regulatory Work Group regarding the State Water Resources Control Board's Triennial Review of the Ocean Plan as required by the US EPA. The triennial review seeks to set the agenda for State Water Board staff regarding future modifications to the Ocean Plan over the next three years. CalDesal has also been working to provide input to a recent State Water Board proposed "Desalination Fee" to cover the State's cost for desalination project permit reviews.
	A meeting is in the process of being set with MWDOC, MET and EOCWD representatives to resolve the variety of issues pending at AMP service connection OC-70. MWDOC staff put together an agenda outline of topics and submitted to both EOCWD and MET on July 8 and is awaiting responses.

**Status of Ongoing WEROC Projects
July 2019**

Description	Comments
<i>Coordination with WEROC Member Agencies</i>	<p>Final: WEROC, with Michael Baker as the lead consultant, has facilitated 19 agencies through the process of updating the Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan. Please see the full staff report in the August Planning and Operations Board Report.</p> <p><i>Ongoing: WEROC launched an effort to facilitate a joint RFP and contract with participating WEROC member agencies to address the new requirements of the America's Water Infrastructure Act (AWIA). On October 23, 2018, Congress signed into law the American Water Infrastructure Act (AWIA) (S.3021, Law 115-270). Per Section 2013 of Title II, the AWIA requires utilities to conduct a Risk and Resilience Assessment (RRA) of their community water systems and develop a corresponding Emergency Response Plan (ERP). March 31, 2020 for systems serving population of 100,000 or more. New actions:</i></p> <ul style="list-style-type: none"> • Kelly Hubbard finalized the contract with HSG for the AWIA services as approved by the Board on July 17th. • HSG held its kick-off meeting with the member agencies. The meeting was to give agency's an overview of HSG, their approach to all 3 phases and to start phase 1 activities. • Karl Seckel is working with Legal Counsel and Participating Agencies to finalize an Agreement between MWDOC and Participating Agencies for their participation and costs for Phase 2 & 3. <p>Kelly and Daniel Harrison attended the Moulton Niguel Water District (MNWD) Annual Public Safety Appreciation Luncheon. MNWD hosts the luncheon to thank their local law, fire and city officials, as well as to continue to foster working relationships between those agencies and their own response and management staff.</p>
<i>Training and Programs</i>	<p>MWDOC hosted the second Planning Meeting for the MET OC Member Agency Tabletop Exercise in August. The three cities, WEROC and MET staff discussed the scenario, attendees and other planning considerations.</p>
<i>Coordination with the County of Orange</i>	<p><i>Ongoing: OC Operational Area (OA) Alert and Warning Working Group is a new committee to develop county-wide public Alert and Warning policies, procedures and tools such as request and approval forms. This will be a 6 month planning effort. Daniel attended the July meeting and started to work with the County's Control One to address some of WEROC's concerns with the plans associated forms.</i></p> <p><i>Ongoing: WEROC staff participation in the OA Agreement Revision Working Group. Update: The OA Agreement Working Group met for the first time in several months. The Draft Revised Agreement developed by the working group</i></p>

	<p>has been reviewed and approved by the County's Legal Counsel. The OA will be sharing this revised draft to all OC government entities on August 15 to start the review process. Agencies will need to take the agreement to their legal counsel and provide feedback to the OA.</p>
<p><i>Coordination with Outside Agencies</i></p>	<p><i>On-going: California Public Utilities Commission (PUC) proceedings regarding the Impacts from De-Energization with a Focus on First Responders and Local Government. MWDOC has received party status to these proceedings. Party Status ensures that we receive all communications regarding the proceedings and that our comments are included officially for consideration. Kelly Hubbard will provide a presentation at the August Planning and Operations Committee Meeting.</i></p> <p>Kelly and Daniel attend the Mutual Aid Regional Advisory Committee (MARAC) in Moreno Valley. The quarterly meeting works on issues and concepts related to mutual aid and Operational Area coordination. The primary presentation of interest was on the new dam planning requirements. Kelly was able to represent some of the WEROC member agencies concerns with the CalOES approval process. She communicated to CalOES the difficulty agencies are having in getting approval of their dam plans and was able to ask some questions to clarify why this is occurring.</p>
<p><i>EOC Readiness</i></p>	<p>Janine Schunk participated in the OA and MET radio tests and WebEOC tests. She also facilitated the WEROC monthly radio test.</p> <p>Janine scheduled an inspection and service of the new WEROC generator that is being transferred to MWDOC from the City of Anaheim. The generator was a Homeland Security Grant funded purchase that was not being utilized by the originally intended agency. She is coordinating with the City of Orange Water Department to move the generator to the MWDOC parking lot until a more permanent storage location can be identified.</p> <p>Leah Frazier assisted WEROC staff with ordering the newly updated WEROC Water and Wastewater county-wide wall maps on large magnetic white boards. WEROC EOC staff will now be able to mark up the wall maps with dry erase markers during exercises and real events to track damages. Staff are working on ordering picture icon magnets as symbols for certain types of impacts. Janine facilitated the installation of those maps at the South EOC.</p> <p>Daniel purchased new low flow water toilets and installed them at the South EOC. The South EOC toilets have been finicky, had a tendency to not work and were not water use efficient.</p> <p>Janine coordinated the cleaning of the South EOC.</p>

Status of Water Use Efficiency Projects

August 2019

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Smart Timer Rebate Program	MWDSC	Ongoing	Ongoing	In June 2019, 290 smart timers were installed in Orange County. To date, 25,180 smart timers have been installed through this program.
Rotating Nozzles Rebate Program	MWDSC	Ongoing	Ongoing	In June 2019, 62 rotating nozzles were installed in Orange County. To date, 567,470 rotating nozzles have been installed through this program.
SoCal Water\$mart Residential Indoor Rebate Program	MWDSC	Ongoing	Ongoing	In June 2019, 227 high efficiency clothes washers and 26 premium high efficiency toilets were installed in Orange County. To date, 119,298 high efficiency clothes washers and 60,377 high efficiency toilets have been installed through this program.
SoCal Water\$mart Commercial Rebate Program	MWDSC	Ongoing	Ongoing	In June 2019, 8 commercial premium high efficiency toilets, 86 residential premium high efficiency toilets, 4 zero water urinals, and 1 ice making machine were installed in Orange County. To date, 104,952 commercial devices have been installed through this program.
Industrial Process/ Water Savings Incentive Program (WSIP)	MWDSC	75%	July 2020	This program is designed to improve water efficiency for commercial customers through upgraded equipment or services that do not qualify for standard rebates. Incentives are based on the amount of water customers save and allows for customers to implement custom water-saving projects. Total water savings to date for the entire program is 914 AFY and 3,831 AF cumulatively.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Turf Removal Program	MWDOC	Ongoing	Ongoing	<p>In July 2019, 17 rebates were paid, representing \$25,029 in rebates paid this month in Orange County.</p> <p>To date, the Turf Removal Program has removed approximately 22.4 million square feet of turf.</p>
Spray to Drip Conversion Program	MWDOC	Ongoing	Ongoing	<p>This is a rebate program designed to encourage residential and commercial property owners to convert their existing conventional spray heads to low-volume, low-precipitation drip technology.</p> <p>To date, 247 residential sites and 69 commercial sites have completed spray to drip conversion projects.</p>
Recycled Water Retrofit Program	MWDSC	Ongoing	Ongoing	<p>This program provides incentives to commercial sites for converting dedicated irrigation meters to recycled water.</p> <p>To date, 155 sites, irrigating a total of 1,559 acres of landscape, have been converted. MWDOC has paid a total of \$56,950.00 in grant funding to 20 of those sites. The total potable water savings achieved by these projects is 3,357 AFY and 9,774 AF cumulatively.</p>