

**AGENDA
IRVINE RANCH WATER DISTRICT
BOARD OF DIRECTORS
REGULAR MEETING**

May 23, 2016

PLEDGE OF ALLEGIANCE

CALL TO ORDER

5:00 P.M., Board Room, District Office
15600 Sand Canyon Avenue, Irvine, California

ROLL CALL

Directors LaMar, Reinhart, Swan, Withers and President Matheis

NOTICE

If you wish to address the Board on any item, including Consent Calendar items, please file your name with the Secretary. Forms are provided on the lobby table. Remarks are limited to five minutes per speaker on each subject. Consent Calendar items will be acted upon by one motion, without discussion, unless a request is made for specific items to be removed from the Calendar for separate action.

COMMUNICATIONS TO THE BOARD

1. A. Written:

B. Oral:

2. ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Recommendation: Determine that the need to discuss and/or take immediate action on item(s) introduced come to the attention of the District subsequent to the agenda being posted.

PRESENTATION

3. MWDOC CONSERVATION AWARD FOR 2015

MWDOC's Director Jeffery Thomas and Director Sat Tamaribuchi will be presenting the District with a Conservation award for its efforts in 2015.

WORKSHOP

4. SEWER FLOW PROJECTIONS AND DEMAND FACTOR CALIBRATION

Recommendation: Receive and file.

CONSENT CALENDAR

Next Resolution No. 2016-9

Items 5-13

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the April 25, 2016 Regular Board Meeting be approved as presented.

6. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: That the Board ratify/approve the meetings and events for Steven LaMar, Mary Aileen Matheis, Douglas Reinhart, Peer Swan, and John Withers as described.

7. APRIL TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate Swap Summary for April 2016, and Disclosure Report of Reimbursements to board members and staff; approve the April 2016 summary of payroll ach payments in the total amount of \$2,337,626 and approve the April 2016 accounts payable disbursement summary of warrants 366466 through 367198, workers' compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$22,371,573.

8. PROPOSED AMENDED & RESTATED LICENSE AND SUBLICENSE FOR USE OF SAN JOAQUIN WILDLIFE SANCTUARYSITE, FACILITIES & ACCESSWAYS

Recommendation: That the Board approve the Third Amended and Restated License Agreement between Irvine Ranch Water District and San Joaquin Wildlife Sanctuary subject to non-substantive modifications.

9. 2016 LEGISLATIVE UPDATE

Recommendation: That the Board adopt a "Support in Concept" position on SB 970 (Leyva) and the development of a State program which would provide grants to wastewater agencies for the development or implementation of projects that would integrate food waste processing by the agencies at its wastewater treatment facilities, result in the diversion of organics from local landfills, and dedicate cap-and-trade revenues to the wastewater sector; and a "Support" position on the Santa Ana Mountains to Sea National Monument proposal.

CONSENT CALENDAR	Next Resolution No. 2016-9	Items 5-13
10. <u>ON-CALL PLAN CHECK SERVICES</u>	Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Stantec Consulting Services, Inc. for a not-to-exceed amount of \$250,000 for on-call plan check services.	
11. <u>HERITAGE FIELDS DISTRICT 8 BIORETENTION BASIN</u>	Recommendation: That the Board approve acceptance of the District 8 Bioretention NTS Facility subject to the terms and conditions set forth in the application for service, addendum thereto, and Grant of Easement subject to non-substantive changes as the General Manager may approve.	
12. <u>PETERS CANYON WASH CHANNEL WATER CAPTURE AND REUSE PIPELINE CONTRACT CHANGE ORDER</u>	Recommendation: That the Board authorize the General Manager to approve Contract Change Order No. 6 in the amount of \$128,296.20 with E.J. Meyer Company for the Peters Canyon Wash Channel Water Capture and Reuse Pipeline, project 4985.	
13. <u>MICHELSON WATER RECYCLING PLANT FILTER PUMP STATION 2 AND DYER ROAD WELLFIELD WELLS 12 AND 13 ROOF MODIFICATIONS CONSTRUCTION AWARD</u>	Recommendation: That the Board authorize a budget increase in the amount of \$44,500, from \$340,500 to \$385,000, for project 5453; authorize a budget increase in the amount of \$278,600, from \$256,000 to \$534,600, for project 5469; and authorize the General Manager to execute a construction contract with Schuler Constructors in the amount of \$501,469 for the Michelson Water Recycling Plant Filter Pump Station 2, project 5469, and Dyer Road Wellfield Wells 12 and 13 Roof Modifications, project 5453.	

ACTION CALENDAR		
14. <u>VERIFICATIONS OF SUFFICIENT WATER SUPPLY FOR THE WEST ALTON PARCEL AND EL TORO 100-ACRE PARCEL DEVELOPMENTS</u>	Recommendation: That the Board approve the verification of sufficient water supply for the West Alton Parcel Development and the verification of sufficient water supply for the El Toro 100-acre parcel development.	

ACTION CALENDAR - Continued

15. MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES CONTRACT CHANGE ORDERS AND AMENDMENT NO. 1 TO AGREEMENT WITH ORANGE COUNTY SANITATION DISTRICT FOR INTERIM SOLIDS HANDLING

Recommendation: That the Board approve Contract Change Order No. 41 in the amount of \$1,103,650.56 with Filanc/Balfour-Beatty for the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities, project No. 4286; approve Contract Change Order No. 42 in the credit amount of <\$199,771.09> with Filanc/Balfour-Beatty for the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities, project No. 4286; and authorize the General Manager to execute Amendment No. 1 to the Agreement for Transfer of Wastewater Solids Residuals with Orange County Sanitation District, subject to non-substantive changes.

16. HOLT PROPERTY PURCHASE

Recommendation: That the Board, subject to Bardeen Partners, Inc. approval of the Assignment of the Purchase Agreement to IRWD, authorize the General Manager to execute the Assignment and Assumption of Real Property Purchase Agreement accepting the assignment of the purchase and sale agreement from Bardeen Partners, Inc.; authorize the Treasurer to request and execute any necessary amendment to the purchase and sale agreement or an addendum to the escrow instructions to extend the due diligence period for up to thirty days to correct the title issue identified on the property; find that all matters currently identified with regard to the condition of title, subject to correction of the title issue identified on the property, physical condition and suitability of the property for the uses contemplated are acceptable; approve the addition of project 11956 (7305) to the FY 2015-16 Capital budget in the amount of \$1,690,000 for the purchase of the property; find that the property acquisition only is exempt from CEQA; approve the project and authorize staff to post and file the Notices of Exemption in Orange and Riverside counties; and, and authorize the General Manager and Treasurer and each other officer of the district, each acting singly, to execute and deliver any and all documents, program assignments, certificates, instructions and instruments necessary or proper for carrying out and closing the real estate purchase transaction for the acquisition of the property, subject to correction of the title issue identified on the property.

ACTION CALENDAR - Continued

17. MARTIN PROPERTY PURCHASE

Recommendation: That the Board, subject to Bardeen Partners, Inc. approval of the Assignment of the Purchase Agreement to IRWD, authorize the General Manager to execute the Assignment and Assumption of Real Property Purchase Agreement accepting the assignment of the purchase and sale agreement from Bardeen Partners, Inc.; authorize the Treasurer to request and execute any necessary amendment to the purchase and sale agreement or an addendum to the escrow instructions for the Martin property to allow for buyer abandonment of the well with a credit for the cost of the well abandonment to be applied to the purchase price; find that all matters currently identified with regard to the condition of title, physical condition and suitability of the property for the uses contemplated are acceptable; approve the addition of project 11955 (7302) to the FY 2015-16 Capital budget in the amount of \$1,261,000 for the purchase of the Martin property; find that the property acquisition only is exempt from CEQA; approve the project and authorize staff to post and file the Notices of Exemption in Orange and Riverside counties; and authorize the General Manager and Treasurer and each other officer of the District, each acting singly, to execute and deliver any and all documents, program assignments, certificates, instructions and instruments necessary or proper for carrying out and closing the real estate purchase transaction for the acquisition of the property.

OTHER BUSINESS

Pursuant to Government Code Section 54954.2, members of the Board of Directors or staff may ask questions for clarification, make brief announcements, make brief reports on his/her own activities. The Board or a Board member may provide a reference to staff or other resources for factual information, request staff to report back at a subsequent meeting concerning any matter, or direct staff to place a matter of business on a future agenda. Such matters may be brought up under the General Manager's Report or Directors' Comments.

- 18. A. General Manager's Report
- B. Directors' Comments
- C. CLOSED SESSION: Conference with Legal Counsel relative to anticipated litigation-Government Code Section 54956.9(d)(2) – significant exposure to litigation (one potential case), and Government Code Section 54956.9(d)(4) initiation of litigation (one potential case)
- D. Open Session
- E. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Irvine Ranch Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Board Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance to the Board of Directors Room of the District Office. The Irvine Ranch Water District Board Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

May 23, 2016

Prepared by: E. Akiyoshi

Submitted by: K. Burton

Approved by: Paul Cook

Handwritten initials 'K.A.' and a signature in blue ink.

WORKSHOP

SEWER FLOW PROJECTIONS AND DEMAND FACTOR CALIBRATION

SUMMARY:

IRWD staff and consultants have calibrated the District's sewer demand factors for the Sewer Collection System Master Plan (SCSMP). IRWD's Demand Forecast Tool (DFT) uses these factors to project sewer flows from the current year through build-out conditions. Staff will make a presentation of the updated demand factors, calibration methodology, updated sewer flow projections, and an update on the SCSMP schedule and progress.

BACKGROUND:

In the 2005-06 SCSMP, sewer system flow monitoring was conducted to calibrate the sewage generation factors. In 2011-12, an overall water demand factor study was conducted that made several adjustments to the sewer flow projections. Over the past four years, IRWD has continuously made minor adjustments to land uses, phasing, and sewer projections (e.g. strategic plan presentation in October 2014).

The current SCSMP focused its analysis on sewage generation factors (i.e. local-interior water use factors) that corresponded with residential land use categories projected to have the greatest future contributions and growth within the District. This analysis resulted in changes to 18 land use categories with the highest estimated local-interior water use (i.e. sewage generation). These 18 land use categories will contribute approximately 94% of the total future residential sewer flows.

Additionally, this calibration effort made adjustments for several factors including:

- Land Use Changes – Increased residential development in the IBC area (≈18,000 dwelling units), Great Park Neighborhoods (≈6,000 dwelling units), and County owned land (≈3,000 dwelling units)
- Conservation Efforts – Sensitivity analysis incorporating plumbing codes and current reductions in water use
- Phasing – Most of the major developments have been accelerated in the past few years

While some factors exert a downward pressure on projected sewer flows, others (e.g. increased residential development) tend to increase projected sewer flows: there are both upwards and downwards pressures on existing and future sewer flows.

During the calibration phase the consultant, AKM Consulting, conducted a comprehensive sewer flow monitoring program at approximately 60 locations and made recommendations for sewage generation factors. IRWD staff conducted a final calibration using the DFT and all the sewage generation factors.

The final calibration of the sewage generation factors analyzed all of the District’s demand factors as listed in Exhibit “A”. The intent of this calibration was to make final minor adjustments using historical data for the entire District. The factors will be used for on-going planning studies including urban water master plans, sewage treatment plant master planning, sewer collection system sizing, long-term capital program expenditures, and water supply requirements.

IRWD used the DFT and new factors to project the build-out condition sewer flows for several sewer tributary areas. The table below summarizes the changes in the new demand projection at build-out and the previous projections before the demand factors were updated.

Summary of Sewer Flow Projections (mgd)

Sewage Treatment Plant/Area	2015 Projections	2011-12 Projections	2005-06 SCSMP
MWRP Tributary	32.6 mgd	32.1 mgd	36.2 mgd
LAWRP Tributary	5.0 mgd	5.5 mgd	7.8 mgd
OCSD Tributary			
• IBC / Tustin Legacy	7.5 mgd	8.32 mgd	4.3 mgd
• Newport Coast	1.0 mgd	1 mgd	1.0 mgd

Staff will make a presentation of the updated demand factors, the calibration methodology, and the updated demand projections at the Board meeting. A copy of the presentation is attached as Exhibit “B”.

The demand factors and sewer system flow projections are an important part of the overall SCSMP. The existing system hydraulic model and condition assessments of lift stations, siphons, and diversion structures were delivered as part of the recent 75% submittal. The future system hydraulic model, capacity analysis, and reliability and redundancy analysis are anticipated in late July with the 90% submittal. Staff will also include an update on the SCSMP progress at the Board meeting.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15262 which provides exemption for planning studies.

Workshop: Sewer Flow Projections and Demand Factor Calibration

May 23, 2016

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COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on March 15, 2016.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Sewage Generation Demand Factor Table

Exhibit "B" – PowerPoint Presentation

EXHIBIT "A"

Sewer Generation Demand Factor Table 2015-16 Proposed Factors

Land Use Code	Land Use Description	Average Density (DU or KSF per Acre)	Local - Interior	% Change
1111	Rural Density - Orange	0.3	250	0%
1112	Rural Density - Irvine	0.3	250	0%
1115	Rural Density - County	0.3	300	0%
1121	Estate Density - East Orange	1.2	300	0%
1122	Estate Density - Irvine	0.5	300	0%
1126	Estate Density - Lake Forest	0.5	300	0%
1131	Low Density - East Orange	4.0	300	0%
1132	Low Density - Irvine	3.0	215	(4%)
1133	Low Density - Newport Beach	1.0	250	(14%)
1134	Low Density PC - Tustin	4.5	450	0%
1135	Suburban Density - County Of Orange	9.3	215	30%
1136	Low Density - Lake Forest	3.0	210	(22%)
1141	Low-Medium Density - East Orange	10.5	235	0%
1146	Low-Medium Density - Lake Forest	11.0	200	(2%)
1153	Medium-Low Density - Newport Beach	2.8	400	0%
1161	Medium Density - East Orange	19.5	200	0%
1162	Medium Density - Irvine	7.5	155	(23%)
1163	Medium Density - Newport Beach	5.0	200	(11%)
1164	Medium Density PC - Tustin	11.8	160	3%
1166	Medium Density - Lake Forest	7.5	150	7%
1172	Medium-High Density - Irvine	17.5	125	(4%)
1175	Urban Density - County Of Orange	29.0	130	(7%)
1176	Medium-High Density - Lake Forest	17.5	110	(24%)
1182	High Density - Irvine	32.5	120	(8%)
1183	High Density - Newport Beach	12.3	110	(4%)
1184	High Density PC - Tustin	17.4	100	(13%)
1186	High Density - Lake Forest	32.5	100	(13%)
1191	High Rise Density - Orange - Orange east	35.0	115	0%
1192	High Rise Density - Irvine - Irvine	40.0	120	4%
1210	General Office	20.0	62	0%
1221	Community Commercial	9.0	142	0%
1222	Regional Commercial	10.0	130	0%
1230	Commercial Recreation	8.0	40.5	0%
1235	Hotel	45.0	110	0%
1240	Institutional	8.0	30	0%
1244	Hospital	9.0	165	0%
1260	School	10.0	20	0%
1261	UCI	10.0	215	0%
1290	Hotel	45.0	110	0%
1300	Industrial	9.1	600	0%
1310	Industrial - Light	18.0	67	12%
1320	Industrial - Heavy	25.0	2000	0%

EXHIBIT "B"

Sewer Collection System Flow Projections

Board of Directors Workshop
May 23, 2016



Presentation Outline

- Background
- Changed conditions
- Sewage generation factor calibration
- Sewer flow projections and sensitivity analysis
- Sewer Collection System Master Plan Update

Background

Sewer flow projections are used for:

- Sizing future collection and treatment facilities (e.g. MWRP Phase 3 and upcoming Sewage Treatment Master Plan – LAW RP upgrades)
- Sizing future development facilities
- Enterprise modeling OCSD CORF / Equity requirements
- Updating future recycled water facilities and potential potable reuse opportunities

Background – Flow Projection Methodology

- Identify land uses within IRWD Service Area
 - Use “land-use” based projections, not population (aka “per-capita”)
 - Calculate flows per Dwelling Unit (DU) or 1000’s Square Feet (KSF)
- Develop Sewage Generation Factors
 - Also known as Local Interior Demands
 - Approximately 30 residential factors and 30 non-residential factors
- Use IRWD’s Demand Forecast Tool to project demands for 2015 to build-out for service area



Background

- **Past Calibration Work**
 - 2005-06 SCSMP Flow Monitoring and Calibration
 - 2011-12 Overall Water Demand Factor Calibration
- **Changed Conditions**
 - Land Use Changes
 - Conservation
 - Phasing

Sensitivity Analysis is Critical!

It is important to resist the temptation to anecdotally decrease or increase future sewer flows.
For example...

"Future redevelopment WILL continue, therefore future sewer flows WILL increase..."

"Conservation efforts WILL reduce future indoor use, therefore future sewer flows WILL decrease..."

"Current reductions in water use WILL remain forever and therefore sewer flows WILL be less..."

Changes - Land Use (Since 2005-06)

- **IBC Redevelopment** – Converted industrial uses to approximately 17,000-18,000 dwelling units (EIR contemplated 20,000 DUs)
- **Lake Forest Opportunity Areas** – Added \approx 4,000 DUs
- **Great Park Neighborhoods** – Added \approx 6,200 DUs (and the County added another 3,000 DUs)
- **Musick Jail** – Increased beds from 1,200 to 7,580
- **East Orange** – Irvine Company removed \approx 2,200 DUs
- **Overall Increase of \approx 37,000 DUs**

Changes - Conservation

- For IRWD, the State mandated a 16% sales reduction compared to June-Feb 2012-13
- Anticipated reduction in local-interior water use from new plumbing codes
- Several adjustments to tiered rate structure

Changes - Phasing Updates

- Phasing will not change build-out projections, but will impact when flows will change.
 - Irvine Company indicates that build-out will be within five to ten years
 - IBC Redevelopment accelerated
 - Great Park Neighborhoods accelerated

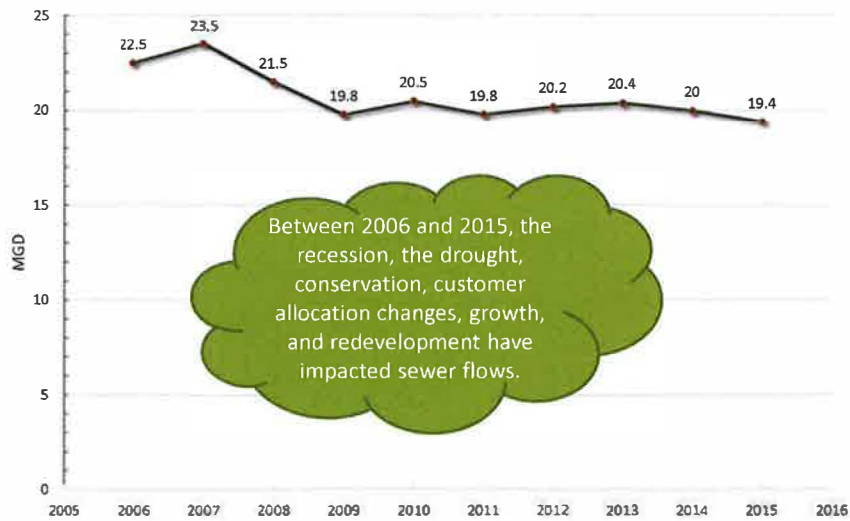
Sewage Generation Factor Calibration

- Installed approximately 60 sewer flow monitors throughout IRWD attempting to isolate various land uses
- Compared sewer flows with water billing data to help ensure reasonable factors for local-interior (sewage generation) component
- Consultant proposed changes to existing local-interior factors
- IRWD completed a final calibration using the DFT and added one additional change (Light-Industrial)

Sewage Generation Factor Calibration

Land Use Code	Land Use Description	Sept 2012	Proposed Factors	% Change
1132	Low Density - Irvine	225	215	(4%)
1133	Low Density - Newport Beach	290	250	(14%)
1135	Suburban Density - County Of Orange	165	215	30%
1136	Low Density - Lake Forest	270	210	(22%)
1146	Low-Medium Density - Lake Forest	205	200	(2%)
1162	Medium Density - Irvine	200	155	(23%)
1163	Medium Density - Newport Beach	225	200	(11%)
1164	Medium Density PC - Tustin	155	160	3%
1166	Medium Density - Lake Forest	140	150	7%
1172	Medium-High Density - Irvine	130	125	(4%)
1175	Urban Density - County Of Orange	140	130	(7%)
1176	Medium-High Density - Lake Forest	145	110	(24%)
1182	High Density - Irvine	130	120	(8%)
1183	High Density - Newport Beach	115	110	(4%)
1184	High Density PC - Tustin	115	100	(13%)
1186	High Density - Lake Forest	115	100	(13%)
1192	High Rise Density - Irvine - Irvine	115	120	4%
1310	Industrial - Light	60	67	12%

Historical MWRP Influent Flows



Sewage Generation Factor Calibration

- **Reviewed MWRP Historical Influent Flows**
- **Goal is to be within 5-10% of the existing flow monitoring data (Feb 2015)**
 - Continued redevelopment / increased densities
 - Drought / extraordinary conservation / plumbing codes
 - Vacancies
 - Aging infrastructure

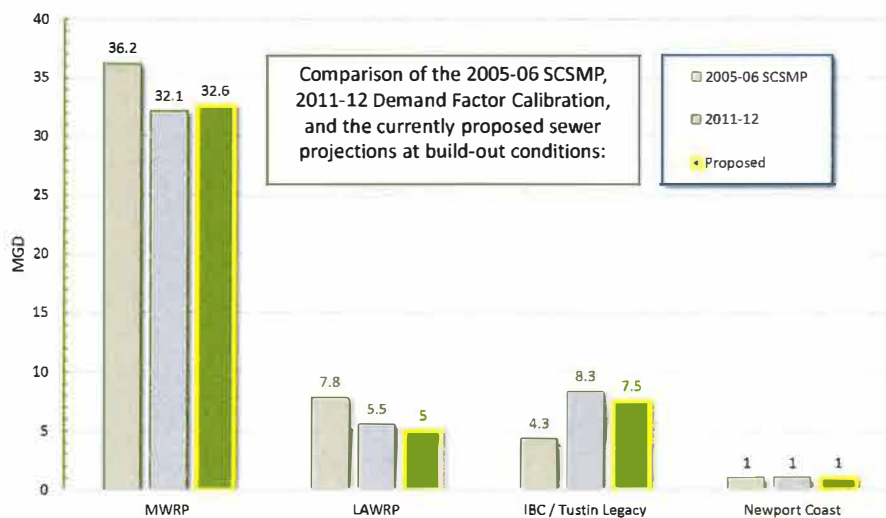
Sewage Generation Factor Calibration

Compare 2015 SCSMP Flow Monitoring with 2015-16 Demand Forecast Tool Projections (mgd)

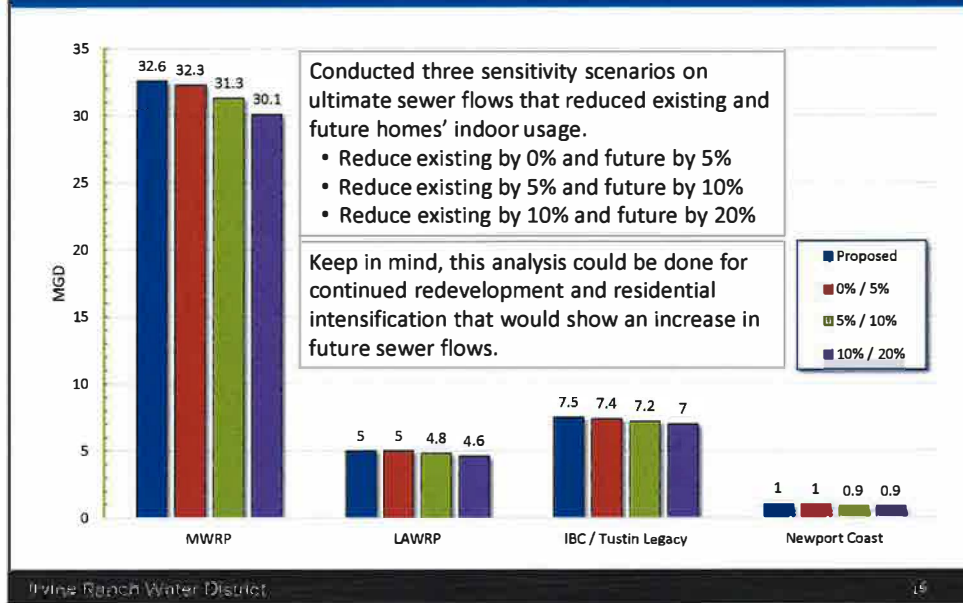
Calibration Area	Demand Forecast Tool	Flow Monitoring
Total Flow to MWRP	22.5 mgd*	20.3 mgd
LAWRP (incl. English Cyn)	3.9	3.4
IBC / Tustin Legacy	5.2	5.45
HATS Trunk Sewer	4.9	4.8
Newport Coast	1.0	≈1.0

*2011-12 Projection = 23.3 mgd

Sewer Flow Projections – Build Out



Sensitivity Analysis - Conservation



Flow Projection Conclusions and Next Steps

• Conclusions

- Minimal projected reduction in overall sewer influent flows to MWRP
- The proposed sewage generation factors (local-interior water use) are well-calibrated

• Next Steps

- Incorporate results into the SCSMP
- Use results for the upcoming Sewage Treatment Plant Master Plan
- Develop Scope of Work to revisit overall water demand factors from 2011-2012 study and calibration

SCSMP – Progress Update

Collection System Flow Characterization

- Completed – Presenting results
- Wet and Dry Weather Monitoring: 2-year storm

Review in progress

Analyze Existing Collection System

- Completed building existing system hydraulic model
- Completed condition assessment of lift stations, siphons, and diversion structures
- Preliminary results show SDC Interceptor d/D =17%-49%

July 2016

Analyze Future Collection System

- Developing build-out collection system hydraulic model
- Identify future system needs

July 2016

Reliability and Redundancy

- Building criticality based system analysis tools.
- Verifying past analysis
- Develop recommendations for critical facilities

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SCSMP – Next Steps

Reliability and Redundancy

- Complete in late June
- Submit with 90% SCSMP


90% SCSMP Submittal

- Submit in July
- Review in July / August
- Includes future system model

Present Findings to E&O / Board

- August / September E&O
- August / September Board

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May 23, 2016
Prepared and
Submitted by: L. Bonkowski
Approved by: P. Cook 

CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes of the April 25, 2016 Regular Board Meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE APRIL 25, 2016 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – April 25, 2016 Minutes

EXHIBIT "A"

MINUTES OF REGULAR MEETING – APRIL 25, 2016

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President Matheis on April 25, 2016 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

Directors Present: Reinhart, Swan, LaMar, Matheis and Withers.

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Engineering and Water Quality Burton, Executive Director of Finance and Administration Clary, Executive Director of Water Policy Weghorst, Executive Director of Operations Sheilds, Director of Treasury and Risk Management Jacobson, Director of Public Affairs Beeman, Director of Human Resources Roney, Legal Counsel Arneson, Secretary Bonkowski, Government Relations Officer Compton, Purchasing Manager Aguilar, Principle Engineer Akiyoshi, Mr. Barkev Meserlian, Ms. Tina Bertsch, Mr. Jim Reed, Mr. Bruce Newell, Ms. Donna Sutton of Neighborhood United, Ms. Debbie Knox of Neighborhood United, Mr. Andrew Lazenby of Black & Veatch, Mr. Jim Cathcart of Arcadis, Ms. Sandra Bauer, Ms. Peggy Falcon, Ms. Jennifer Fitzgerald of Curt Pringle and Associates, and other members of the public and staff.

WRITTEN COMMUNICATIONS: None.

ORAL COMMUNICATIONS: Ms. Donna Sutton, Ms. Sandra Bauer, and Ms. Debbie Knox expressed disappointment with the Local Agency Formation Commission's (LAFCO) recent vote on local sewer service for the Orange County Sanitation District Service Area 7 as they were hopeful that IRWD would be its future service provider. President Matheis thanked Ms. Jennifer Fitzgerald of Curt Pringle and Associates along with District staff on their efforts with preparing and submitting an application to LAFCO.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED: None.

WORKSHOPS

PROPOSED OPERATING BUDGET AND RATES AND CHARGES FOR FISCAL YEAR 2016-17

General Manager Cook reported that this is the second workshop held on the proposed Operating Budget with the first workshop held on April 11, 2016. Mr. Cook said that rate increases are necessary to fund anticipated shortfalls in the water and sewer/recycled water systems. He said that the proposed budget is \$146.9 million, representing an increase of \$6.6 million, or 4.7%, when compared with the Operating Budget for FY 2015-16.

Using a PowerPoint presentation. Mr. Christopher Smithson provided an overview of the proposed operating budget and rate setting. Mr. Smithson reviewed the key driver comparison to the prior year's budget which includes salaries and benefits, purchased water, repairs and maintenance, electricity, and other expenses. He updated the Board on the effects of the proposed rate increases

for a typical residential customer within the Irvine Ranch and Los Alisos rate areas noting that the rate impacts to the Irvine Ranch rate area are an increase of 4.2% for the average residential customer and the rate impacts to the Los Alisos rate area are an increase of 4.6% for the average residential customer. He then reviewed a comparison of both the IRWD and Los Alisos rate areas with neighboring agencies. Director LaMar inquired about the number of residents who will be receiving the \$2.00 low volume credit, and asked that an update be provided at a Committee meeting.

Smithson said that the Proposition 218 notices have been improved with a two to three page format which highlights the basic components, proposed commodity rates, proposed monthly water and sewer service charges, and other required noticing. He then reviewed its structure and noted the changes to the pumping surcharges. Mr. Smithson said that staff is proposing to mail the notices on May 6, 2016 with a Public hearing to be held on June 27, 2016.

On MOTION by Swan, seconded and unanimously carried, THE BOARD ADOPTED THE FOLLOWING RESOLUTION BY TITLE APPROVING THE OPERATING BUDGET FOR FISCAL YEAR 2016-17 (WITH RATES AND CHARGES FOR FISCAL YEAR 2016-17 TO BE ADOPTED ON JUNE 27, 2016); AND APPROVED THE PROPOSITION 218 NOTICES SUBJECT TO NON-SUBSTANTIVE MODIFICATIONS.

RESOLUTION NO. 2016 -6

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT,
ORANGE COUNTY, CALIFORNIA
APPROVING DISTRICT'S OPERATING BUDGET FOR
FISCAL YEAR 2016-17 AND DETERMINING COMPLIANCE WITH
ARTICLE XIII B OF THE CALIFORNIA CONSTITUTION

FISCAL YEAR 2016-17 CAPITAL BUDGET

Using a PowerPoint presentation, Mr. Barkev Meserlian reported that actual expenditures are projected at approximately \$136.8 million (equating to 91% of projected expenditures) through the end of the current fiscal year. Mr. Meserlian said that capital expenditures for FY 2016-17 are estimated at \$160.2 million and that three projects: (1) the MWRP Biosolids and Energy Recovery Facilities, (2) Orange County Sanitation District's Capital Outlay Revolving Fund, Equity and Solids Facilities, and (3) the Irvine Lake Pipeline North Conversion project will make up approximately 50% of projected expenditures. He said that this item was reviewed by the Engineering and Operations Committee on March 15, 2016. He said that the total FY 2016-17 capital expenditures presented to the Committee were \$159.6 million; however, adjustments have been made to several improvement district splits and three project budgets were increased. He said that the FY 2016-17 development activity is forecasted to be similar to 2015-16 and that multi-family and single-family dwelling units continue to be developed in Orchard Hills, Portola Springs, Cypress Village, Great Park neighborhoods and Baker Ranch. In response to Director Swan's request for an update on facilities at the Great Park and IIC-E to the San Diego Creek Interceptor, Mr. Burton said that an information item will be provided for Committee review.

Mr. Meserlian reviewed the top 10 project groups, capital budget funding sources, and a long-term capital program summary which is estimated at \$631.9 million. He further reviewed the Flagged projects which will require additional Board review and approval prior to proceeding with any expenditures.

On MOTION by Reinhart, seconded and unanimously carried, THE FOLLOWING RESOLUTION WAS ADOPTED BY TITLE:

RESOLUTION NO. 2016 -7

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA,
APPROVING DISTRICT'S CAPITAL BUDGET
FOR FISCAL YEAR 2016-17

CONSENT CALENDAR

On MOTION by Swan, seconded and unanimously carried, CONSENT CALENDAR ITEMS 5 THROUGH 9 WERE APPROVED AS FOLLOWS:

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the April 11, 2016 Regular Board Meeting be approved as presented.

6. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: That the Board ratify/approve the meetings and events for Steven LaMar, Mary Aileen Matheis, Douglas Reinhart, Peer Swan, and John Withers as described.

7. IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES

Recommendation: Receive and file.

8. MARCH TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate Swap summary for March 2016, and disclosure report of reimbursements to board members and staff; approve the March 2016 summary of payroll payments in the total amount of \$1,556,287 and approve the March 2016 accounts payable disbursement summary of warrants 365608 through 366465, workers' compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$27,855,901.

CONSENT CALENDAR (CONTINUED)

9. REIMBURSEMENT AGREEMENT BETWEEN IRWD AND THE CITY OF IRVINE FOR INSTALLATION AND ADJUSTMENT OF IRWD FACILITIES TO GRADE

Recommendation: That the Board authorize the General Manager to execute a Reimbursement Agreement with the City of Irvine for its annual slurry seal and pavement rehabilitation project.

ACTION CALENDAR

SERIES 2009-A AND 2009-B BONDS LETTERS OF CREDIT EXTENSION

The District currently has \$65 million of Series 2009-A Bonds (2009-A Bonds) with a U.S. Bank letter of credit (LOC) and \$65 million of Series 2009-B Bonds (2009-B Bonds) with a Bank of America (B of A) letter of credit, both scheduled to expire on July 15, 2016. On MOTION by Swan, seconded and unanimously carried, THE BOARD APPROVED EXTENDING THE U.S. BANK LETTER OF CREDIT SUPPORTING THE 2009-A BONDS FOR 4-1/2 YEARS AT AN ANNUAL COST OF 0.41%, APPROVED EXTENDING THE BANK OF AMERICA LETTER OF CREDIT SUPPORTING THE 2009-B BONDS FOR THREE YEARS AT AN ANNUAL COST OF 0.40%; AND ADOPTED THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2016 - 8

RESOLUTION OF THE BOARD OF DIRECTORS OF
THE IRVINE RANCH WATER DISTRICT
AUTHORIZING CERTAIN ACTIONS IN CONNECTION
WITH EXTENSION OF LETTERS OF CREDIT
(CONSOLIDATED SERIES 2009-A AND CONSOLIDATED SERIES 2009-B)

OTHER BUSINESS

GENERAL MANAGER'S REPORT

General Manager Cook reported on the Harvard Avenue Trunk Station's lift station project and commended Collections, Mechanical, and Electrical staff on their work effort. Mr. Cook said that during the shutdown, 7.4 MGDs of flows were diverted to the Orange County Sanitation District. He further said that the contractor, Zebron, completed work today, and that service was restored.

DIRECTORS' COMMENTS

Director LaMar reported on his attendance at a National Water Resources Federal conference and a Southern California Water Committee meeting last Friday.

Director Withers reported that he will attend an OCSB Board meeting on Wednesday.

Director Swan said it was his understanding that the "Delta Fix" is unlikely to go forward and commented that the IRWD needs to take certain steps to better insulate the District's customers, and it is important to have back-up programs in place for additional water supplies.

DIRECTORS' COMMENTS (CONTINUED)

In response to Director Reinhart's comment on the recent ACWA report where the State Water Board is issuing mandatory consolidations, Ms. Christine Compton provided him an update on legislation whereby the State Board bypasses the LAFCO process only if there is a water quality violation in a disadvantaged community.

Director Matheis reported that she will be attending the ACWA conference next week. She further thanked staff and General Manager Cook on their efforts on the application to LAFCO for the Orange County Sanitation District Service Area 7.

ADJOURNMENT

President Matheis adjourned the meeting at 6:50 p.m.

APPROVED and SIGNED this 23rd day of May, 2016.

President, IRVINE RANCH WATER DISTRICT

Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

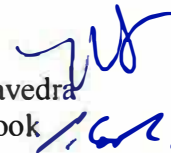
Legal Counsel - Bowie, Arneson, Wiles & Giannone

May 23, 2016

Prepared and

Submitted by: N. Savedra

Approved by: P. Cook



CONSENT CALENDAR

RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

SUMMARY:

Pursuant to Resolution 2006-29 adopted on August 28, 2006, approval of attendance of the following events and meetings are required by the Board of Directors.

Events/Meetings

Steven LaMar

4/9-14/16 NWRA Federal Water Issues Conference, Washington D.C.
5/14/16 IRWD Resident Tour
5/17/16 Irvine Ranch Conservancy Restoration Projects Tour
6/2-3/16 ACWA Board Meeting, Sacramento, CA

Mary Aileen Matheis

5/16/16 IRWD Update on District Issues w/General Manager Paul Cook
5/19/16 IRWD/MWDOC Meeting
5/20/16 MWDOC-OC Water Summit
5/25/16 Monthly Discussion of District Activities w/General Manager Paul Cook

Douglas Reinhart

5/19/16 IRWD/MWDOC Meeting
5/20/16 MWDOC-OC Water Summit
5/25/16 Monthly Discussion of District Activities w/General Manager Paul Cook

Peer Swan

3/03/16 Newport Beach Chamber of Commerce Meeting
3/07/16 Special Retirement Trust Meeting Investment Advisor Board Interviews
3/14/16 Newport Watershed Meeting at SAWPA
5/16/16 Integrated Regional Water Management Follow-up Discussion
5/25/16 MWD-Southern California Water Dialogue Meeting
5/27/16 OCWD/MWDOC Joint Committee Meeting

John Withers

5/18/16 OCWA 2016 Safety Fest for Water Industry
5/20/16 MWDOC-OC Water Summit

RECOMMENDATION:

THAT THE BOARD RATIFY/APPROVE THE MEETINGS AND EVENTS FOR STEVEN LAMAR, MARY AILEEN MATHEIS, DOUGLAS REINHART, PEER SWAN AND JOHN WITHERS AS DESCRIBED.

LIST OF EXHIBITS:

None

May 23, 2016

Prepared by: Jennifer Davis/Tanja Fournier

Submitted by: Robert Jacobson/Cheryl Clary

Approved by: Paul Cook

CONSENT CALENDAR

APRIL 2016 TREASURY REPORTS

SUMMARY:

The following is submitted for the Board's information and approval:

- A. The Investment Summary Report for April 2016. This Investment Summary Report is in conformity with the 2016 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Monthly Interest Rate Swap Summary as of April 30, 2016, as outlined in Exhibit "B".
- C. The Summary of Payroll ACH payments in the total amount of \$2,337,626, as outlined in Exhibit "C".
- D. The April 30, 2016 Disbursement Summary of warrants 366466 through 367198, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$22,371,573 as outlined in Exhibit "D".
- E. The Disclosure Report of Reimbursements to Board Members and Staff for April 2016, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "E".

FISCAL IMPACTS:

As of April 30, 2016, the book value of the investment portfolio was \$240,912,192, with a 0.73% rate of return and a market value of \$240,967,838. Based on the District's March 31, 2016 quarterly real estate investment rate of return of 13.63%, the weighted average return for the fixed income and real estate investments was 3.77%.

As of April 30, 2016, the total notional amount of the interest rate swap portfolio was \$130 million of fixed payer swaps. Cash accrual in April from all swaps was negative \$555,673.

Payroll ACH payments totaled \$2,337,626, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for April totaled \$22,371,573.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act Code of Regulations, Title 14, Chapter 3 Section 15378.

COMMITTEE STATUS:

This item was not submitted to a Committee; however, the investment and interest rate swap reports are submitted to the Finance and Personnel Committee on a monthly basis.

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE MONTHLY INTEREST RATE SWAP SUMMARY FOR APRIL 2016, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE APRIL 2016 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$2,337,626 AND APPROVE THE APRIL 2016 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 366466 THROUGH 367198, WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$22,371,573.

LIST OF EXHIBITS:

Exhibit "A" – Investment Summary Report

Exhibit "B" – Monthly Interest Rate Swap Summary

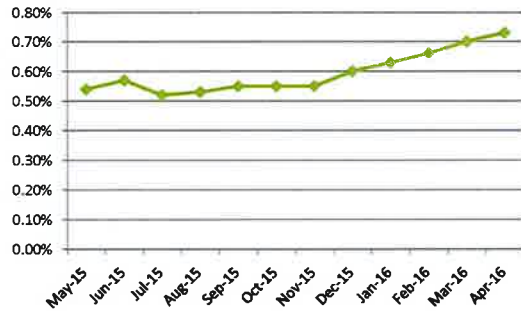
Exhibit "C" – Monthly Payroll ACH Summary

Exhibit "D" – Monthly Summary of District Disbursements

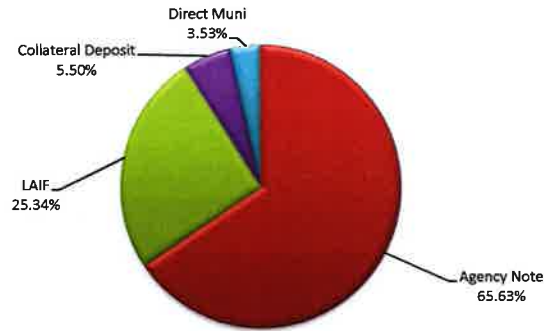
Exhibit "E" – Disclosure of Reimbursements to Board Members and Staff

Exhibit "A"
Irvine Ranch Water District
Investment Portfolio Summary
April 2016

Monthly Fixed Income Yield



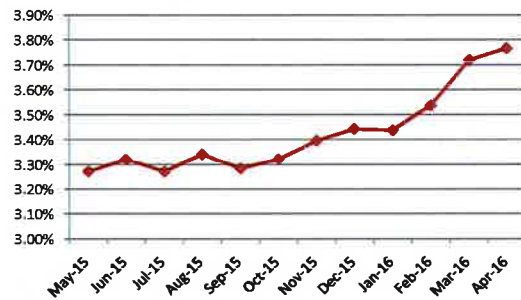
Portfolio Distribution



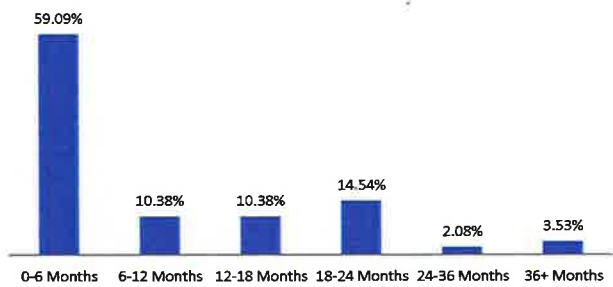
Investment Summary

Type	PAR	Book Value	Market Value
Agency Note	158,000,000	158,165,688	158,207,850
LAIF	61,000,000	61,000,000	61,013,485
Collateral Deposit	13,249,929	13,249,929	13,249,929
Direct Muni	8,496,575	8,496,575	8,496,575
Grand Total	240,746,504	240,912,192	240,967,838

Weighted Average Return Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
Fed Home Loan Mortgage Corp	70,000,000	29.08%
State of California Treasury - LAIF	61,000,000	25.34%
Fed Home Loan Bank	53,000,000	22.01%
Fed Natl Mortgage Assoc	20,000,000	8.31%
Fed Farm Credit Bank	10,000,000	4.15%
ETWD	8,496,575	3.53%
Citi-Group Collateral	8,349,929	3.47%
Fed Ag Mortgage Corp	5,000,000	2.08%
Merrill Lynch Collateral	4,900,000	2.03%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

04/30/16

SETTLMT *	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	YTFC	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 4/30/2016	UNREALIZED ⁽²⁾ GAIN/(LOSS)
04/28/16			05/01/16		LAIF	State of California Tsy.	\$61,000,000		0.510%		\$61,000,000.00	\$61,000,000.00	61,013,484.66	13,484.66
05/20/15	N/A	N/A	05/04/16	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	3,000,000	0.300%	0.315%		2,999,565.00	2,999,996.27	3,000,000.00	3.73
10/14/15	N/A	N/A	05/13/16	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.500%	0.238%		5,007,600.00	5,000,430.19	5,000,450.00	19.81
05/20/15	N/A	N/A	05/18/16	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.250%	0.305%		4,997,285.00	4,999,873.20	4,999,950.00	76.80
05/20/15	N/A	N/A	05/27/16	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.500%	0.304%		5,111,650.00	5,007,782.57	5,007,800.00	17.43
06/04/15	N/A	N/A	06/20/16	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.340%	0.355%		4,999,200.00	4,999,895.29	5,000,250.00	354.71
07/01/15	N/A	N/A	06/24/16	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.375%	0.345%		5,001,450.00	5,000,218.11	5,000,500.00	281.89
11/20/14	N/A	N/A	06/27/16	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.375%	0.424%		4,996,091.65	4,999,619.19	5,000,700.00	1,080.81
01/11/16	N/A	N/A	06/30/16	NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.500%	0.500%		5,000,000.00	5,000,000.00	5,001,400.00	1,400.00
05/08/14	N/A	N/A	07/05/16	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.375%	0.484%		4,988,300.00	4,999,036.12	5,000,100.00	1,063.88
06/09/15	N/A	N/A	08/25/16	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	2.000%	0.467%		10,184,900.00	10,048,416.25	10,047,500.00	(916.25)
10/19/15	N/A	N/A	09/28/16	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	10,000,000	1.250%	0.342%		10,085,280.00	10,037,493.79	10,031,300.00	(6,193.79)
06/15/15	N/A	N/A	10/13/16	NR	FAMCA - Note	Fed Ag Mortgage Corp	5,000,000	0.970%	0.578%		5,025,900.00	5,008,793.21	5,012,700.00	3,906.79
11/28/14	Quarterly	05/15/15	11/15/16	Aaa/AA+/NR	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.600%	0.600%	0.600%	5,000,000.00	5,000,000.00	5,000,700.00	700.00
09/21/15	N/A	N/A	12/09/16	Aaa/AA+/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	0.532%		5,066,150.00	5,033,000.67	5,033,200.00	199.33
10/08/15	N/A	N/A	01/30/17	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.250%	0.492%		5,049,445.00	5,028,224.85	5,024,150.00	(4,074.85)
09/21/15	N/A	N/A	02/22/17	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.875%	0.570%		5,021,500.00	5,012,279.81	5,010,450.00	(1,829.81)
06/15/15	N/A	N/A	03/30/17	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.625%	0.727%		4,990,950.00	4,995,391.97	5,001,800.00	6,408.03
08/27/15	N/A	N/A	05/30/17	NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.625%	0.642%		4,998,500.00	4,999,079.44	4,999,050.00	(29.44)
11/05/15	N/A	N/A	08/28/17	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.750%	0.800%		4,995,500.00	4,996,709.97	5,002,000.00	5,290.03
09/16/15	N/A	N/A	09/15/17	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.900%	0.915%	0.960%	4,998,500.00	4,998,968.49	5,012,500.00	13,531.51
09/29/15	Continuous after	03/28/16	09/28/17	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.810%	0.815%		4,999,500.00	4,999,647.26	4,991,100.00	(8,547.26)
07/29/15	Continuous after	01/16/13	10/16/17	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.000%	0.997%		5,000,000.00	5,000,000.00	5,000,000.00	
12/18/15	Continuous after	12/13/13	12/12/17	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.820%	1.132%		4,969,500.00	4,975,179.31	4,995,300.00	20,120.69
12/18/15	Quarterly	03/18/16	12/18/17	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	6,000,000	1.125%	1.138%		5,998,500.00	5,998,775.89	6,002,880.00	4,104.11
04/22/16	N/A	N/A	01/29/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	4,000,000	0.850%	0.856%		3,999,600.00	3,999,605.56	4,001,520.00	1,914.44
03/01/16	Quarterly	05/26/16	02/26/18	NR/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%		5,000,000.00	5,000,000.00	5,000,150.00	150.00
03/16/16	Quarterly	06/16/16	03/16/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.125%	1.145%	1.128%	4,998,000.00	4,998,126.03	5,000,300.00	2,173.97
03/23/16	N/A	N/A	03/23/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.100%	0.908%		5,019,000.00	5,017,984.93	5,024,800.00	6,815.07
04/07/16	N/A	N/A	04/09/18	NA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.750%	0.790%		4,996,000.00	4,996,131.15	4,996,000.00	(131.15)
03/03/16	One Time	07/27/16	04/27/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.096%	0.436%	5,016,250.00	5,015,028.66	5,009,300.00	(5,728.66)
05/30/15	N/A	N/A	04/30/36	NR	Direct Muni	ETWD	8,496,575	4.570%	4.570%	4.570%	8,496,574.67	8,496,574.67	8,496,574.67	
SUB-TOTAL							\$227,496,575				\$228,010,691.32	\$227,662,262.86	\$227,717,909.33	\$55,646.47
RESTRICTED CASH (Swap Collateral Deposits)⁽³⁾														
03/01/16					Collateral Deposit	Citi-Group	\$8,349,929		0.370%		\$8,349,929.11	\$8,349,929.11	8,349,929.11	
02/28/16					Collateral Deposit	Merrill Lynch	\$4,900,000		0.370%		\$4,900,000.00	\$4,900,000.00	4,900,000.00	
SUB-TOTAL							\$13,249,929				\$13,249,929.11	\$13,249,929.11	\$13,249,929.11	
TOTAL INVESTMENTS							\$240,746,504				\$241,260,620.43	\$240,912,191.97	\$240,967,838.44	
				April	Petty Cash Ck Balance	Bank of America					3,400.00 804,050.23			
											\$242,068,070.66			

⁽¹⁾ LAIF market value is as of the most recent quarter-end as reported by LAIF.
⁽²⁾ Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing.
⁽³⁾ Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers
⁽⁴⁾ Real estate rate of return is based on most recent quarter end return
⁽⁵⁾ Calculation excludes Direct Muni - ETWD
⁽⁶⁾ Swap Collateral Deposits assumes 6 month maturity, dependent on interest rate changes

Outstanding Variable Rate Debt \$316,200,000
Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps) \$186,200,000
Investment Balance: \$242,068,071
Investment to Variable Rate Debt Ratio: 130%
Portfolio - Average Number of Days To Maturity⁽⁴⁾ 223

	Investment Portfolio	Real Estate ⁽⁵⁾ Portfolio	Weighted Avg. Return
April	0.73%	13.63%	3.77%
March	0.70%	13.63%	3.72%
Change	0.03%		

This Investment Summary Report is in conformity with the 2016 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.
* \$ - Step up

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES

04/30/16

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	Direct Muni
04/16	\$61,000,000	25.34%	\$61,000,000				
05/16	18,000,000	7.48%		18,000,000			
06/16	20,000,000	8.31%		20,000,000			
07/16	5,000,000	2.08%		5,000,000			
08/16	10,000,000	4.15%		10,000,000			
09/16	23,249,929	9.66%		10,000,000		\$13,249,929	
10/16	5,000,000	2.08%		5,000,000			
11/16	5,000,000	2.08%		5,000,000			
12/16	5,000,000	2.08%		5,000,000			
01/17	5,000,000	2.08%		5,000,000			
02/17	5,000,000	2.08%		5,000,000			
03/17	5,000,000	2.08%		5,000,000			
SUB-TOTAL	\$167,249,929	69.47%	\$61,000,000	\$93,000,000		\$13,249,929	
13 Months - 3 YEARS							
04/01/17-06/30/17	5,000,000	2.08%		5,000,000			
07/01/17 - 9/30/2017	15,000,000	6.23%		15,000,000			
10/30/17 - 12/31/2017	16,000,000	6.65%		16,000,000			
01/01/2018-03/31/2018	19,000,000	7.89%		19,000,000			
04/01/18-06/30/2018	10,000,000	4.15%		10,000,000			
	-						
04/30/2036	8,496,575	3.53%					8,496,575
TOTALS	\$240,746,504	100.00%	\$61,000,000	\$158,000,000		\$13,249,929	\$8,496,575

% OF PORTFOLIO

25.34%

65.63%

5.50%

3.53%

Irvine Ranch Water District
 Summary of Real Estate
 3/31/2016

	<u>ACQUISITION DATE</u>	<u>PROPERTY TYPE</u>	<u>OWNERSHIP INTEREST</u>	<u>ORIGINAL COST</u>	<u>RATE OF RETURN QUARTER ENDED Mar-16</u>
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	17.84%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	8.58%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	7.77%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	5.11%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	8.28%
				<u>\$ 72,569,826</u>	<u>13.63%</u>

IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT
INVESTMENT ACTIVITY
April 2016

MATURITIES/SALES/CALLS

PURCHASES

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
4/7/2016	FHLB - Note	\$5,000,000	0.22%	4/7/2016	4/9/2018	FHLMC - Note	\$5,000,000	0.79%
				4/22/2016	1/29/2018	FHLMC - Note	\$4,000,000	0.86%

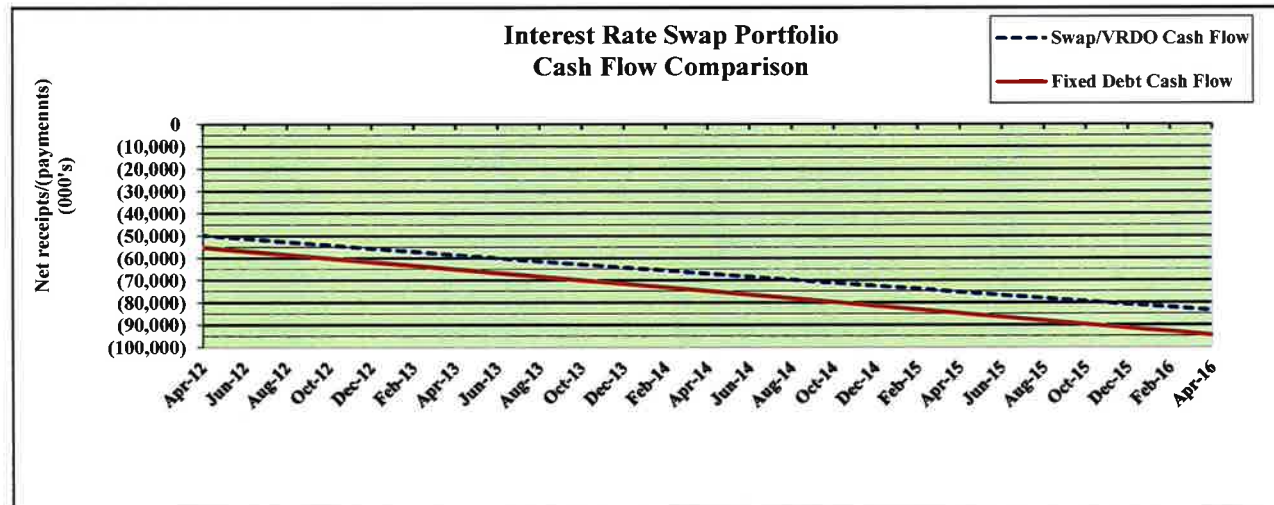
IRVINE RANCH WATER DISTRICT
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL
 April 30, 2016

LIBOR Avg %	Prior Mo.	Current Mo.	12-Mo Avg
	0.43%	0.44%	0.29%

Current Fiscal Year Active Swaps								Cash Flow				Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Fixed Payer Swaps - By Effective Date													
6/4/2006	6/4/2019	3.1	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(102,701)	(89,399)	\$ (980,708)	\$ (9,635,675)	\$ 16,757,530	\$ (3,242,470)
6/4/2006	6/4/2019	3.1	CG	20,000,000	FXP	LIBOR	6.200%	(102,701)	(89,399)	(980,708)	(9,635,675)	16,754,297	(3,245,703)
6/17/2006	6/17/2019	3.1	CG	30,000,000	FXP	LIBOR	6.140%	(152,494)	(132,657)	(1,455,776)	(14,293,679)	25,134,983	(4,865,017)
3/10/2007	3/10/2029	12.9	ML	30,000,000	FXP	LIBOR	5.687%	(140,333)	(122,109)	(1,343,244)	(12,853,052)	16,263,691	(13,736,309)
3/10/2007	3/10/2029	12.9	CG	30,000,000	FXP	LIBOR	5.687%	(140,333)	(122,109)	(1,343,244)	(12,853,052)	16,212,082	(13,787,918)
Totals/Weighted Avgs				7.6	\$ 130,000,000		5.949%	\$ (638,562)	\$ (555,673)	\$ (6,103,680)	\$ (59,271,134)	\$ 91,122,583	\$ (38,877,417)
Total Current Year Active Swaps					\$ 130,000,000			\$ (638,562)	\$ (555,673)	\$ (6,103,680)	\$ (59,271,134)	\$ 91,122,583	\$ (38,877,417)

Current Fiscal Year Terminated Swaps								Cash Flow				Mark to Market	
Effective Date	Maturity Date		Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Total Current Year Terminated Swaps								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market	
Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference								
\$ (638,562)	\$ (555,673)	\$ (6,103,680)	\$ (59,271,134)	\$ 91,122,583	\$ (38,877,417)								



Cash Flow Comparison	
Synthetic Fixed vs. Fixed Rate Debt	
	<u>Cash Flow to Date</u>
Synthetic Fixed =	\$83,535,195
Fixed Rate =	\$96,275,887
Assumptions:	
- Fixed rate debt issued at 5.10% in Jun-06, and 4.93% in Mar-07 (estimated TE rates - Bloomberg)	
- 'Synthetic' includes swap cash flow + interest + fees to date	

Exhibit "C"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

**April
2016**

	AMOUNT	VENDOR	PURPOSE
4/1/2016	769,939.92	BANK OF AMERICA	ACH Payments for Payroll
4/15/2016	770,705.63	BANK OF AMERICA	ACH Payments for Payroll
4/29/2016	796,980.76	BANK OF AMERICA	ACH Payments for Payroll
	<u>\$2,337,626.31</u>		

Exhibit "D"

>

IRWD Ledger

Void Payment Register

Report Date: 30-APR-2016 14:10

Include Zero Amount Payments: Yes
Display Payee Address: No

Period From: 01-APR-16

Page: 1
To: 30-APR-16
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD (US Dollar)

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
363646	10-DEC-15	JUNG-CHE SHIH, JENNY	ORANGE		450.00	12-APR-16
363799	17-DEC-15	Roberts, Thomas (Tom)	HOME		19.61	06-APR-16
364248	07-JAN-16	LI, DAIJIN	PAY		18.68	29-APR-16
364292	07-JAN-16	STICE COMPANY INC.	PAY		1,500.00	29-APR-16
364377	14-JAN-16	DUZGUNCINAR, DOGUKAN	PAY		16.07	29-APR-16
364406	14-JAN-16	HSIEH, HENRY	PAY		31.53	29-APR-16
364435	14-JAN-16	MOTHKURI, PRAVEEN	PAY		70.26	29-APR-16
364499	14-JAN-16	VISION TECHNOLOGY SOLUTIONS	EL SEGUNDO		2,025.00	29-APR-16
364678	21-JAN-16	THRIEPP, JAMES	PAY		36.57	29-APR-16
364877	04-FEB-16	ORANGE COUNTY SANITATION DI	FOUNTAIN VALLEY		24,432.54	14-APR-16
365525	25-FEB-16	HSIEH, AMYI	PAY		77.19	25-APR-16
366391	31-MAR-16	KONOVALOV, ALEKSEY	PAY		43.25	01-APR-16
366782	14-APR-16	STEVEN A. CARLSON	PURCHASE		1,248.48	14-APR-16
366962	21-APR-16	ROUEENFAR ALI AND MITDRA	PAY		24.15	25-APR-16
367007	21-APR-16	XIN, TAO	PAY		28.25	25-APR-16
Payment Document Subtotal					30,021.58	

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD Wire						
11487	14-APR-16	BANK OF NEW YORK MELLON TRU	NEWARK		1,500,147.54	28-APR-16
Payment Document Subtotal					1,500,147.54	

Bank Account Subtotal 1,530,169.12

Report Total 1,530,169.12

Total Voids

Report Count: 16
IRWD Ledger

Include Zero Amount Payments: Yes
Display Payee Address: No

Void Payment Register

Period From: 01-APR-16

Report Date: 30-APR-2016 14:10
Page: 2
To: 30-APR-16
Date: Void Date

*** End of Report ***

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IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 1
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366466		05-APR-16	JOHN MICHAEL COVASPO BOX 421		391.60	11-APR-16	391.60	Reconciled
366467		05-APR-16	JCI JONES	CINCINNATI	5,505.50	08-APR-16	5,505.50	Reconciled
366468		06-APR-16	CHEMICALS INC					
366469		07-APR-16	COSTCO WHOLESALE CORPORATION	ISSAQUAH	8,441.93	08-APR-16	8,441.93	Reconciled
366470		07-APR-16	ORANGE COUNTY SANITATION DISTRICT	FOUNTAIN VALLEY	525,776.66	11-APR-16	525,776.66	Reconciled
366471		07-APR-16	Roberts, Thomas (Tom)		19.61			Negotiable
366472		07-APR-16	AAF INTERNATIONAL		1,307.17	12-APR-16	1,307.17	Reconciled
366473		07-APR-16	AGILENT TECHNOLOGIES, INC. AMERICAN GEOTECHNICAL, INC.		1,871.64	11-APR-16	1,871.64	Reconciled
366474		07-APR-16	ANTHEM BLUE CROSS		390.00	12-APR-16	390.00	Reconciled
366475		07-APR-16	ANTHEM BLUE CROSS		1,089.40	13-APR-16	1,089.40	Reconciled
366476		07-APR-16	APPLIED INDUSTRIAL TECHNOLOGIES - CA LLC		415.62	13-APR-16	415.62	Reconciled
366477		07-APR-16	APPLIED TECHNOLOGY GROUP INC		68.79	11-APR-16	68.79	Reconciled
366478		07-APR-16	ARI INDUSTRIES		3,077.79	12-APR-16	3,077.79	Reconciled
366479		07-APR-16	ARMORCAST PRODUCTS COMPANY		843.23	11-APR-16	843.23	Reconciled
366480		07-APR-16	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA		7,490.88	11-APR-16	7,490.88	Reconciled
366481		07-APR-16	AT&T		32,091.42	14-APR-16	32,091.42	Reconciled
366482		07-APR-16	AUTOZONE PARTS, INC.		3,918.19	13-APR-16	3,918.19	Reconciled
366483		07-APR-16	BARR, ERIK		230.53	12-APR-16	230.53	Reconciled
366484		07-APR-16	BATTERIES PLUS AND BATTERIES PLUS BULBS		113.70	18-APR-16	113.70	Reconciled
366485		07-APR-16	BEE EMERGENCY RESPONSE TEAM		1,730.55	11-APR-16	1,730.55	Reconciled
366486		07-APR-16	BLACK & VEATCH CORPORATION		175.00	11-APR-16	175.00	Reconciled
366487		07-APR-16	BLACK BOX CORP OF PENNSYLVANIA		331,672.63	14-APR-16	331,672.63	Reconciled
366488		07-APR-16	BOWIE, ARNESON, WILES & GIANNONE		600.06	12-APR-16	600.06	Reconciled
366489		07-APR-16	BOYD & ASSOCIATES		35,080.83	20-APR-16	35,080.83	Reconciled
366490		07-APR-16	BRITHINEE ELECTRIC		345.00	12-APR-16	345.00	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 2
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366491		07-APR-16	C WELLS PIPELINE MATERIALS INC		114,096.60	14-APR-16	114,096.60	Reconciled
366492		07-APR-16	CALIFORNIA BARRICADE INC		1,820.00	12-APR-16	1,820.00	Reconciled
366493		07-APR-16	CANON FINANCIAL SERVICES, INC		1,315.44	11-APR-16	1,315.44	Reconciled
366494		07-APR-16	CAROLLO ENGINEERS, INC		75,289.70	14-APR-16	75,289.70	Reconciled
366495		07-APR-16	CDW GOVERNMENT LLC		3,532.58	14-APR-16	3,532.58	Reconciled
366496		07-APR-16	CHANG, DAVID		16.46	12-APR-16	16.46	Reconciled
366497		07-APR-16	CHEN, VICTORIA		125.46	13-APR-16	125.46	Reconciled
366498		07-APR-16	CHO, YANG		28.98			Negotiable
366499		07-APR-16	CITY OF SANTA ANA		98.22	11-APR-16	98.22	Reconciled
366500		07-APR-16	CITY OF SANTA ANA		18,980.06	21-APR-16	18,980.06	Reconciled
366501		07-APR-16	CITY OF TUSTIN		211.10	11-APR-16	211.10	Reconciled
366502		07-APR-16	COMMERCE ENERGY INC		481.57	11-APR-16	481.57	Reconciled
366503		07-APR-16	CORTECH ENGINEERING, A DXP COMPANY		3,103.09	13-APR-16	3,103.09	Reconciled
366504		07-APR-16	COUNTY OF ORANGE		5,015.00	19-APR-16	5,015.00	Reconciled
366505		07-APR-16	CUESTA CONSTRUCTION COMPANY		2,493.66	12-APR-16	2,493.66	Reconciled
366506		07-APR-16	CUMMINS PACIFIC, LLC		3,009.14	11-APR-16	3,009.14	Reconciled

366507	07-APR-16	CURT PRINGLE AND ASSOCIATES	10,000.00	20-APR-16	10,000.00	Reconciled
366508	07-APR-16	D & H WATER SYSTEMS INC.	1,495.78	13-APR-16	1,495.78	Reconciled
366509	07-APR-16	DANGELO CO	8,343.00	11-APR-16	8,343.00	Reconciled
366510	07-APR-16	DATAZEO, INC.	5,699.09	11-APR-16	5,699.09	Reconciled
366511	07-APR-16	DDB ENGINEERING, INC.	1,360.00	12-APR-16	1,360.00	Reconciled
366512	07-APR-16	DELL MARKETING LP	222.88	11-APR-16	222.88	Reconciled
366513	07-APR-16	EAST ORANGE COUNTY WATER DISTRICT	17,170.35	19-APR-16	17,170.35	Reconciled
366514	07-APR-16	EHS INTERNATIONAL, INC	1,620.00	12-APR-16	1,620.00	Reconciled
366515	07-APR-16	EI&C ENGINEERING INC	27,760.00	18-APR-16	27,760.00	Reconciled
366516	07-APR-16	ELISHA, JACOB	74.51	14-APR-16	74.51	Reconciled
366517	07-APR-16	ENDRESS AND HAUSER INC	4,029.92	13-APR-16	4,029.92	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 3
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366518		07-APR-16	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		11,741.25	14-APR-16	11,741.25	Reconciled
366519		07-APR-16	ENVIRONMENTAL EQUIPMENT SUPPLY, INC		279.08	13-APR-16	279.08	Reconciled
366520		07-APR-16	ENVIRONMENTAL SCIENCE ASSOCIATES		3,021.20	12-APR-16	3,021.20	Reconciled
366521		07-APR-16	FACILITYDUDE.COM		7,875.00	13-APR-16	7,875.00	Reconciled
366522		07-APR-16	FARRELL & ASSOCIATES		453.84	25-APR-16	453.84	Reconciled
366523		07-APR-16	FIDELITY SECURITY LIFE INSURANCE COMPANY		6,406.34	12-APR-16	6,406.34	Reconciled
366524		07-APR-16	FISHER SCIENTIFIC COMPANY LLC		4,928.63	11-APR-16	4,928.63	Reconciled
366525		07-APR-16	FRANK LA PLACA EXTERMINATING, INC.		175.00	15-APR-16	175.00	Reconciled
366526		07-APR-16	FRISCH, SHANNON		1,233.13	13-APR-16	1,233.13	Reconciled
366527		07-APR-16	FULLER TRUCK ACCESSORIES		477.71	11-APR-16	477.71	Reconciled
366528		07-APR-16	GRAINGER		2,955.24	11-APR-16	2,955.24	Reconciled
366529		07-APR-16	HAAKER EQUIPMENT COMPANY		691.34	11-APR-16	691.34	Reconciled
366530		07-APR-16	HABITAT RESTORATION SCIENCES, INC.		4,206.00	13-APR-16	4,206.00	Reconciled
366531		07-APR-16	HAMILTON, KURT		591.44	14-APR-16	591.44	Reconciled
366532		07-APR-16	HARRINGTON INDUSTRIAL PLASTICS LLC		1,978.80	11-APR-16	1,978.80	Reconciled
366533		07-APR-16	HASLER INC.		5,010.00	14-APR-16	5,010.00	Reconciled
366534		07-APR-16	HDR ENGINEERING INC		74,673.01	14-APR-16	74,673.01	Reconciled
366535		07-APR-16	HELPMATES STAFFING SERVICES		13,374.27	13-APR-16	13,374.27	Reconciled
366536		07-APR-16	HILL BROTHERS CHEMICAL COMPANY		3,999.20	11-APR-16	3,999.20	Reconciled
366537		07-APR-16	HOME DEPOT USA INC		762.49	21-APR-16	762.49	Reconciled
366538		07-APR-16	HUNSAKER & ASSOCIATES IRVINE		5,976.00	12-APR-16	5,976.00	Reconciled
366539		07-APR-16	INDUSTRIAL METAL SUPPLY CO		823.50	11-APR-16	823.50	Reconciled
366540		07-APR-16	IRVINE PIPE & SUPPLY INC		1,528.57	11-APR-16	1,528.57	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 4
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366541		07-APR-16	JACOBS PROJECT MANAGEMENT CO.		28,000.00	18-APR-16	28,000.00	Reconciled
366542		07-APR-16	JOHN ROBINSON CONSULTING, INC.		33,891.00	18-APR-16	33,891.00	Reconciled
366543		07-APR-16	JOHNSTONE SUPPLY		246.65	12-APR-16	246.65	Reconciled
366544		07-APR-16	KAZARIANS & ASSOCIATES, INC.		9,225.96	12-APR-16	9,225.96	Reconciled
366545		07-APR-16	KHAN, SHAFIQ R		150.15	12-APR-16	150.15	Reconciled
366546		07-APR-16	KIMBALL MIDWEST		2,367.29	13-APR-16	2,367.29	Reconciled

366547	07-APR-16	KITIC PANIC, MILENA	885.33	11-APR-16	885.33	Reconciled
366548	07-APR-16	KLEINFELDER, INC.	67,657.60	14-APR-16	67,657.60	Reconciled
366549	07-APR-16	L. G. SUPPLY COMPANY	2,960.28	18-APR-16	2,960.28	Reconciled
366550	07-APR-16	LANDCARE HOLDINGS, INC.	6,373.45	11-APR-16	6,373.45	Reconciled
366551	07-APR-16	LI, FEIYANG	29.18	25-APR-16	29.18	Reconciled
366552	07-APR-16	LILLESTRAND LEADERSHIP CONSULTING, INC.	774.46	26-APR-16	774.46	Reconciled
366553	07-APR-16	LU'S LIGHTHOUSE, INC.	726.00	12-APR-16	726.00	Reconciled
366554	07-APR-16	MBF CONSULTING, INC.	19,066.75	14-APR-16	19,066.75	Reconciled
366555	07-APR-16	MC FADDEN-DALE INDUSTRIAL	32.62	12-APR-16	32.62	Reconciled
366556	07-APR-16	MC MASTER CARR SUPPLY CO	7,518.47	11-APR-16	7,518.47	Reconciled
366557	07-APR-16	MCR TECHNOLOGIES INC	2,213.58	14-APR-16	2,213.58	Reconciled
366558	07-APR-16	MSC INDUSTRIAL SUPPLY CO	304.06	15-APR-16	304.06	Reconciled
366559	07-APR-16	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	30,413.55	13-APR-16	30,413.55	Reconciled
366560	07-APR-16	NCL OF WISCONSIN INC	157.50	12-APR-16	157.50	Reconciled
366561	07-APR-16	OLIN CORPORATION	8,654.12	11-APR-16	8,654.12	Reconciled
366562	07-APR-16	ONESOURCE DISTRIBUTORS LLC	7,190.18	11-APR-16	7,190.18	Reconciled
366563	07-APR-16	ORANGE COUNTY AUTO PARTS CO	130.31	11-APR-16	130.31	Reconciled
366564	07-APR-16	OUTFRONT MEDIA LLC	19,148.00	15-APR-16	19,148.00	Reconciled
366565	07-APR-16	PACIFIC GAS AND ELECTRIC COMPANY	22.53	13-APR-16	22.53	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 5
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366566		07-APR-16	PAPER DEPOT DOCUMENT DESTRUCTION LLC		1,034.00	18-APR-16	1,034.00	Reconciled
366567		07-APR-16	PARK, JONGHYUK		100.00	19-APR-16	100.00	Reconciled
366568		07-APR-16	PARKHOUSE TIRE INC		8,398.29	14-APR-16	8,398.29	Reconciled
366569		07-APR-16	PAULUS ENGINEERING INC		715.53	11-APR-16	715.53	Reconciled
366570		07-APR-16	PERKINELMER HEALTH SCIENCES INC		325.88	11-APR-16	325.88	Reconciled
366571		07-APR-16	PIVOT INTERIORS INC		214.62	11-APR-16	214.62	Reconciled
366572		07-APR-16	PRAXAIR DISTRIBUTION INC		1,439.13	13-APR-16	1,439.13	Reconciled
366573		07-APR-16	PTI SAND & GRAVEL INC		586.83	12-APR-16	586.83	Reconciled
366574		07-APR-16	PURE EFFECT INC		5,955.00	12-APR-16	5,955.00	Reconciled
366575		07-APR-16	RAIN FOR RENT		3,642.37	11-APR-16	3,642.37	Reconciled
366576		07-APR-16	RAININ INSTRUMENT, LLC		397.94	11-APR-16	397.94	Reconciled
366577		07-APR-16	REAL WATER CONSULTANTS INC.		32,232.00	15-APR-16	32,232.00	Reconciled
366578		07-APR-16	RED WING SHOES		9,601.88	11-APR-16	9,601.88	Reconciled
366579		07-APR-16	RINCON TRUCK CENTER INC.		2,449.14	11-APR-16	2,449.14	Reconciled
366580		07-APR-16	RINGCLEAR LLC		101.04	11-APR-16	101.04	Reconciled
366581		07-APR-16	RMC WATER AND ENVIRONMENT		6,182.50	11-APR-16	6,182.50	Reconciled
366582		07-APR-16	SAFETY-KLEEN SYSTEMS, INC		1,614.56	13-APR-16	1,614.56	Reconciled
366583		07-APR-16	SAGE HILL SCHOOL		1,557.90	11-APR-16	1,557.90	Reconciled
366584		07-APR-16	SANDERS PAVING INC		13,122.00	14-APR-16	13,122.00	Reconciled
366585		07-APR-16	SANTA ANA BLUE PRINT		17.92	13-APR-16	17.92	Reconciled
366586		07-APR-16	SANTA MARGARITA FORD		47.81	11-APR-16	47.81	Reconciled
366587		07-APR-16	SANTA MARGARITA FORD		210.97	11-APR-16	210.97	Reconciled
366588		07-APR-16	SCAP		10,114.00	26-APR-16	10,114.00	Reconciled
366589		07-APR-16	SCHINDLER ELEVATOR CORPORATION		180.14	12-APR-16	180.14	Reconciled
366590		07-APR-16	SEAL ANALYTICAL INC		808.46	15-APR-16	808.46	Reconciled
366591		07-APR-16	SHERWIN WILLIAMS COMPANY		421.20	13-APR-16	421.20	Reconciled
366592		07-APR-16	SIRIUS COMPUTER SOLUTIONS INC		3,348.30	14-APR-16	3,348.30	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 6

Bank Account Currency: USD (US Dollar)
 Payment Type: All

Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366593		07-APR-16	SOFTWAREONE INC		247.05	12-APR-16	247.05	Reconciled
366594		07-APR-16	SONG, LEI		19.08	22-APR-16	19.08	Reconciled
366595		07-APR-16	SOUTHERN CALIFORNIA EDISON COMPANY		497,744.37	11-APR-16	497,744.37	Reconciled
366596		07-APR-16	SOUTHERN COUNTIES LUBRICANTS LLC		1,491.11	12-APR-16	1,491.11	Reconciled
366597		07-APR-16	SOUTHLAND WATER TECHNOLOGIES LLC		1,877.00	18-APR-16	1,877.00	Reconciled
366598		07-APR-16	STANTEC CONSULTING SERVICES INC.		39,184.50	14-APR-16	39,184.50	Reconciled
366599		07-APR-16	TETRA TECH, INC		13,334.37	14-APR-16	13,334.37	Reconciled
366600		07-APR-16	THE FURMAN GROUP, INC.		12,685.00			Negotiable
366601		07-APR-16	THYSSENKRUPP ELEVATOR CORPORATION		359.28	12-APR-16	359.28	Reconciled
366602		07-APR-16	TRENCH SHORING COMPANY		25.00	13-APR-16	25.00	Reconciled
366603		07-APR-16	TRI COUNTY PUMP COMPANY		13,800.00	14-APR-16	13,800.00	Reconciled
366604		07-APR-16	TRUCPARCO		2,478.38	19-APR-16	2,478.38	Reconciled
366605		07-APR-16	TUSTIN TOYOTA		121.76	12-APR-16	121.76	Reconciled
366606		07-APR-16	U.S. HEALTHWORKS MEDICAL GROUP, P.C.		210.00	11-APR-16	210.00	Reconciled
366607		07-APR-16	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA		1,143.00	14-APR-16	1,143.00	Reconciled
366608		07-APR-16	UNITED STATES POST OFFICE		27,083.33	14-APR-16	27,083.33	Reconciled
366609		07-APR-16	URS CORPORATION		145,479.11	18-APR-16	145,479.11	Reconciled
366610		07-APR-16	USA BLUEBOOK		201.74	13-APR-16	201.74	Reconciled
366611		07-APR-16	VA CONSULTING, INC		8,220.30	18-APR-16	8,220.30	Reconciled
366612		07-APR-16	VERIZON CALIFORNIA INC		274.74	18-APR-16	274.74	Reconciled
366613		07-APR-16	VERIZON CALIFORNIA INC		38.01	15-APR-16	38.01	Reconciled
366614		07-APR-16	VERIZON WIRELESS SERVICES LLC		1,462.49	14-APR-16	1,462.49	Reconciled
366615		07-APR-16	VRIDE INC		10,755.00	11-APR-16	10,755.00	Reconciled
366616		07-APR-16	VWR INTERNATIONAL, LLC		1,250.85	12-APR-16	1,250.85	Reconciled
366617		07-APR-16	WALTERS WHOLESALE ELECTRIC		22,077.27	15-APR-16	22,077.27	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 7
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366618		07-APR-16	WANG, HAIYAN		48.64	11-APR-16	48.64	Reconciled
366619		07-APR-16	WASTE MANAGEMENT OF ORANGE COUNTY		4,382.83	12-APR-16	4,382.83	Reconciled
366620		07-APR-16	WATERSMART SOFTWARE, INC		17,974.42	15-APR-16	17,974.42	Reconciled
366621		07-APR-16	WAXIE'S ENTERPRISES, INC		2,253.67	12-APR-16	2,253.67	Reconciled
366622		07-APR-16	WEST COAST SAFETY SUPPLY INC		116.94	21-APR-16	116.94	Reconciled
366623		07-APR-16	WESTAMERICA COMMUNICATIONS, INC.		110.16	11-APR-16	110.16	Reconciled
366624		07-APR-16	WESTERN EXTERMINATOR COMPANY		49.00	20-APR-16	49.00	Reconciled
366625		07-APR-16	WIN-911 SOFTWARE		3,005.00	18-APR-16	3,005.00	Reconciled
366626		07-APR-16	YORKE ENGINEERING LLC		3,076.30	14-APR-16	3,076.30	Reconciled
366627		07-APR-16	YSI, INC		347.69	11-APR-16	347.69	Reconciled
366628		07-APR-16	ZEBRON CONTRACTING INC		64,750.00	25-APR-16	64,750.00	Reconciled
366629		07-APR-16	ORANGE COUNTY FIREIRVINE AUTHORITY		1,410.00	13-APR-16	1,410.00	Reconciled
366630		13-APR-16	FORESITE ESCROW, INC.	BARDEEN PT/PVID	100,000.00	15-APR-16	100,000.00	Reconciled
366631		14-APR-16	Paz, Alfonso III		195.00	18-APR-16	195.00	Reconciled
366632		14-APR-16	Mossbarger, Anthony J (Tony)		16.70	14-APR-16	16.70	Reconciled
366633		14-APR-16	Kalinsky, Arseny		255.00	25-APR-16	255.00	Reconciled

366634	14-APR-16	(Arseny) Hall, Darrin E (Darrin)	43.00	25-APR-16	43.00	Reconciled
366635	14-APR-16	Ronin, Gretchen C (Gretchen)	137.70	18-APR-16	137.70	Reconciled
366636	14-APR-16	Swift, Ian P (Ian)	49.66	15-APR-16	49.66	Reconciled
366637	14-APR-16	Moeder, Jacob J (Jacob)	35.00			Negotiable
366638	14-APR-16	Hesch, Jessee j	139.32			Negotiable
366639	14-APR-16	Perez, Jesus J (Jesus)	25.92			Negotiable
366640	14-APR-16	Tettemer, John M (Mark)	23.22			Negotiable
366641	14-APR-16	McGehee, Joseph M (Joe)	168.48	21-APR-16	168.48	Reconciled
366642	14-APR-16	Cortez, Malcolm A (Malcolm)	32.40			Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 8
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366643		14-APR-16	Bennett, Ray R (Ray)		180.24	25-APR-16	180.24	Reconciled
366644		14-APR-16	Sitzler, Roberta K (Roberta)		95.00	18-APR-16	95.00	Reconciled
366645		14-APR-16	Fournier, Tanja L (Tanja)		110.26	14-APR-16	110.26	Reconciled
366646		14-APR-16	CANON SOLUTIONS AMERICA, INC.	LOS ANGELES	7,687.49	18-APR-16	7,687.49	Reconciled
366647		14-APR-16	ADVANCED CALIBRATION DESIGNS INC		785.00	21-APR-16	785.00	Reconciled
366648		14-APR-16	AIRGAS, INC.		620.60	18-APR-16	620.60	Reconciled
366649		14-APR-16	ALL STAR GLASS		473.54	18-APR-16	473.54	Reconciled
366650		14-APR-16	ALLIANCE RESOURCE CONSULTING LLC		27,000.00	20-APR-16	27,000.00	Reconciled
366651		14-APR-16	ALPHA TRAFFIC SERVICES, INC.		570.00	19-APR-16	570.00	Reconciled
366652		14-APR-16	AM CONSERVATION GROUP, INC.		6,185.99	18-APR-16	6,185.99	Reconciled
366653		14-APR-16	AMERICAN TRUCK & TRAILER BODY SANTA ANA LLC		4,315.02	26-APR-16	4,315.02	Reconciled
366654		14-APR-16	ANTHEM BLUE CROSS		2,012.80	19-APR-16	2,012.80	Reconciled
366655		14-APR-16	ANTHONY N. LARSEN		400.00	27-APR-16	400.00	Reconciled
366656		14-APR-16	ANTHONY SUFFREDINI		5,200.00	18-APR-16	5,200.00	Reconciled
366657		14-APR-16	ARCADIS U.S., INC.		74,708.24	21-APR-16	74,708.24	Reconciled
366658		14-APR-16	AT&T		1,688.36	19-APR-16	1,688.36	Reconciled
366659		14-APR-16	B & B METALS, INC.		379.08	21-APR-16	379.08	Reconciled
366660		14-APR-16	BANK OF NEW YORK MELLON TRUST COMPANY NA		1,425.00	19-APR-16	1,425.00	Reconciled
366661		14-APR-16	BATTERY SPECIALTIES		4,182.40	22-APR-16	4,182.40	Reconciled
366662		14-APR-16	BIGWIG MONSTER, LLC		7,650.00	18-APR-16	7,650.00	Reconciled
366663		14-APR-16	BIOMERIEUX INC		395.05	18-APR-16	395.05	Reconciled
366664		14-APR-16	BORCHARD SURVEYING & MAPPING, INC.		7,317.50	21-APR-16	7,317.50	Reconciled
366665		14-APR-16	BTF PRECISE MICROBIOLOGY INC.		525.20	19-APR-16	525.20	Reconciled
366666		14-APR-16	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		237.00	18-APR-16	237.00	Reconciled
366667		14-APR-16	C WELLS PIPELINE MATERIALS INC		8,475.97	21-APR-16	8,475.97	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 9
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366668		14-APR-16	CALIFORNIA BARRICADE INC		4,209.50	19-APR-16	4,209.50	Reconciled
366669		14-APR-16	CANON SOLUTIONS AMERICA, INC.		10,186.63	20-APR-16	10,186.63	Reconciled
366670		14-APR-16	CAPTIVE AUDIENCE MARKETING INC.		85.32	19-APR-16	85.32	Reconciled
366671		14-APR-16	CARL WARREN & CO		568.00	18-APR-16	568.00	Reconciled
366672		14-APR-16	CDW GOVERNMENT LLC		101.90	18-APR-16	101.90	Reconciled
366673		14-APR-16	CHEMTREC		975.00	18-APR-16	975.00	Reconciled
366674		14-APR-16	CITY OF IRVINE		202.18			Negotiable
366675		14-APR-16	CITY OF IRVINE		3,538.24	18-APR-16	3,538.24	Reconciled

366676	14-APR-16	CITY OF SANTA ANA	134.69	18-APR-16	134.69	Reconciled
366677	14-APR-16	CLEAN ENERGY	1,552.58	20-APR-16	1,552.58	Reconciled
366678	14-APR-16	CONTROLLED KEY SYSTEMS INC	278.18	20-APR-16	278.18	Reconciled
366679	14-APR-16	CORELOGIC INC	168.00	18-APR-16	168.00	Reconciled
366680	14-APR-16	CR & R INCORPORATED	135.65	18-APR-16	135.65	Reconciled
366681	14-APR-16	CUMMINS PACIFIC, LLC	816.35	18-APR-16	816.35	Reconciled
366682	14-APR-16	DATA CLEAN CORPORATION	526.50	19-APR-16	526.50	Reconciled
366683	14-APR-16	DEACON, JANET	2,506.35			Negotiable
366684	14-APR-16	DILYTICS INC	5,000.00	21-APR-16	5,000.00	Reconciled
366685	14-APR-16	DUDEK	5,070.00	20-APR-16	5,070.00	Reconciled
366686	14-APR-16	E.J. MEYER COMPANY, INC.	31,135.13	20-APR-16	31,135.13	Reconciled
366687	14-APR-16	E.J. MEYER COMPANY, INC.	591,567.41	20-APR-16	591,567.41	Reconciled
366688	14-APR-16	EAGLE PRINT DYNAMICS	1,230.12	18-APR-16	1,230.12	Reconciled
366689	14-APR-16	EDUCATION & TRAINING SERVICES, LLC	24,950.00	27-APR-16	24,950.00	Reconciled
366690	14-APR-16	EHS INTERNATIONAL, INC	1,620.00	18-APR-16	1,620.00	Reconciled
366691	14-APR-16	ELECTRABOND	355.00	20-APR-16	355.00	Reconciled
366692	14-APR-16	EMPLOYEE BENEFIT SPECIALIST, INC	1,115.00	19-APR-16	1,115.00	Reconciled
366693	14-APR-16	ENDRESS AND HAUSER INC	4,192.42	18-APR-16	4,192.42	Reconciled
366694	14-APR-16	EXECUTIVE LIGHTING & ELECTRIC	858.25	19-APR-16	858.25	Reconciled
366695	14-APR-16	FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC.	9,500.00	21-APR-16	9,500.00	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 10
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366696		14-APR-16	FARRELL & ASSOCIATES		81.70	25-APR-16	81.70	Reconciled
366697		14-APR-16	FEDEX		755.55	19-APR-16	755.55	Reconciled
366698		14-APR-16	FIRST CHOICE SERVICES		508.80	20-APR-16	508.80	Reconciled
366699		14-APR-16	FISHER SCIENTIFIC COMPANY LLC		1,190.25	18-APR-16	1,190.25	Reconciled
366700		14-APR-16	FITCH RATINGS, INC.		7,000.00	20-APR-16	7,000.00	Reconciled
366701		14-APR-16	FLEET SOLUTIONS LLC		4,554.70	19-APR-16	4,554.70	Reconciled
366702		14-APR-16	FRED EMMERT		750.00	18-APR-16	750.00	Reconciled
366703		14-APR-16	FUSCOE ENGINEERING, INC.		1,203.00	18-APR-16	1,203.00	Reconciled
366704		14-APR-16	GARCIA-PAGE, MARGARITA		134.48	20-APR-16	134.48	Reconciled
366705		14-APR-16	GENERAL PUMP COMPANY INC		9,405.00	18-APR-16	9,405.00	Reconciled
366706		14-APR-16	GHD INC.		49,036.40	21-APR-16	49,036.40	Reconciled
366707		14-APR-16	GRAINGER		697.58	18-APR-16	697.58	Reconciled
366708		14-APR-16	GRAYBAR ELECTRIC COMPANY		16,063.08	18-APR-16	16,063.08	Reconciled
366709		14-APR-16	HABITAT RESTORATION SCIENCES, INC.		1,974.98	20-APR-16	1,974.98	Reconciled
366710		14-APR-16	HACH COMPANY		2,693.45	18-APR-16	2,693.45	Reconciled
366711		14-APR-16	HARRINGTON INDUSTRIAL PLASTICS LLC		8,482.51	18-APR-16	8,482.51	Reconciled
366712		14-APR-16	HASLER INC.		111.38	20-APR-16	111.38	Reconciled
366713		14-APR-16	HDR ENGINEERING INC		26,034.10	21-APR-16	26,034.10	Reconciled
366714		14-APR-16	HELP/SYSTEMS, LLC		25,022.00	21-APR-16	25,022.00	Reconciled
366715		14-APR-16	HELPMATES STAFFING SERVICES		6,277.94	18-APR-16	6,277.94	Reconciled
366716		14-APR-16	HILL BROTHERS CHEMICAL COMPANY		4,087.60	18-APR-16	4,087.60	Reconciled
366717		14-APR-16	HOME DEPOT USA INC		88.71	25-APR-16	88.71	Reconciled
366718		14-APR-16	IBM CORPORATION		1,179.00	18-APR-16	1,179.00	Reconciled
366719		14-APR-16	IRVINE PIPE & SUPPLY INC		1,256.99	18-APR-16	1,256.99	Reconciled
366720		14-APR-16	IRWD-PETTY CASH CUSTODIAN		1,296.16	15-APR-16	1,296.16	Reconciled
366721		14-APR-16	JOHNSON PLASTICS		683.88	18-APR-16	683.88	Reconciled
366722		14-APR-16	JUNG-CHE SHIH, JENNY		450.00			Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 11
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)

Payment Type: All

Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status	
Payment Document : IRWD CHECK									
366723		14-APR-16	KAYUGA SOLUTION INC		28,132.50	25-APR-16	28,132.50	Reconciled	
366724		14-APR-16	KELLEY BLUE BOOK, INC.		98.00	18-APR-16	98.00	Reconciled	
366725		14-APR-16	KOELLER NEBEKER CARLSON & HALUCK, LLP		500.00	18-APR-16	500.00	Reconciled	
366726		14-APR-16	L & S CONSTRUCTION INC		2,474.41			Negotiable	
366727		14-APR-16	LA HABRA FENCE COMPANY INC		1,282.00	19-APR-16	1,282.00	Reconciled	
366728		14-APR-16	LANDCARE HOLDINGS, INC.		26,222.43	22-APR-16	26,222.43	Reconciled	
366729		14-APR-16	LIM, ERIC		19.15	18-APR-16	19.15	Reconciled	
366730		14-APR-16	MC FADDEN-DALE INDUSTRIAL		57.77	19-APR-16	57.77	Reconciled	
366731		14-APR-16	MC MASTER CARR SUPPLY CO		151.02	18-APR-16	151.02	Reconciled	
366732		14-APR-16	MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED		17,740.03	21-APR-16	17,740.03	Reconciled	
366733		14-APR-16	MICHAEL BAKER INTERNATIONAL, INC.		1,136.43	18-APR-16	1,136.43	Reconciled	
366734		14-APR-16	MICHAELS, ROSS & COLE, LTD.		6,660.00	18-APR-16	6,660.00	Reconciled	
366735		14-APR-16	MORRISROE, EDWARD		428.53	21-APR-16	428.53	Reconciled	
366736		14-APR-16	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		1,296.00	18-APR-16	1,296.00	Reconciled	
366737		14-APR-16	MYERS & SONS HI- WAY SAFETY, INC.		2,587.68	18-APR-16	2,587.68	Reconciled	
366738		14-APR-16	NATIONAL READY MIXED CONCRETE CO.		1,398.60	18-APR-16	1,398.60	Reconciled	
366739		14-APR-16	NCH CORPORATION		665.09	19-APR-16	665.09	Reconciled	
366740		14-APR-16	NORTHWOOD PLACE APTS		5.71	25-APR-16	5.71	Reconciled	
366741		14-APR-16	OCEAN BLUE ENVIRONMENTAL SERVICES INC		4,159.30	21-APR-16	4,159.30	Reconciled	
366742		14-APR-16	OLIN CORPORATION		10,801.22	21-APR-16	10,801.22	Reconciled	
366743		14-APR-16	ONESOURCE DISTRIBUTORS LLC		943.74	18-APR-16	943.74	Reconciled	
366744		14-APR-16	ORANGE COUNTY FIRE PROTECTION		725.00	19-APR-16	725.00	Reconciled	
IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10									
BANK: Bank of America N.A.			Branch : Los Angeles			Account: Checking AP and PR			Page: 12
Bank Account Currency: USD (US Dollar)			Payment Currency: USD (US Dollar)			Display Supplier Address: No			
Payment Type: All									

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366745		14-APR-16	ORANGE COUNTY TREASURER		66.95	18-APR-16	66.95	Reconciled
366746		14-APR-16	ORANGE COUNTY VECTOR CONTROL DISTRICT		3,263.45	22-APR-16	3,263.45	Reconciled
366747		14-APR-16	ORANGE COUNTY WATER DISTRICT		2,102.00	18-APR-16	2,102.00	Reconciled
366748		14-APR-16	OUTFRONT MEDIA LLC		19,148.00	25-APR-16	19,148.00	Reconciled
366749		14-APR-16	OUTSOURCE TECHNICAL LLC		69,430.00	20-APR-16	69,430.00	Reconciled
366750		14-APR-16	PACIFIC COAST BOLT CORP		605.66	19-APR-16	605.66	Reconciled
366751		14-APR-16	PACIFIC SURVEYS, LLC		1,276.51	18-APR-16	1,276.51	Reconciled
366752		14-APR-16	PAULUS ENGINEERING INC		63,260.26	20-APR-16	63,260.26	Reconciled
366753		14-APR-16	PRAXAIR DISTRIBUTION INC		224.22	18-APR-16	224.22	Reconciled
366754		14-APR-16	QUINN COMPANY		332.85	18-APR-16	332.85	Reconciled
366755		14-APR-16	R.F. MACDONALD CO.		4,153.89	18-APR-16	4,153.89	Reconciled
366756		14-APR-16	RADWELL INTERNATIONAL INC		77.48	18-APR-16	77.48	Reconciled
366757		14-APR-16	RAINBOW DISPOSAL CO INC		325.21	20-APR-16	325.21	Reconciled
366758		14-APR-16	RAM AIR ENGINEERING INC		12,270.48	21-APR-16	12,270.48	Reconciled
366759		14-APR-16	RANCHO MONTEREY APTS		418.38	25-APR-16	418.38	Reconciled
366760		14-APR-16	RANCHO SANTA FE APTS		112.62	25-APR-16	112.62	Reconciled
366761		14-APR-16	ROSEDALE - RIO		31,611.22	25-APR-16	31,611.22	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
366762	14-APR-16		BRAVO WATER STORAGE DISTRICT ROTO ROOTER SERVICE AND PLUMBING		800.00	18-APR-16	800.00	Reconciled
366763	14-APR-16		SCHROEDAR, LORRI		1,037.02	20-APR-16	1,037.02	Reconciled
366764	14-APR-16		SECURTEC DISTRICT PATROL, INC.		1,600.00			Negotiable
366765	14-APR-16		SERRANO APARTMENTS		171.29	25-APR-16	171.29	Reconciled
366766	14-APR-16		SHAMROCK SUPPLY CO INC		185.20	18-APR-16	185.20	Reconciled
366767	14-APR-16		SIMI VALLEY LANDFILL AND RECYCLING CENTER		431.95	18-APR-16	431.95	Reconciled

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All

Payment Register For 01-APR-16 To 30-APR-16
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366768	14-APR-16		SIRIUS COMPUTER SOLUTIONS INC		131,798.16	22-APR-16	131,798.16	Reconciled
366769	14-APR-16		SITMATIC		724.56	20-APR-16	724.56	Reconciled
366770	14-APR-16		SOLANA APTS		42.71	25-APR-16	42.71	Reconciled
366771	14-APR-16		SOMERSET APARTMENTS		63.33	25-APR-16	63.33	Reconciled
366772	14-APR-16		SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		2,461.34	21-APR-16	2,461.34	Reconciled
366773	14-APR-16		SOUTH COAST WATER CO.		40.00	18-APR-16	40.00	Reconciled
366774	14-APR-16		SOUTH COAST WATER DISTRICT		2,519.00	18-APR-16	2,519.00	Reconciled
366775	14-APR-16		SOUTHERN CALIFORNIA EDISON COMPANY		14,398.14	18-APR-16	14,398.14	Reconciled
366776	14-APR-16		SOUTHERN CALIFORNIA SECURITY CENTER, INC.		639.45	20-APR-16	639.45	Reconciled
366777	14-APR-16		SPARKLETTES		397.76	21-APR-16	397.76	Reconciled
366778	14-APR-16		STANTEC CONSULTING SERVICES INC.		6,879.00	18-APR-16	6,879.00	Reconciled
366779	14-APR-16		STATE WATER RESOURCES CONTROL BOARD		51,368.22	21-APR-16	51,368.22	Reconciled
366780	14-APR-16		STERILIZER TECHNICAL SPECIALISTS LLC		473.50	18-APR-16	473.50	Reconciled
366781	14-APR-16		STERIS CORPORATION		4,675.87	18-APR-16	4,675.87	Reconciled
366782	14-APR-16		STEVEN A. CARLSON		1,248.48			Voided
366783	14-APR-16		STRADLING YOCCA CARLSON & RAUTH		202.50	19-APR-16	202.50	Reconciled
366784	14-APR-16		SUSAN A. SIROTA		4,195.00	19-APR-16	4,195.00	Reconciled
366785	14-APR-16		TAIT ENVIRONMENTAL SERVICES INC		1,067.60	18-APR-16	1,067.60	Reconciled
366786	14-APR-16		TEKDRAULICS		40,873.76	22-APR-16	40,873.76	Reconciled
366787	14-APR-16		TESTAMERICA LABORATORIES, INC		192.15	20-APR-16	192.15	Reconciled
366788	14-APR-16		THE GAS COMPANY		857.88	25-APR-16	857.88	Reconciled
366789	14-APR-16		THE PROVIDER FUND		168.61			Negotiable
366790	14-APR-16		TRI COUNTY PUMP COMPANY		12,380.00	20-APR-16	12,380.00	Reconciled
366791	14-APR-16		TROPICAL PLAZA NURSERY INC		219.05	18-APR-16	219.05	Reconciled

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All

Payment Register For 01-APR-16 To 30-APR-16
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366792	14-APR-16		TURTLE ROCK CANYON APTS		62.71	25-APR-16	62.71	Reconciled
366793	14-APR-16		TURTLE ROCK VISTA APTS		3,958.89	25-APR-16	3,958.89	Reconciled
366794	14-APR-16		U.S. HEALTHWORKS MEDICAL GROUP, P.C.		820.00	18-APR-16	820.00	Reconciled
366795	14-APR-16		UNITED PARCEL SERVICE INC		50.00	18-APR-16	50.00	Reconciled
366796	14-APR-16		US BANK NAT'L ASSOC N.DAKOTA		11,312.84	22-APR-16	11,312.84	Reconciled
366797	14-APR-16		VULCAN MATERIALS COMPANY		1,307.93	18-APR-16	1,307.93	Reconciled
366798	14-APR-16		WALTERS WHOLESALE		773.93	21-APR-16	773.93	Reconciled

366799	14-APR-16	ELECTRIC WARE MALCOMB	938.36	18-APR-16	938.36	Reconciled
366800	14-APR-16	WAXIE'S ENTERPRISES, INC	1,022.89	15-APR-16	1,022.89	Reconciled
366801	14-APR-16	WESTAMERICA COMMUNICATIONS, INC.	501.32	18-APR-16	501.32	Reconciled
366802	14-APR-16	WIRELESS WATCHDOGS, LLC	480.00	21-APR-16	480.00	Reconciled
366803	14-APR-16	YP LLC	123.50	18-APR-16	123.50	Reconciled
366804	14-APR-16	WESTAMERICA LAKE COMMUNICATIONS, FOREST INC.	16,472.00	20-APR-16	16,472.00	Reconciled
366805	14-APR-16	STEVEN A. CARLSON PURCHASE	4,993.92	26-APR-16	4,993.92	Reconciled
366806	15-APR-16	PERS LONG TERM PASADENA CARE	771.11	21-APR-16	771.11	Reconciled
366807	15-APR-16	CLEARINGHOUSE PHOENIX	477.67	21-APR-16	477.67	Reconciled
366808	15-APR-16	IRWD EMPLOYEE 15600 SC ASSOCIATION	840.00			Negotiable
366809	15-APR-16	ORANGE COUNTY 4601 SHERIFF'S OFFICE JAMBOREE	62.50	25-APR-16	62.50	Reconciled
366810	18-APR-16	JCI JONES CINCINNATI	4,404.40	21-APR-16	4,404.40	Reconciled
366811	18-APR-16	CHEMICALS INC CALIFORNIA DEPT OF3883	1,474.25			Negotiable
366812	18-APR-16	FISH & GAME RUFFIN RD ORANGE COUNTY FIREIRVINE AUTHORITY	458.70	27-APR-16	458.70	Reconciled
366813	19-APR-16	FORESITE ESCROW, BARDEEN INC. PT/PVID	100,000.00	22-APR-16	100,000.00	Reconciled
366814	21-APR-16	ORANGE COUNTY FOUNTAIN SANITATION VALLEY DISTRICT	3,140.00	25-APR-16	3,140.00	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 15
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366815		21-APR-16	3M COMPANY		408.89	26-APR-16	408.89	Reconciled
366816		21-APR-16	A.D. WILSON, INC.		733.87			Negotiable
366817		21-APR-16	ADS LLC		1,936.50	25-APR-16	1,936.50	Reconciled
366818		21-APR-16	AIR TECHNOLOGY LABORATORIES		503.00			Negotiable
366819		21-APR-16	ALHAMBRA FOUNDRY CO LTD		952.09	25-APR-16	952.09	Reconciled
366820		21-APR-16	ALHAZNI, ANWAR		22.59			Negotiable
366821		21-APR-16	ALKEMA SOLUTIONS		10,276.38			Negotiable
366822		21-APR-16	ALSTON & BIRD LLP		1,337.50	25-APR-16	1,337.50	Reconciled
366823		21-APR-16	AM CONSERVATION GROUP, INC.		1,387.17	25-APR-16	1,387.17	Reconciled
366824		21-APR-16	APCO GRAPHICS INC		108.00	25-APR-16	108.00	Reconciled
366825		21-APR-16	ARCADIS U.S., INC.		6,514.58	25-APR-16	6,514.58	Reconciled
366826		21-APR-16	AT&T		2,244.84	26-APR-16	2,244.84	Reconciled
366827		21-APR-16	AT&T		3,649.06	26-APR-16	3,649.06	Reconciled
366828		21-APR-16	AT&T		48.51	26-APR-16	48.51	Reconciled
366829		21-APR-16	ATHENS SERVICES		7,246.62			Negotiable
366830		21-APR-16	AUTOZONE PARTS, INC.		461.85	25-APR-16	461.85	Reconciled
366831		21-APR-16	BASCHSHI, BASHIR A		50.00	25-APR-16	50.00	Reconciled
366832		21-APR-16	BATTERIES PLUS AND BATTERIES PLUS BULBS		440.69	25-APR-16	440.69	Reconciled
366833		21-APR-16	BDC SPECIAL WASTE		207.20	25-APR-16	207.20	Reconciled
366834		21-APR-16	BIGWIG MONSTER, LLC		3,000.00	27-APR-16	3,000.00	Reconciled
366835		21-APR-16	BILL'S SWEEPING SERVICE INC		460.00	26-APR-16	460.00	Reconciled
366836		21-APR-16	BIOMAGIC INC		11,204.36			Negotiable
366837		21-APR-16	BOWIE, ARNESON, WILES & GIANNONE		34,246.49			Negotiable
366838		21-APR-16	BOYD & ASSOCIATES		135.00	25-APR-16	135.00	Reconciled
366839		21-APR-16	BROOKFIELD RESIDENTIAL		933.39	27-APR-16	933.39	Reconciled
366840		21-APR-16	C WELLS PIPELINE MATERIALS INC		85,640.50			Negotiable
366841		21-APR-16	CALIFORNIA BARRICADE INC		1,780.00	26-APR-16	1,780.00	Reconciled
366842		21-APR-16	CALIFORNIA PACIFIC HOMES		1,693.28			Negotiable
366843		21-APR-16	CANON FINANCIAL SERVICES, INC		9,617.97	25-APR-16	9,617.97	Reconciled
366844		21-APR-16	CHAVEZ, RICARDO		62.18			Negotiable
366845		21-APR-16	CHEM TECH INTERNATIONAL INC		3,379.20			Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 16
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status	
Payment Document : IRWD CHECK									
366846		21-APR-16	CITY OF TUSTIN		555.09	25-APR-16	555.09	Reconciled	
366847		21-APR-16	CIVILSOURCE, INC.		28,035.00			Negotiable	
366848		21-APR-16	CLARK, TOM		231.35	27-APR-16	231.35	Reconciled	
366849		21-APR-16	CNC ENGINEERING		5,891.50	26-APR-16	5,891.50	Reconciled	
366850		21-APR-16	CONSOLIDATED CONTRACTING SERVICES, INC.		490.97			Negotiable	
366851		21-APR-16	CONTROLLED KEY SYSTEMS INC		2,695.84	27-APR-16	2,695.84	Reconciled	
366852		21-APR-16	COX COMMUNICATIONS, INC.		109.00	25-APR-16	109.00	Reconciled	
366853		21-APR-16	CREDENTIAL CHECK CORPORATION		2,104.43	25-APR-16	2,104.43	Reconciled	
366854		21-APR-16	CREW, INC.		356.15			Negotiable	
366855		21-APR-16	CROCE, CRISTIN		34.32	25-APR-16	34.32	Reconciled	
366856		21-APR-16	D & G SIGNS		81.00	27-APR-16	81.00	Reconciled	
366857		21-APR-16	DATA CLEAN CORPORATION		526.50	26-APR-16	526.50	Reconciled	
366858		21-APR-16	DEE JASPAR & ASSOCIATES, INC.		17,127.33			Negotiable	
366859		21-APR-16	DIRECTV INC		115.98	25-APR-16	115.98	Reconciled	
366860		21-APR-16	DISCOUNT COURIER SERVICE		64.29	25-APR-16	64.29	Reconciled	
366861		21-APR-16	DONALD RAY GLASCOCK		625.00			Negotiable	
366862		21-APR-16	EASTON, PHIL		5,925.75	25-APR-16	5,925.75	Reconciled	
366863		21-APR-16	ELITE EQUIPMENT, INC.		206.97			Negotiable	
366864		21-APR-16	ENDRESS AND HAUSER INC		2,031.81	27-APR-16	2,031.81	Reconciled	
366865		21-APR-16	ENVIRONMENTAL RESOURCE ASSOCIATES		3,095.21	26-APR-16	3,095.21	Reconciled	
366866		21-APR-16	ENVIRONMENTAL SCIENCE ASSOCIATES		1,496.09	26-APR-16	1,496.09	Reconciled	
366867		21-APR-16	EVANS-HYDRO INC		26,320.80			Negotiable	
366868		21-APR-16	EVISTA INDUSTRIES, INC.		395.00	26-APR-16	395.00	Reconciled	
366869		21-APR-16	EXECUTIVE LIGHTING & ELECTRIC		851.98	26-APR-16	851.98	Reconciled	
366870		21-APR-16	FARRELL & ASSOCIATES		213.34	27-APR-16	213.34	Reconciled	
366871		21-APR-16	FEDEX		504.00	27-APR-16	504.00	Reconciled	
366872		21-APR-16	FISERV		16,902.40	26-APR-16	16,902.40	Reconciled	
IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10									
BANK: Bank of America N.A.			Branch : Los Angeles			Account: Checking AP and PR			Page: 17
Bank Account Currency: USD (US Dollar)			Payment Currency: USD (US Dollar)			Display Supplier Address: No			
Payment Type: All									

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366873		21-APR-16	FISHER SCIENTIFIC COMPANY LLC		268.92	25-APR-16	268.92	Reconciled
366874		21-APR-16	FLEET SOLUTIONS LLC		215.10	26-APR-16	215.10	Reconciled
366875		21-APR-16	FOOTHILLS SENTRY INC		750.00			Negotiable
366876		21-APR-16	FUGATE, MICHELL		39.59	25-APR-16	39.59	Reconciled
366877		21-APR-16	FULLER TRUCK ACCESSORIES		846.72	25-APR-16	846.72	Reconciled
366878		21-APR-16	GANAHL LUMBER CO.		47.49	27-APR-16	47.49	Reconciled
366879		21-APR-16	GARZA INDUSTRIES, INC		1,295.58	25-APR-16	1,295.58	Reconciled
366880		21-APR-16	GEIGER BROS		1,849.61	25-APR-16	1,849.61	Reconciled
366881		21-APR-16	GOYAL, NAVEEN		287.32			Negotiable
366882		21-APR-16	GRAINGER		5,833.37	25-APR-16	5,833.37	Reconciled
366883		21-APR-16	GRAYBAR ELECTRIC COMPANY		1,547.11	25-APR-16	1,547.11	Reconciled
366884		21-APR-16	HAAKER EQUIPMENT COMPANY		1,903.07	27-APR-16	1,903.07	Reconciled
366885		21-APR-16	HABITAT RESTORATION SCIENCES, INC.		2,103.00	26-APR-16	2,103.00	Reconciled
366886		21-APR-16	HACH COMPANY		663.75	25-APR-16	663.75	Reconciled
366887		21-APR-16	HALCYON ELECTRIC INC		5,500.00	27-APR-16	5,500.00	Reconciled
366888		21-APR-16	HARMSWORTH ASSOCIATES		4,363.00			Negotiable
366889		21-APR-16	HDR ENGINEERING INC		134,267.55			Negotiable
366890		21-APR-16	HELPMATES STAFFING SERVICES		14,929.16	27-APR-16	14,929.16	Reconciled
366891		21-APR-16	HILL BROTHERS CHEMICAL COMPANY		6,524.45	25-APR-16	6,524.45	Reconciled
366892		21-APR-16	HOME DEPOT USA INC		1,064.55			Negotiable

366893	21-APR-16	HONG, SUNGHYUN		31.24			Negotiable
366894	21-APR-16	IDEXX DISTRIBUTION, INC		7,811.89	25-APR-16	7,811.89	Reconciled
366895	21-APR-16	INDUSTRIAL METAL SUPPLY CO		104.02	25-APR-16	104.02	Reconciled
366896	21-APR-16	INNERLINE ENGINEERING		3,050.00			Negotiable
366897	21-APR-16	INTERNATIONAL RISK MANAGEMENT INSTITUTE, INC.		374.92	26-APR-16	374.92	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 18
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366898		21-APR-16	IRON MOUNTAIN INFORMATION MANAGEMENT INC		1,941.86	27-APR-16	1,941.86	Reconciled
366899		21-APR-16	IRVINE PIPE & SUPPLY INC		300.59	25-APR-16	300.59	Reconciled
366900		21-APR-16	JAIN, MICHELLE		443.40	25-APR-16	443.40	Reconciled
366901		21-APR-16	KASSIR, ANTHONY		2,569.24			Negotiable
366902		21-APR-16	KENT & AMY DAHLBERG		6,954.00	26-APR-16	6,954.00	Reconciled
366903		21-APR-16	KIM, SCEOUNGGIE		698.03	25-APR-16	698.03	Reconciled
366904		21-APR-16	KIM, SOON TAE		2,250.00	26-APR-16	2,250.00	Reconciled
366905		21-APR-16	KLEINFELDER, INC.		13,550.44			Negotiable
366906		21-APR-16	KOELLER NEBEKER CARLSON & HALUCK, LLP		1,490.91	25-APR-16	1,490.91	Reconciled
366907		21-APR-16	KOLAR, RANDALL		215.76	26-APR-16	215.76	Reconciled
366908		21-APR-16	LA HABRA FENCE COMPANY INC		32,732.00	27-APR-16	32,732.00	Reconciled
366909		21-APR-16	LAI, LING		9.99			Negotiable
366910		21-APR-16	LANDCARE HOLDINGS, INC.		1,960.58	25-APR-16	1,960.58	Reconciled
366911		21-APR-16	LEE, DAE HOON		76.99			Negotiable
366912		21-APR-16	LIGHTHOUSE JUMBO VISION		41.90			Negotiable
366913		21-APR-16	LUBRICATION ENGINEERS, INC.		1,073.52	25-APR-16	1,073.52	Reconciled
366914		21-APR-16	MARINA LANDSCAPE MAINTENANCE, INC.		6,152.82			Negotiable
366915		21-APR-16	MARVIN GARDENS LLC		164.80	22-APR-16	164.80	Reconciled
366916		21-APR-16	MBC APPLIED ENVIRONMENTAL SCIENCES		1,300.00	25-APR-16	1,300.00	Reconciled
366917		21-APR-16	MC MASTER CARR SUPPLY CO		4,397.72	25-APR-16	4,397.72	Reconciled
366918		21-APR-16	MEGGER		280.31	26-APR-16	280.31	Reconciled
366919		21-APR-16	MENDOZA, ALICIA J		280.31			Negotiable
366920		21-APR-16	MICHAEL BAKER INTERNATIONAL, INC.		375.90	25-APR-16	375.90	Reconciled
366921		21-APR-16	MISSION COMMUNICATIONS LLC		167.36	26-APR-16	167.36	Reconciled
366922		21-APR-16	MOBILE MODULAR MANAGEMENT CORPORATION		972.00	26-APR-16	972.00	Reconciled
366923		21-APR-16	MOULTON NIGUEL WATER DISTRICT		25,000.00	27-APR-16	25,000.00	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 19
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366924		21-APR-16	MUNSEY, STEPHEN		69.69	26-APR-16	69.69	Reconciled
366925		21-APR-16	NATURALWELL, LLC		852.50	25-APR-16	852.50	Reconciled
366926		21-APR-16	NATURES IMAGE INC		791.16	25-APR-16	791.16	Reconciled
366927		21-APR-16	NEWPORT BEACH CHAMBER OF COMMERCE		2,500.00			Negotiable
366928		21-APR-16	NINYO & MOORE		18,989.50	27-APR-16	18,989.50	Reconciled
366929		21-APR-16	NMG GEOTECHNICAL INC		12,501.00			Negotiable
366930		21-APR-16	NORTHWOOD PARK APTS		1,688.29	25-APR-16	1,688.29	Reconciled
366931		21-APR-16	NORTHWOOD PLACE APTS		60.27			Negotiable
366932		21-APR-16	O'NEIL PRODUCT DEVELOPMENT INC		40.40			Negotiable
366933		21-APR-16	OLIN CORPORATION		2,839.33	25-APR-16	2,839.33	Reconciled
366934		21-APR-16	ONESOURCE		9,787.71	25-APR-16	9,787.71	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
366935		21-APR-16	DISTRIBUTORS LLC ORANGE COUNTY AUTO PARTS CO		258.98	25-APR-16	258.98	Reconciled
366936		21-APR-16	ORANGE COUNTY FIRE PROTECTION		1,069.60	27-APR-16	1,069.60	Reconciled
366937		21-APR-16	ORANGE COUNTY TREASURER		609.53	25-APR-16	609.53	Reconciled
366938		21-APR-16	OSTS, INC		6,750.00	26-APR-16	6,750.00	Reconciled
366939		21-APR-16	PACESETTER INVESTMENT CO.		1,423.30	25-APR-16	1,423.30	Reconciled
366940		21-APR-16	PACIFIC EH&S SERVICES, INC.		8,255.19			Negotiable
366941		21-APR-16	PACIFIC TECHNICAL EQUIPMENT AND ENGINEERING, INC.		44,591.04			Negotiable
366942		21-APR-16	PACRIM ENGINEERING INC.		2,812.50	27-APR-16	2,812.50	Reconciled
366943		21-APR-16	PELLETIER & ASSOCIATES, INC.		840.00	25-APR-16	840.00	Reconciled
366944		21-APR-16	PINNACLE CUSTOM HOMES		757.63			Negotiable
366945		21-APR-16	PINNACLE TOWERS LLC		666.04	25-APR-16	666.04	Reconciled
366946		21-APR-16	PIPKIN, KATHY		343.60			Negotiable
366947		21-APR-16	POLLARDWATER.COM		1,280.14	25-APR-16	1,280.14	Reconciled
366948		21-APR-16	POST GRADING COMPANY		669.55	25-APR-16	669.55	Reconciled
366949		21-APR-16	PRAXAIR DISTRIBUTION INC		224.22	25-APR-16	224.22	Reconciled

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 20
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
366950		21-APR-16	PRES-TECH MANUFACTURER'S REPRESENTATIVES, INC.		280.00	26-APR-16	280.00	Reconciled
366951		21-APR-16	PROBOLSKY RESEARCH LLC		16,900.00	27-APR-16	16,900.00	Reconciled
366952		21-APR-16	PTI SAND & GRAVEL INC		1,547.09	26-APR-16	1,547.09	Reconciled
366953		21-APR-16	PUBLIC FINANCIAL MANAGEMENT, INC.		9,338.17	26-APR-16	9,338.17	Reconciled
366954		21-APR-16	PULIDO, ANA		41.42			Negotiable
366955		21-APR-16	RANCHO SANTA FE APTS		1,407.35	25-APR-16	1,407.35	Reconciled
366956		21-APR-16	RANKIN, JAMES		293.42			Negotiable
366957		21-APR-16	RED WING SHOES		1,571.61	25-APR-16	1,571.61	Reconciled
366958		21-APR-16	REED, JAMES D		1,947.00			Negotiable
366959		21-APR-16	RMC WATER AND ENVIRONMENT		10,304.77			Negotiable
366960		21-APR-16	RMS ENGINEERING & DESIGN, INC.		5,375.00	25-APR-16	5,375.00	Reconciled
366961		21-APR-16	ROHAN, NANCY		469.15			Negotiable
366962		21-APR-16	ROUEENFAR ALI AND MITDRA		24.15			Voided
366963		21-APR-16	ROVELLO, FRANK		130.67			Negotiable
366964		21-APR-16	SAFETY-KLEEN SYSTEMS, INC		302.70	25-APR-16	302.70	Reconciled
366965		21-APR-16	SAGE CREEK INVESTORS LLC		883.91			Negotiable
366966		21-APR-16	SANTA ANA BLUE PRINT		2,379.57	26-APR-16	2,379.57	Reconciled
366967		21-APR-16	SANTA CLARA APTS		627.32	25-APR-16	627.32	Reconciled
366968		21-APR-16	SANTA MARGARITA FORD		167.51	25-APR-16	167.51	Reconciled
366969		21-APR-16	SANTA MARGARITA FORD		229.23	25-APR-16	229.23	Reconciled
366970		21-APR-16	SHAMROCK SUPPLY CO INC		147.42	25-APR-16	147.42	Reconciled
366971		21-APR-16	SHEA/BAKER RANCH ASSOCIATES, LLC		71.62			Negotiable
366972		21-APR-16	SIRIUS COMPUTER SOLUTIONS INC		31,410.28			Negotiable
366973		21-APR-16	SMITH, CAROL		376.02	25-APR-16	376.02	Reconciled
366974		21-APR-16	SOLARWINDS, INC		9,800.00			Negotiable
366975		21-APR-16	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		814.52			Negotiable

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 21
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
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Payment Document : IRWD CHECK

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
366976	21-APR-16	21-APR-16	SOUTH COAST WATER CO.		151.68	25-APR-16	151.68	Reconciled
366977	21-APR-16	21-APR-16	SOUTHERN CALIFORNIA EDISON COMPANY		352,026.94	22-APR-16	352,026.94	Reconciled
366978	21-APR-16	21-APR-16	SOUTHERN CALIFORNIA SECURITY CENTER, INC.		90.30	27-APR-16	90.30	Reconciled
366979	21-APR-16	21-APR-16	SOUTHERN COUNTIES LUBRICANTS LLC		394.95	25-APR-16	394.95	Reconciled
366980	21-APR-16	21-APR-16	STANTEC CONSULTING SERVICES INC.		21,990.00			Negotiable
366981	21-APR-16	21-APR-16	STRADLING YOCCA CARLSON & RAUTH		25,000.00	27-APR-16	25,000.00	Reconciled
366982	21-APR-16	21-APR-16	SZETO, STANLEY		151.21	27-APR-16	151.21	Reconciled
366983	21-APR-16	21-APR-16	TENORIO, REENA		40.88			Negotiable
366984	21-APR-16	21-APR-16	THE GAS COMPANY		1,234.32	25-APR-16	1,234.32	Reconciled
366985	21-APR-16	21-APR-16	THE NEW HOME COMPANY		903.88			Negotiable
366986	21-APR-16	21-APR-16	THOMAS HARDER & CO		1,487.50	25-APR-16	1,487.50	Reconciled
366987	21-APR-16	21-APR-16	TOYS "R" US 5638		19.14			Negotiable
366988	21-APR-16	21-APR-16	TRIPAC MARKETING INC		507.10	26-APR-16	507.10	Reconciled
366989	21-APR-16	21-APR-16	TROPICAL PLAZA NURSERY INC		9,477.80	25-APR-16	9,477.80	Reconciled
366990	21-APR-16	21-APR-16	TRUCPARCO		4,167.29			Negotiable
366991	21-APR-16	21-APR-16	U S RIGGING SUPPLY		503.92	25-APR-16	503.92	Reconciled
366992	21-APR-16	21-APR-16	U.S. HEALTHWORKS MEDICAL GROUP, P.C.		340.00	25-APR-16	340.00	Reconciled
366993	21-APR-16	21-APR-16	ULINE INC		225.98			Negotiable
366994	21-APR-16	21-APR-16	ULTRA SCIENTIFIC		42.55	26-APR-16	42.55	Reconciled
366995	21-APR-16	21-APR-16	UNITED WATER WORKS, INC.		1,410.48	25-APR-16	1,410.48	Reconciled
366996	21-APR-16	21-APR-16	US POSTAL SERVICE		389.12			Negotiable
366997	21-APR-16	21-APR-16	USDA FOREST SERVICE		25.11	25-APR-16	25.11	Reconciled
366998	21-APR-16	21-APR-16	VITALE, ANTHONY		45.22			Negotiable
366999	21-APR-16	21-APR-16	WALTERS WHOLESALE ELECTRIC		394.55			Negotiable
367000	21-APR-16	21-APR-16	WATERLINE TECHNOLOGIES INC		8,740.00	25-APR-16	8,740.00	Reconciled
367001	21-APR-16	21-APR-16	WATERWISE CONSULTING, INC.		33,275.00	27-APR-16	33,275.00	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 22
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
367002	21-APR-16	21-APR-16	WAXIE'S ENTERPRISES, INC		567.94			Negotiable
367003	21-APR-16	21-APR-16	WESTAMERICA COMMUNICATIONS, INC.		3,399.00	25-APR-16	3,399.00	Reconciled
367004	21-APR-16	21-APR-16	WESTERN EXTERMINATOR COMPANY		8,832.50	27-APR-16	8,832.50	Reconciled
367005	21-APR-16	21-APR-16	WOODBURY PLACE APTS		1,182.66	25-APR-16	1,182.66	Reconciled
367006	21-APR-16	21-APR-16	WOODRUFF, SPRADLIN & SMART APC		25.50	26-APR-16	25.50	Reconciled
367007	21-APR-16	21-APR-16	XIN, TAO		28.25			Voided
367008	21-APR-16	21-APR-16	Perez, Cesar (Cesar)		102.80			Negotiable
367009	21-APR-16	21-APR-16	Silva, Constantino (Tino)		25.92			Negotiable
367010	21-APR-16	21-APR-16	Blaska, Erika M (Erika)		49.45	21-APR-16	49.45	Reconciled
367011	21-APR-16	21-APR-16	Sanchez, Fiona M (Fiona)		15.65			Negotiable
367012	21-APR-16	21-APR-16	Vargas, Gabriel A (Gabriel)		80.00	21-APR-16	80.00	Reconciled
367013	21-APR-16	21-APR-16	Justice, Jack L (Jack)		164.00			Negotiable
367014	21-APR-16	21-APR-16	Smyth, Jeffrey S (Jeff)		44.28	27-APR-16	44.28	Reconciled
367015	21-APR-16	21-APR-16	Pan, Jenny W (Jenny)		119.10			Negotiable
367016	21-APR-16	21-APR-16	Bonkowski, Leslie A (Leslie)		174.22	22-APR-16	174.22	Reconciled
367017	21-APR-16	21-APR-16	Bowers, Marie		880.00			Negotiable
367018	21-APR-16	21-APR-16	Denhaan, Robert E		12.00	25-APR-16	12.00	Reconciled
367019	21-APR-16	21-APR-16	Perez, Rodolfo (Rudy)		86.00			Negotiable
367020	21-APR-16	21-APR-16	Norman, Tammy		138.87	26-APR-16	138.87	Reconciled
367021	21-APR-16	21-APR-16	Bonkowski, Thomas		27.11	22-APR-16	27.11	Reconciled

367022 21-APR-16 J (Thomas) Koenig, Timothy 260.00 26-APR-16 260.00 Reconciled
 (Tim)
 367023 21-APR-16 THE IRVINE COMPANYPO BOX 30,000.00 Negotiable
 LLC S26336
 367024 27-APR-16 PAULUS ENGINEERINGPAY 18,311.22 Negotiable
 INC
 367025 28-APR-16 Murphy, Alexander 39.99 Negotiable
 J (Alexander)
 IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 23
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
367026		28-APR-16	Rutherford, Allan		319.00			Negotiable
367027		28-APR-16	Pham, Amie		105.00			Negotiable
367028		28-APR-16	Chau, Denise		64.79			Negotiable
367029		28-APR-16	McElroy, Dorien		90.00			Negotiable
367030		28-APR-16	Bertsch, Frederick J (Jeff)		97.24			Negotiable
367031		28-APR-16	Garza, Gaspar		340.00			Negotiable
367032		28-APR-16	Smyth, Jeffrey S (Jeff)		980.00			Negotiable
367033		28-APR-16	Davis, Jennifer R (Jennifer)		50.00			Negotiable
367034		28-APR-16	Escobar, Omar (Omar)		105.00			Negotiable
367035		28-APR-16	Bennett, Ray R (Ray)		180.24			Negotiable
367036		28-APR-16	Perez, Rodolfo (Rudy)		77.59			Negotiable
367037		28-APR-16	LaMar, Steven E		490.53			Negotiable
367038		28-APR-16	Cady, Thanh-Van T (Van)		300.00			Negotiable
367039		28-APR-16	Koenig, Timothy (Tim)		128.03			Negotiable
367040		28-APR-16	ORANGE COUNTY SANITATION DISTRICT	FOUNTAIN VALLEY	24,269.07			Negotiable
367041		28-APR-16	ORANGE COUNTY SANITATION DISTRICT	FOUNTAIN VALLEY	4,537.02			Negotiable
367042		28-APR-16	ADT SECURITY SERVICES INC		413.47			Negotiable
367043		28-APR-16	AFLAC		11,097.63			Negotiable
367044		28-APR-16	AFLAC		524.55			Negotiable
367045		28-APR-16	AIR RESOURCES BOARD		350.00			Negotiable
367046		28-APR-16	ALEXANDER'S CONTRACT SERVICES, INC.		110,795.82			Negotiable
367047		28-APR-16	ALLIANT INSURANCE SERVICES, INC		50,180.00			Negotiable
367048		28-APR-16	ALTA NURSERY, INC.		1,653.76			Negotiable
367049		28-APR-16	AMIRY, NARGIS		322.83			Negotiable
367050		28-APR-16	ANDERSONPENNA PARTNERS, INC		34,708.50			Negotiable
367051		28-APR-16	ANTHONY N. LARSEN		400.00			Negotiable
367052		28-APR-16	AT&T		5,576.81			Negotiable
367053		28-APR-16	AUSTIN, JACQUELINE		200.72			Negotiable

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 24
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
367054		28-APR-16	BATTERIES PLUS AND BATTERIES PLUS BULBS		852.12			Negotiable
367055		28-APR-16	BILL'S SWEEPING SERVICE INC		690.00			Negotiable
367056		28-APR-16	BLACK BOX CORP OF PENNSYLVANIA		40.52			Negotiable
367057		28-APR-16	BLAINE, BILL		2,158.41			Negotiable
367058		28-APR-16	BUSH & ASSOCIATES INC		930.00			Negotiable
367059		28-APR-16	BYER, JOHN M		45.40			Negotiable
367060		28-APR-16	C WELLS PIPELINE MATERIALS INC		1,475.28			Negotiable
367061		28-APR-16	CALIFORNIA BARRICADE INC		3,640.00			Negotiable
367062		28-APR-16	CANON SOLUTIONS AMERICA, INC.		1,000.06			Negotiable
367063		28-APR-16	CHEM TECH		5,068.80			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
367064		28-APR-16	INTERNATIONAL INC		288.62			Negotiable
367065		28-APR-16	CHEN, YIMIN		1,127.83			Negotiable
367066		28-APR-16	CITY OF NEWPORT BEACH		1,030.61			Negotiable
367067		28-APR-16	CLEAN ENERGY		477.67			Negotiable
367068		28-APR-16	CLEARINGHOUSE		1,709.40			Negotiable
367069		28-APR-16	COLONIAL LIFE & ACCIDENT INSURANCE CO.		123.04			Negotiable
367070		28-APR-16	COMMERCE ENERGY INC		624.21			Negotiable
367071		28-APR-16	CONTROLLED KEY SYSTEMS INC		3,259.08			Negotiable
367072		28-APR-16	COX COMMUNICATIONS, INC.		152.84			Negotiable
367073		28-APR-16	CREDENTIAL CHECK CORPORATION		508.60			Negotiable
367074		28-APR-16	CUMMINS PACIFIC, LLC		178.20			Negotiable
367075		28-APR-16	D & G SIGNS		11,564.84			Negotiable
367076		28-APR-16	D & H WATER SYSTEMS INC.		1,103.51			Negotiable
367077		28-APR-16	DANGELO CO		1,585.98			Negotiable
367078		28-APR-16	DEL TACO		1,556.00			Negotiable
367079		28-APR-16	DEPARTMENT OF WATER RESOURCES		113.55			Negotiable
367079		28-APR-16	DIRECTV INC					Negotiable

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 25
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
367080		28-APR-16	DMS FACILITY SERVICES, INC.		50.00			Negotiable
367081		28-APR-16	DUDEK		753.75			Negotiable
367082		28-APR-16	EAGLE PRINT DYNAMICS		3,775.46			Negotiable
367083		28-APR-16	EBERHARD EQUIPMENT		502.20			Negotiable
367084		28-APR-16	EHS		1,012.50			Negotiable
367085		28-APR-16	INTERNATIONAL, INC		1,765.00			Negotiable
367086		28-APR-16	ENVIRONMENTAL SCIENCE ASSOCIATES		996.19			Negotiable
367087		28-APR-16	EXECUTIVE LIGHTING & ELECTRIC		285.47			Negotiable
367088		28-APR-16	FEDEX		2,005.30			Negotiable
367089		28-APR-16	FISHER SCIENTIFIC COMPANY LLC		1,250.00			Negotiable
367090		28-APR-16	FLW SERVICE CORPORATION		312.80			Negotiable
367091		28-APR-16	FLW, INC.		664.44			Negotiable
367092		28-APR-16	FRANCHISE TAX BOARD		5.63			Negotiable
367093		28-APR-16	GARNER, VICKIE E		7,138.00			Negotiable
367094		28-APR-16	GENTERRA		1,062.10			Negotiable
367095		28-APR-16	CONSULTANTS INC		3,036.48			Negotiable
367096		28-APR-16	GRAINGER		7,231.68			Negotiable
367097		28-APR-16	GRAYBAR ELECTRIC COMPANY		3,231.44			Negotiable
367098		28-APR-16	GREGG OHLHAVER		243.00			Negotiable
367099		28-APR-16	HACH COMPANY		369.60			Negotiable
367099		28-APR-16	HACKETT PRINTING					Negotiable
367100		28-APR-16	HARRINGTON INDUSTRIAL PLASTICS LLC		174.27			Negotiable
367101		28-APR-16	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY		26,319.77			Negotiable
367102		28-APR-16	HARTFORD LIFE INSURANCE COMPANY		3,814.88			Negotiable
367103		28-APR-16	HD SUPPLY WATERWORKS LTD		10,099.69			Negotiable
367104		28-APR-16	HELPMATES STAFFING SERVICES		2,284.20			Negotiable
367105		28-APR-16	HERTZ EQUIPMENT RENTAL CORPORATION		9,652.65			Negotiable
367106		28-APR-16	HILL BROTHERS CHEMICAL COMPANY		1,683.09			Negotiable
367106		28-APR-16	HOME DEPOT USA INC					Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 26
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								

367107	28-APR-16	HUYNH, TANYA	1,430.19	Negotiable
367108	28-APR-16	HYDRO INTERNATIONAL	12,015.43	Negotiable
367109	28-APR-16	IBM CORPORATION	3,821.00	Negotiable
367110	28-APR-16	INORGANIC VENTURES INC	179.96	Negotiable
367111	28-APR-16	IRVINE PIPE & SUPPLY INC	810.43	Negotiable
367112	28-APR-16	IRWD EMPLOYEE ASSOCIATION	870.00	Negotiable
367113	28-APR-16	IRWD-PETTY CASH CUSTODIAN	836.44	Negotiable
367114	28-APR-16	KENT & AMY DAHLBERG	12,937.50	Negotiable
367115	28-APR-16	KIMBALL MIDWEST	939.16	Negotiable
367116	28-APR-16	KOELLER NEBEKER CARLSON & HALUCK, LLP	1,020.00	Negotiable
367117	28-APR-16	KONECRANES INC	5,400.49	Negotiable
367118	28-APR-16	LAGUNA BEACH COUNTY WATER DISTRICT	2,723.31	Negotiable
367119	28-APR-16	LANDCARE HOLDINGS, INC.	29,441.57	Negotiable
367120	28-APR-16	LCS TECHNOLOGIES, INC.	2,430.00	Negotiable
367121	28-APR-16	LEE, SEUNG HO	41.39	Negotiable
367122	28-APR-16	LIANG, BENSON	537.26	Negotiable
367123	28-APR-16	LOS OLIVOS APARTMENTS	3,358.15	Negotiable
367124	28-APR-16	MA, JOAN	126.24	Negotiable
367125	28-APR-16	MARK COMPANY	1,025.00	Negotiable
367126	28-APR-16	MARVIN GARDENS LLC	2,593.70	Negotiable
367127	28-APR-16	MC FADDEN-DALE INDUSTRIAL	20.36	Negotiable
367128	28-APR-16	MC MASTER CARR SUPPLY CO	4,420.36	Negotiable
367129	28-APR-16	MGH PAINTING INC	4,275.00	Negotiable
367130	28-APR-16	MICHAEL BAKER INTERNATIONAL, INC.	9,075.80	Negotiable
367131	28-APR-16	MONTILLA COMMUNITY ASSN	3,627.54	Negotiable
367132	28-APR-16	MURALLES, RUTH	8.13	Negotiable
367133	28-APR-16	NALCO CAL WATER, LLC	240.00	Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 27
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
367134		28-APR-16	NATIONAL READY MIXED CONCRETE CO.		2,068.40			Negotiable
367135		28-APR-16	NATURALWELL, LLC		1,237.50			Negotiable
367136		28-APR-16	NATURES IMAGE INC		2,897.30			Negotiable
367137		28-APR-16	NEPTUNE TECHNOLOGY GROUP, INC.		103,680.00			Negotiable
367138		28-APR-16	OLA, BOLARINWA		455.99			Negotiable
367139		28-APR-16	OLIN CORPORATION		13,962.44			Negotiable
367140		28-APR-16	OLIVER, KEVIN		12.97			Negotiable
367141		28-APR-16	ON QUE STYLE LLC		5,571.05			Negotiable
367142		28-APR-16	ORANGE COUNTY FIRE PROTECTION		2,898.00			Negotiable
367143		28-APR-16	ORANGE COUNTY SHERIFF'S OFFICE		62.50			Negotiable
367144		28-APR-16	PACIFIC PARTS & CONTROLS INC		7,874.80			Negotiable
367145		28-APR-16	PARK WEST APTS		4,658.19			Negotiable
367146		28-APR-16	PARKHOUSE TIRE INC		6,891.66			Negotiable
367147		28-APR-16	PERS LONG TERM CARE		771.11			Negotiable
367148		28-APR-16	PETERSEN, MARY		56.09			Negotiable
367149		28-APR-16	PRE-PAID LEGAL SERVICES INC		2,398.20			Negotiable
367150		28-APR-16	PRUDENTIAL OVERALL SUPPLY		5,122.80			Negotiable
367151		28-APR-16	QUAIL RIDGE APARTMENTS		766.59			Negotiable
367152		28-APR-16	QUINN COMPANY		765.97			Negotiable
367153		28-APR-16	RAM AIR ENGINEERING INC		4,002.65			Negotiable
367154		28-APR-16	RANCHO SAN JOAQUIN APTS		52.83			Negotiable
367155		28-APR-16	REACH EMPLOYEE ASSISTANCE INC		907.20			Negotiable
367156		28-APR-16	RELIANCE SAFETY CONSULTANTS, INC.		5,065.84			Negotiable
367157		28-APR-16	RESOLUTE		144.71			Negotiable

367158	28-APR-16	CONTRACTORS, INC RESPONSE ENVELOPE, INC	2,532.38	Negotiable
367159	28-APR-16	RINCON TRUCK CENTER INC.	18,403.55	Negotiable
367160	28-APR-16	RMC WATER AND ENVIRONMENT	7,880.55	Negotiable
367161	28-APR-16	SANTA ANA BLUE PRINT	52.68	Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 28
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
367162		28-APR-16	SANTA CLARA APTS		5,146.22			Negotiable
367163		28-APR-16	SCOTT HEALTH & SAFETY		243.51			Negotiable
367164		28-APR-16	SEAL ANALYTICAL INC		519.84			Negotiable
367165		28-APR-16	SEPARATION PROCESSES INC		958.75			Negotiable
367166		28-APR-16	SHAMROCK SUPPLY CO INC		1,597.59			Negotiable
367167		28-APR-16	SIGMA-ALDRICH INC		214.13			Negotiable
367168		28-APR-16	SOUTHERN CALIFORNIA EDISON COMPANY		65,114.24			Negotiable
367169		28-APR-16	SOUTHERN CALIFORNIA SECURITY CENTER, INC.		889.72			Negotiable
367170		28-APR-16	SOUTHERN COUNTIES LUBRICANTS LLC		1,491.11			Negotiable
367171		28-APR-16	SPRINKLES CUPCAKES CA, LLC		1,072.00			Negotiable
367172		28-APR-16	STANTEC CONSULTING SERVICES INC.		2,764.00			Negotiable
367173		28-APR-16	SUN, TAO		777.72			Negotiable
367174		28-APR-16	TIC-OFFICE PROPERTIES		436.33			Negotiable
367175		28-APR-16	TIC-SPECTRUM OFFICE		758.96			Negotiable
367176		28-APR-16	TRAN, MINDY		85.64			Negotiable
367177		28-APR-16	TRIPAC MARKETING INC		444.49			Negotiable
367178		28-APR-16	TROPICAL PLAZA NURSERY INC		27,858.30			Negotiable
367179		28-APR-16	TRUCPARCO		7,080.50			Negotiable
367180		28-APR-16	ULTRA SCIENTIFIC		329.90			Negotiable
367181		28-APR-16	UNITED PARCEL SERVICE INC		66.16			Negotiable
367182		28-APR-16	UNITED SITE SERVICES OF CALIFORNIA INC		630.56			Negotiable
367183		28-APR-16	UNIVERSAL TRAILERS, INC.		19,745.60			Negotiable
367184		28-APR-16	URS CORPORATION		7,399.08			Negotiable
367185		28-APR-16	US BANK NAT'L ASSOCIATION NORTH DAKOTA		107,105.40			Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 29
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
367186		28-APR-16	VALLEY POWER SYSTEMS INC		2,078.24			Negotiable
367187		28-APR-16	VCS ENVIRONMENTAL		1,859.55			Negotiable
367188		28-APR-16	VERIZON WIRELESS SERVICES LLC		7,481.26			Negotiable
367189		28-APR-16	VRIDE INC		10,755.00			Negotiable
367190		28-APR-16	VWR INTERNATIONAL, LLC		1,434.26			Negotiable
367191		28-APR-16	WALTERS WHOLESALE ELECTRIC		2,516.02			Negotiable
367192		28-APR-16	WATERLINE TECHNOLOGIES INC		2,840.00			Negotiable
367193		28-APR-16	WAXIE'S ENTERPRISES, INC		1,280.36			Negotiable
367194		28-APR-16	WECK LABORATORIES INC		54.00			Negotiable
367195		28-APR-16	WENSMAN, WHITNEY		42.15			Negotiable
367196		28-APR-16	WISCONSIN STATE		600.00			Negotiable

		LABORATORY OF HYGENE			
367197	28-APR-16	WORKHORSE DIVING AND SALVAGE		60,337.00	Negotiable
367198	28-APR-16	YSI, INC		23,611.74	Negotiable

Payment Document Subtotal: 6,988,628.28 5,313,852.09

Payment Document : IRWD Wire

11467	04-APR-16	CALPERS	SACRAMENTO	426,472.23	Negotiable
11468	05-APR-16	YORK INSURANCE SERVICES GROUP INC - CA	PAY	2,816.61	Negotiable
11469	06-APR-16	INTERNAL REVENUE SERVICE	FRESNO	169,106.92	Negotiable
11470	06-APR-16	FRANCHISE TAX BOARD	SACRAMENTO	45,891.62	Negotiable
11471	06-APR-16	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	10,799.65	Negotiable
11472	06-APR-16	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR	500.77	Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All
 Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 Account: Checking AP and PR Page: 30
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
11473		06-APR-16	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	2,980.94			Negotiable
11474		06-APR-16	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	10,603.00			Negotiable
11475		06-APR-16	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	105,269.52			Negotiable
11476		06-APR-16	CALPERS	SACRAMENTO	87,510.53			Negotiable
11477		12-APR-16	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	50,040.59			Negotiable
11478		13-APR-16	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	15,475.41			Negotiable
11479		13-APR-16	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	1,315.79			Negotiable
11480		13-APR-16	U.S. BANK NATIONALPAY ASSOCIATION		6,446.78			Negotiable
11481		13-APR-16	BANK OF AMERICA	SAN FRANCISCO	5,434.47			Negotiable
11482		13-APR-16	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	5,995.90			Negotiable
11483		13-APR-16	U.S. BANK NATIONALPAY ASSOCIATION		3,255.74			Negotiable
11484		13-APR-16	U.S. BANK NATIONALPAY ASSOCIATION		89,400.97			Negotiable
11485		14-APR-16	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	64,537.40			Negotiable
11486		14-APR-16	BANK OF AMERICA	SAN FRANCISCO	59,034.76			Negotiable
11487		14-APR-16	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	1,500,147.54			Voided
11488		15-APR-16	FILANC-BALFOUR BEATTY JV	ACT 4427724347	3,488,955.40			Negotiable
11489		15-APR-16	FILANC-BALFOUR BEATTY JV	ESR 211084000	371,350.85			Negotiable
11490		18-APR-16	U.S. BANK NATIONALPAY ASSOCIATION	ST. LOUIS	8,482.70			Negotiable
11491		20-APR-16	MUNICIPAL WATER DISTRICT OF ORANGEVALLEY	FOUNTAIN	55,836.00			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All
 Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 Account: Checking AP and PR Page: 31
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
11492		20-APR-16	MUNICIPAL WATER DISTRICT OF ORANGEVALLEY	FOUNTAIN	716,010.47			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
11493	26-APR-16	COUNTY YORK INSURANCE SERVICES GROUP INC - CA	PAY		4,077.51			Negotiable
11494	26-APR-16	COUNTY YORK INSURANCE SERVICES GROUP INC - CA	PAY		2,793.32			Negotiable
11495	26-APR-16	COUNTY YORK INSURANCE SERVICES GROUP INC - CA	PAY		35,415.51			Negotiable
11496	26-APR-16	COUNTY YORK INSURANCE SERVICES GROUP INC - CA	PAY		188.45			Negotiable
11497	26-APR-16	COUNTY YORK INSURANCE SERVICES GROUP INC - CA	PAY		271.82			Negotiable
11498	27-APR-16	CALPERS	SACRAMENTO		87,784.89			Negotiable
11499	27-APR-16	INTERNAL REVENUE SERVICE	FRESNO		172,642.45			Negotiable
11500	27-APR-16	FRANCHISE TAX BOARD	SACRAMENTO		46,917.67			Negotiable
11501	27-APR-16	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO		10,925.05			Negotiable
11502	27-APR-16	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR		500.77			Negotiable
11503	27-APR-16	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO		3,067.47			Negotiable
11504	27-APR-16	EMPLOYEE BENEFIT SPECIALIST, INC	PAY		10,661.58			Negotiable
11505	27-APR-16	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER		105,495.59			Negotiable
11506	28-APR-16	US BANK NAT'L ASSOC N.DAKOTA	PO BOX 70870		1,500,147.54			Negotiable
11507	29-APR-16	INTERNAL REVENUE SERVICE	FRESNO		182,802.73			Negotiable
11508	29-APR-16	FRANCHISE TAX BOARD	SACRAMENTO		49,841.25			Negotiable
11509	29-APR-16	US BANK NAT'L ASSOC N.DAKOTA	PO BOX 70870		274.15			Negotiable

IRWD Ledger Payment Register For 01-APR-16 To 30-APR-16 Report Date: 30-APR-2016 14:10
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 32
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
11510	29-APR-16	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK		7,564.74			Negotiable
11511	29-APR-16	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO		11,293.09			Negotiable
11512	29-APR-16	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR		500.77			Negotiable
11513	29-APR-16	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO		3,067.47			Negotiable
11514	29-APR-16	EMPLOYEE BENEFIT SPECIALIST, INC	PAY		10,583.95			Negotiable
11515	29-APR-16	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER		106,046.83			Negotiable
11516	29-APR-16	PCL CONSTRUCTION, INC.	ACCT 6971821722		1,316,094.30			Negotiable
11517	29-APR-16	PCL CONSTRUCTION, INC.	ESR 141511.1		146,232.70			Negotiable
11518	29-APR-16	US BANK NAT'L ASSOC N.DAKOTA	PO BOX 70870		5,794,250.00			Negotiable

Payment Document Subtotal: 16,913,114.16

Bank Account Subtotal : 23,901,742.44 5,313,852.09

Report Count : 785 Report Total: 23,901,742.44 5,313,852.09

Total Disbursements

*** End of Report ***

\$ 23,901,742.44 Disbursements
 <1,530,169.12> Voids
 \$ 22,371,573.32 Total Voids and Disbursements

Exhibit "E"

IRWD Gov Code 53065.5 Disclosure Report


Payment or Reimbursements for Individual charges of \$100 or more per transaction for services or product received.


01-APR-16 to 30-APR-16

NAME	CHECK NO.	CHECK DATE	TRANSACTION	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Bennett, Ray	366643	14-Apr-16	165.24	Mileage	Rosedale Drought Relief Project (March)
Bennett, Ray	367035	28-Apr-16	165.24	Mileage	Rosedale Drought Relief Project (April)
Bonkowski, Leslie	367016	21-Apr-16	174.22	Other(Misc)	Meeting supplies
Bowers, Marie	367017	21-Apr-16	129.59	Other(Misc)	Office supplies
Bowers, Marie	367017	21-Apr-16	310.99	Other(Misc)	Office supplies
Cady, Thanh-Van T	367038	28-Apr-16	300.00	Membership/Certification	Grade III Wastewater Treatment Plant Operator certification
Garza, Gaspar	367031	28-Apr-16	340.00	Membership/Certification	Grade V Wastewater Treatment Plant Operator certification
Hesch, Jessee	366638	14-Apr-16	139.32	Other(Misc)	Wireless device reimbursement
Justice, Jack	367013	21-Apr-16	164.00	Membership/Certification	CWEA membership renewal
Kalinsky, Arseny	366633	14-Apr-16	255.00	Membership/Certification	AWWA membership renewal
Koenig, Tim	367022	21-Apr-16	155.00	Membership/Certification	Grade V Water Distribution Operator Exam
Koenig, Tim	367022	21-Apr-16	105.00	Membership/Certification	Grade V Water Distribution Operator certificate
LaMar, Steven	367037	28-Apr-16	225.35	Lodging	CED Dialogue Plenary meeting, Burbank, CA Mar 17-18, 2016
LaMar, Steven	367037	28-Apr-16	137.08	Lodging	ACWA Board meeting, Sacramento, CA Mar 24-25, 2016
McGehee, Joseph	366641	14-Apr-16	168.48	Mileage	Stockdale Construction kick-off meeting, Bakersfield, CA
Norman, Tammy	367020	21-Apr-16	138.87	Other(Misc)	Meeting supplies
Pan, Jenny	367015	21-Apr-16	119.10	Other(Misc)	Meeting supplies
Paz, Alfonso III	366631	14-Apr-16	105.00	Membership/Certification	Grade IV Water Distribution Operator Exam
Rutherford, Allan	367026	28-Apr-16	155.00	Membership/Certification	Grade I Collection System Maintenance certificate
Rutherford, Allan	367026	28-Apr-16	164.00	Membership/Certification	CWEA membership renewal
Smyth, Jeff	367032	28-Apr-16	980.00	Other(Misc)	Orange County Fire Authority Permit Fee Project 6167
Total Amount:			\$4,596.48		

May 23, 2016

Prepared by: Rob Jacobson 

Submitted by: Cheryl Clary 

Approved by: Paul Cook 

CONSENT CALENDAR

PROPOSED AMENDED & RESTATED LICENSE AND SUBLICENSE FOR USE OF SAN JOAQUIN WILDLIFE SANCTUARY SITE, FACILITIES & ACCESSWAYS

SUMMARY:

The current agreements permitting the use of the San Joaquin Marsh property by both the San Joaquin Wildlife Sanctuary, Inc. (“Sanctuary”) and the Sea and Sage Audubon Society, Inc. (“Audubon”) expired in July 2015. Irvine Ranch Water District (the District) staff and legal counsel have prepared a proposed Third Amended and Restated License between the District and Sanctuary with a recommended renewal term of five years, with optional three-year extension periods thereafter, at the District’s discretion. The Sanctuary recently agreed to enter into a new Sublicense with Audubon subject to the District’s approval of the Amended License. Staff recommends approval of the new agreements which include certain minor changes to the prior licenses as noted below.

BACKGROUND:

In 1999, the District entered into an Amended and Restated License for Use of Site, Facilities and Accessways with the Sanctuary, which was extended by subsequent addendums through July 2015. Sanctuary, in turn, entered into a Sublicense with Audubon, which was similarly extended by addendums through July 2015. All of the agreements have expired and the Sanctuary desires to enter into a Third Amended and Restated License with the District for a term of five years, with optional renewal periods of three years each thereafter at the District’s discretion (Exhibit “A”). In turn, the Sanctuary would then enter into a Sublicense with Audubon (Exhibit “B”). Collectively, the proposed new agreements are referred to herein as “the Licenses”.

The terms of the Third Amended and Restated License between IRWD and Sanctuary are consistent with the terms provided in the prior license agreement, with the following exceptions:

1. Section 12 (Maintenance and Repair; Utilities) was modified to include removal of cost reimbursement provisions for utilities and janitorial expenses for the Licensed Buildings and IRWD Learning Center area.
2. Section 17 (Easements) was added and states that the Sanctuary shall abide by obligations, restrictions, prohibitions and conditions of any easement, existing or hereafter granted or created, which affect the premises.

The Licenses also incorporate other minor language edits recommended by legal counsel which are noted in the red-line versions attached. Staff requests that the Board approve the Third Amended and Restated License between the District and Sanctuary, and approve the Third Amended and Restated Sublicense between Sanctuary and Audubon as to form, subject to non-substantive modifications.

FISCAL IMPACTS:

The annual License fee due to the District shall remain at \$1.00 per year for the term of the License.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act (CEQA), Code of Regulations, Title 14, Chapter 3, Section 15378.

RECOMMENDATION:

THAT THE BOARD APPROVE THE THIRD AMENDED AND RESTATED LICENSE AGREEMENT BETWEEN IRVINE RANCH WATER DISTRICT AND SAN JOAQUIN WILDLIFE SANCTUARY SUBJECT TO NON-SUBSTANTIVE MODIFICATIONS, AND APPROVE THE THIRD AMENDED AND RESTATED SUBLICENSE AS TO FORM.

LIST OF EXHIBITS:

- Exhibit "A" – Proposed Third Amended and Restated License between IRWD and San Joaquin Wildlife Sanctuary
- Exhibit "B" – Proposed Third Amended and Restated Sublicense between San Joaquin Wildlife Sanctuary and Sea and Sage Audubon Society, Inc.

Exhibit "A"

~~THIRD~~SECOND AMENDED AND RESTATED
LICENSE FOR USE OF
SITE, FACILITIES AND ACCESSWAYS

Field Code Changed

THIS ~~THIRD~~SECOND AMENDED AND RESTATED LICENSE FOR USE OF SITE, FACILITIES AND ACCESSWAYS, dated as of _____, 20162009 ("License") is entered into by and between the IRVINE RANCH WATER DISTRICT, a California water district organized and existing under Section 34000 et seq. of the California Water Code, as licensor (the "Licensor") and the SAN JOAQUIN WILDLIFE SANCTUARY, INC., a non-profit public benefit corporation, organized and existing under the laws of the State of California, as licensee (the "Licensee").

RECITALS:

A. Licensor owns certain land and improvements located within the San Joaquin Marsh (the "Premises") which Licensor operates and maintains in conjunction with its Michelson Water Reclamation Plant ("MWRP") located on property adjacent to the Premises, all as depicted on Exhibit "A," which exhibit is attached hereto and incorporated by this reference.

B. Licensee desires the exclusive use of the building (inclusive of any appurtenant exterior porches, stairs, patios and decks) located on the Premises at 25 Riparian View (referred to as the "Sea and Sage House") and the building (inclusive of any appurtenant exterior porches, stairs, patios and decks) located on the Premises at 5 Riparian View (referred to as the "Audubon House") (as depicted on Exhibit "A") (5 Riparian View and 25 Riparian View are together referred to herein as the "Licensed Buildings") in carrying out activities in furtherance of its educational purposes related to the San Joaquin Marsh ecology, environment, natural history, birds, and wildlife.

C. In conjunction with the use of the Licensed Buildings, Licensee desires the nonexclusive use of certain roads and pedestrian paths (collectively, the "Accessways") for vehicle access and parking and pedestrian access between the Licensed Buildings, public streets and for pedestrian access to marsh viewing areas. (Collectively, the Licensed Buildings and the Accessways are referred to as the "License Area.")

D. Licensee's proposed activities and use of the License Area will benefit Licensor, which has an interest in promoting education, awareness, and understanding of the marsh environment of which its properties and facilities are a part, as well as water conservation and reclamation.

E. The proposed activities and uses of Licensee can be carried out on the License Area in a manner consistent with Licensor's operations within the Premises.

F. Licensor and Licensee have entered into that certain Second Amended and Restated License for Use of Site, Facilities and Accessways, dated as of August 23, 2010~~February 22, 1999~~ ("Second~~First~~ Amended License"), which amended, restated and superseded a prior license and amendments and addenda thereto. The term of the Second~~First~~ Amended License ~~has previously been extended by Addendum No. 1,~~ terminated on July 5, 2015~~2008~~, and has thereafter been continued in effect by the concurrence of the parties pending the preparation of this License to amend and restate the Second~~First~~ Amended License.

G. ~~In consideration of the reconfiguration of the portion of the Premises known as the "Marsh Campus" undertaken as a joint project by Licensor and Licensee,~~ Licensor and Licensee wish to make clarifications and refinements to their respective rights and obligations.

H Licenser and Licensee desire and intend that this License shall supersede the ~~Second~~^{First} Amended License.

NOW, THEREFORE, in consideration of the above promises and of the mutual covenants contained in this License Agreement, and for other good and valuable consideration, the parties agree as follows:

Section 1. License. Licenser hereby grants to Licensee a license, on the terms and conditions set forth in this License Agreement, to use the License Area as defined in Recital C and described in Exhibit "A" hereto. The License shall be exclusive as to the Licensed Buildings (subject to the reservation set forth in Section 8) and shall be nonexclusive as to the Accessways.

Section 2. Term. The term of this License shall commence on the date hereof and shall end on July 5, ~~2020~~²⁰¹⁵, unless extended pursuant to Section 3 hereof or unless terminated prior thereto by either party by giving sixty (60) days' notice to the other party in writing.

Section 3. Renewal of License Term. The License shall be renewable for three-year terms by the mutual agreement of the parties which shall be evidenced by their execution of an addendum hereto.

Section 4. Restrictions. Licensee shall use commercially reasonable efforts to enforce the restrictions contained in this Section, including those set forth in Exhibit "B," with respect to all persons entering the License Area to conduct, assist, participate in, or act in any other manner in connection with, activities sanctioned by Licensee or any sublicensee approved by Licenser pursuant to Section 7 below ("Sanctioned Activities") and all persons within the Licensed Buildings at any time whether or not in connection with a Sanctioned Activity provided

however, that Licensee shall not have such obligation with respect to persons, including members of the general public, entering the License Area (except the Licensed Buildings) for other than Sanctioned Activities. "Sanctioned Activities" shall mean activities scheduled by Licensee or its sublicensee, and activities publicized, approved or carried out by the governing board of Licensee or the governing board of its sublicensee or the designee, employee, agent or authorized volunteer of Licensee or its sublicensee. Licensee or its sublicensee shall adopt, publish at least annually in a newsletter or equivalent distribution, and post continuously at the Audubon House such restrictions; provided, that the requirements in this sentence are not intended to limit the above-stated agreement to use commercially reasonable efforts to enforce the restrictions or to limit any specific obligations set forth in Section 9 with respect to the Licensed Buildings.

(a) Access. Access to the License Area is restricted to the License Area, and there shall be no entry into the designated yard areas surrounding the employee homes of Licensor, the ponds, and off-trail marsh areas (except for sublicense-supervised organized educational program activities conducted without damaging habitat), or any MWRP facilities. Vehicle and bicycle access other than on the designated vehicle access road and designated parking areas is prohibited. Access shall be limited to pedestrian or wheelchair use on any Accessway other than the designated vehicle access road. Upon scheduling any Sanctioned Activity or any other event that is anticipated to be attended by 70 or more persons (other than Sanctioned Activities on a regular periodic schedule that has previously been provided to Licensor), Licensee shall provide notice to Licensor as soon as practical after the scheduling and shall use reasonable efforts to coordinate parking and other logistical considerations with Licensor so that the multiple public

use capabilities within the marsh campus can be used to full advantage and the concurrently scheduled activities of Licensor, Licensee and its sublicensee and the public can be accommodated with a minimum of inconvenience.

(b) Noise and Disturbances. Persons entering upon the License Area shall refrain from making excessive noise or otherwise disturbing the employee homes, the birds and wildlife on and around the License Area, or the enjoyment of other users of the License Area. The License Area is intended to be used for quiet enjoyment.

(c) Other Restrictions. Entry upon the License Area shall be subject to all other restrictions set forth on Exhibit "B," attached and incorporated herein by this reference.

Section 5. Compensation. Licensee shall pay to Licensor, upon execution and delivery of this License and upon each anniversary of the date of this License until its termination, the sum of One Dollar (\$1.00) as and for compensation to Licensor for the use of the License Area. As additional consideration the Licensee shall perform all of its promises, covenants, and obligations in this License Agreement.

Section 6. Program. Licensee shall use the License Area for the purpose of conducting an environmental youth education program, public field trips, and related activities, including fundraising for its programs, as more specifically detailed in Exhibit "C," which exhibit is attached hereto and incorporated herein by this reference. Licensee shall conduct such programs or may sublicense the License Area to another entity who shall conduct such programs. Licensor may from time to time provide Licensee with curriculum materials designed for various grade levels or adults, related to matters such as water conservation and water reclamation, which Licensor desires to have included in Licensee's education and field trip programs.

Licensee agrees to include such materials in its programs and to coordinate such inclusion with Licensor.

Section 7. Sublicensee. Licensee and Licensor intend that the License Area may be sublicensed to an entity such as the Sea & Sage Chapter of the Audubon Society. Such sublicense will be nonexclusive (except as to the Licensed Buildings), and will not relieve Licensee of any of its obligations hereunder as between Licensor and Licensee. Such sublicense will be subject to Licensor's reasonable approval.

Section 8. Nonexclusive Use.

(a) Meetings and Programs. Except for the Licensed Buildings, Licensor shall retain the right to use the License Area, including the facilities thereon, and shall have the right to grant other persons and entities the nonexclusive use thereof from time to time, subject to the reservation system described below. Licensor shall establish and maintain a master reservation system for the use of the Duck Club and any other Premises areas or buildings, except for the Licensed Buildings, in which Licensor desires to permit public uses. Such system shall be kept and supervised by Licensor on a first-come, first-served basis, with such reasonable procedures and rules as Licensor shall establish from time to time. If Licensee or its sublicense desires to use the Premises areas or buildings that are made available by Licensor for public uses, they shall arrange their uses in advance through Licensor's master reservation system on the same basis as other users; provided, however, that the room designated the "Adventure Room" in the "IRWD Learning Center" will be made available Monday through Friday weekdays for daytime use to Licensee or its sublicensee on a preferential basis except as needed for or preempted by any Licensor-scheduled events on reasonable notice, on the condition that on any day it is using

such room, Licensee or its sublicensee will remove its materials and clear the room by 5:00 p.m. for evening public use, whether or not a public use is actually scheduled for that evening. Simultaneous uses may be permitted where they can reasonably be accommodated without interfering with or disturbing a previously reserved use. Except for Sanctioned Activities, neither Licensee nor its sublicensee shall authorize uses of the License Area or Premises by any persons or entities. If the Licensee or its sublicensee desires to use the Premises areas or buildings that are made available by Licensor for public uses (other than the License Area within the Premises), the terms of such use shall be governed by the separate entry permit and/or other arrangements established by Licensor for use within its master reservation system, and not by this License or any sublicense approved by Licensor.

(b) Other Uses. Licensor further reserves the right to enter the License Area to repair, maintain, improve and inspect the facilities and improvements thereon. Licensor reserves the right to utilize the pond areas for such operational purposes as it may require from time to time. Such use shall include, but not be limited to, the storage of water and/or treated effluent at various times and in various amounts. The uses under this paragraph shall not require notice or advance reservations through the master reservation system; provided, however, that Licensor shall use its best efforts to coordinate such uses with Licensee in advance.

Section 9. Licensed Buildings. The provisions of Section 8 notwithstanding, the Licensed Buildings will not be subject to the advance reservation system supervised by Licensor if Licensee grants to a sublicensee an exclusive sublicense to the Licensed Buildings. If there is no sublicensee or the sublicensee is not given such exclusive sublicense to any Licensed Building, then use of that Licensed Building will be governed by the advance reservation system

of Licensor under Section 8 above.

The provisions of Section 4 notwithstanding, Licensee shall be fully responsible for all persons and activities in the Licensed Buildings on a 24-hour basis. Licensee shall be responsible for locking the Licensed Buildings when they are not occupied.

Section 10. Insurance. Throughout the term of this License, Licensee shall maintain or cause to be maintained, with insurers of recognized responsibility, and shall provide evidence to Licensor of a policy of comprehensive or commercial general liability insurance carried by Licensee covering the occurrences described in Section 11 below regardless of when any Claims respecting such occurrences are made, endorsed to include Licensor as an additional insured and including a ten day notice to Licensor in the event of cancellation or any material change in coverage. In addition, this insurance policy shall reflect that the policy is primary insurance as respects any claim, loss or liability arising directly or indirectly from Licensee's activities under the License, and any other insurance maintained by Licensor shall be considered noncontributing. This liability insurance must be in a form satisfactory to Licensor and written with limits of liability not less than the greater of (i) \$1,000,000 (or such greater amount as may reasonably be required by the Licensor) combined single limit bodily injury and property damage liability per occurrence, or (ii) the current limit of liability carried by Licensee. If Licensee carries more liability insurance than the minimum amount required in (i) above, the certificate or policy delivered to Licensor must evidence this greater amount. Nothing in this subparagraph shall limit Licensee's obligations under the other provisions of this License. Licensee shall require any sublicensee to also comply with the foregoing, but shall not thereby be relieved of its own obligation to comply with the foregoing. In the case of such insurance

maintained by the sublicensee, both Licensee and Licensor shall be included as additional insureds.

The above-described insurance shall not be provided by self-insurance, except with Licensor's prior written consent. Licensor may require evidence as it deems sufficient to verify such self-insurance and demonstrate Licensee's financial ability to self-insure.

Section 11. Indemnification. Licensor shall not be liable for, and Licensee shall indemnify, defend and hold Licensor and its employees, officers, agents, representatives, casement grantees, licensees, and invitees and its and their respective successors and assigns (collectively, the "Indemnitees") harmless from and against any and all claims, losses, liabilities, costs and expenses, including attorney's fees (collectively, the "Claims) for damages to real, personal, tangible or intangible property, including the License Area and including the loss of use of any such property, and all Claims for bodily injury, sickness, disease, or death of any person, to the extent arising from or in any way related to (i) any entry upon the License Area or other activity under this License by Licensee, or (ii) any entry upon the License Area or other activity by any persons or entities within the scope of Licensee's Sanctioned Activity or by any persons or entities invited thereon by Licensee, or (iii) any breach by Licensee of its obligations under this License, unless and to the extent any of the foregoing are held by a court of competent jurisdiction to have been caused solely by the active negligence or willful misconduct of the Indemnitees.

Comment [JA1]: Reb - "solely" and "active" I think were agreed to by the District in 2010

Licensee shall cause any sublicensee to indemnify, defend and hold the Indemnitees harmless from and against any and all Claims for damages to real, personal, tangible or intangible property, including the License Area and including the loss of use of any such

property, and all Claims for bodily injury, sickness, disease, or death of any person, to the extent arising from or in any way related to (i) any entry upon the License Area or other activity by sublicensee under its sublicense or (ii) any entry upon the License Area or other activity by any persons or entities within the scope of sublicensee's (but not Licensee's) Sanctioned Activity or by any persons or entities invited thereon by sublicensee or (iii) any entry upon or activity within the Licensed Buildings, if the sublicense includes the Licensed Buildings, or (iv) any breach by sublicensee of its obligations under its sublicense, unless and to the extent any of the foregoing are held by a court of competent jurisdiction to have been caused by the active negligence or willful misconduct of Licensee and/or the Indemnitees.

Comment [JA2]: Agreed to in 2010

Section 12. Maintenance and Repair; Utilities. All improvement, maintenance and repair to the License Area necessitated by damage caused by Licensee or sublicensee or by persons or entities invited or permitted on the License Area by Licensee or sublicensee, except to the extent covered by the proceeds of Licensee's or sublicensee's insurance, shall be accomplished by Licensor at the expense of Licensee. Licensor shall, at its own expense and in its reasonable discretion, accomplish improvement, maintenance, and repairs necessitated other than by damage caused by Licensee or sublicensee or by persons or entities invited or permitted on the License Area by Licensee or sublicensee. Licensee shall advise Licensor if it is aware that any maintenance is necessary, and Licensor will make arrangements to have the maintenance carried out or, in its discretion, direct Licensee to make such arrangements. Licensee shall not make or permit the making of any repairs or improvements to the License Area without Licensor's express written permission, which shall not be unreasonably withheld or delayed. Any personal property brought upon the License Area by Licensee shall be removed by Licensee

at the end of the License term, shall be at Licensee's own risk and shall not be stored or left in a location or manner that could disturb or obstruct the use of the License Area by Licensor or others. ~~Licensee shall pay or cause sublicensee to pay for utilities and janitorial services attributable to its use of the Licensed Buildings and the IRWD Learning Center. Licensor shall prorate charges for utilities and janitorial services among all users in a manner deemed fair by Licensor, where charges are not identifiable to a specific use.~~ Licensee shall not attach any items to or otherwise modify the interior or exterior of the Licensed Buildings or the Adventure Room without prior approval of Licensor.

Section 13. Waiver of Personal Liability. Each of Licensor and Licensee releases each and every incorporator, director, officer, and employee of the other of and from any personal or individual liability under this License. No incorporator, director, officer, or employee of Licensee or Licensor shall at any time or under any circumstances be individually or personally liable under this License to the Licensor or Licensee, respectively, or to any other party whomsoever for anything done or omitted to be done by the Licensee or Licensor, respectively, hereunder.

Section 14. Termination. Licensee agrees, upon the termination of this License, to surrender the License Area in the same good order and condition as the same was in at the time of commencement of the term hereunder, reasonable wear and tear excepted and excluding damages caused by fire or other casualty and repairs necessitated by condemnation, provided, however, that Licensor shall be entitled to any related insurance and condemnation proceeds. Licensee further agrees that any permanent improvements and structures existing upon the License Area at the time of termination of this License shall remain thereon and title thereto shall

vest in the Licensor.

Section 15. License Area As Is; No Duty to Warn. Licensor makes no representation that the License Area is fit for any particular use, including Licensee's intended purposes specified above, or that the License Area is free from defects, conditions, or risks. Licensee has inspected (or will inspect) the License Area and accepts the License Area "as is." Licensor shall have no duty to inspect the License Area or to warn any person of any latent or patent defect, condition or risk that may be encountered in the exercise of the rights under this License.

Section 16. Water Supply to Ponds. To the extent possible without interfering with Licensor's operations, Licensor agrees to use best efforts to coordinate with Licensee relative to the filling and draining of ponds, and the quantities of water and timing thereof, subject to the availability of water from dewatering activities, San Diego Creek diversion and/or reclaimed water and subject to Licensor's ability to divert such water to the ponds.

Comment [JA3]: Note that this is consistent with the last sentence of Section 9(b).

Section 17. Easements. Licensee agrees to abide by the obligations, restrictions, prohibitions and conditions of any easement, existing or hereafter granted or created, affecting the Premises.

Section 18+17. Notice. Any notice or other written instrument required or permitted by this License Agreement to be given to either party shall be deemed received when personally delivered or twenty-four (24) hours after being deposited in the U.S. Mail, postage prepaid, registered or certified and addressed as follows:

Licensor: Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, California 92619-7000
Attn: General Manager

Licensee: San Joaquin Wildlife Sanctuary, Inc.
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, California 92619-7000
Attn: President

Licensor further agrees to provide a copy of any notice given to Licensee to any sublicensee of whom Licensor has written notice, at the address provided by such sublicensee.

Section 1948. Successors and Assigns; Entire Agreement; Amendment. Licensee may not assign this License without Licensor's prior written consent. This License shall be binding upon and inure to the benefit of the successors and assigns of Licensor and Licensee. This License constitutes the entire agreement between Licensor and Licensee and supersedes all prior understandings and agreements between the parties with respect to the subjects hereof. This License may be amended only in writing signed by both parties hereto.

IN WITNESS WHEREOF, this ~~Third~~^{Second} Amended and Restated License has been executed by Licensor and Licensee as of the date first hereinabove written.

Licensor
IRVINE RANCH WATER DISTRICT

By: _____
President

By: _____
Secretary

Licensee
SAN JOAQUIN WILDLIFE SANCTUARY, INC.

By: _____
President

By: _____
Secretary

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EXHIBIT "B"

**Other Restrictions on Use of
the Premises and Accessways**

1. Vehicle speed on the vehicle access road shall be limited to the lesser of (a) the posted speed limit or (b) the maximum speed at which the road can be safely used under the conditions existing at the time of such use.
2. Users of the vehicle access road shall comply with all laws, rules and regulations of governmental entities and with an order of any tribunal having jurisdiction over the roads or the use thereof.
3. No person shall consume, sell, serve, distribute, or give any alcoholic beverages to anyone on the Premises or Accessways (unless specifically agreed to in writing by Licensor and, where applicable, proper evidence of liquor liability insurance has been received by Licensor).
4. Licensee shall cause gates for which Licensor has provided a key to Licensee to be closed and locked during any times when the gates are not in use. No property of Licensor shall be removed from the Premises or Accessways without Licensor's express prior consent.
5. Licensee shall prohibit the throwing or placing of any food, object or substance into the ponds, on the Accessways, or on the Premises except into designated trash receptacles.
6. Licensee shall prohibit the bringing of firearms and pets or other animals into the Accessways or Premises.
7. Licensee shall prohibit any activity that may disturb or harm the birds and wildlife on and around the License Area.
8. Licensee shall observe all signs and instructions otherwise given from time to time by Licensor concerning direction of travel and turns on vehicle access areas and entrances.
9. Any other reasonable restrictions Licensor may prescribe and notify Licensee about from time to time.

EXHIBIT "C"

Program to be Conducted

Pursuant to Section 6 of the License, the provision of programs for the public within the License Area constitutes a part of the consideration for the License. Licensee is required to furnish such programs and may furnish them through a sublicense. The programs shall include:

1. A minimum of three (3) hours of classroom and field education for each of a minimum of 1500 students at all grade levels per year.
2. Keeping the Audubon House open for at least eight (8) hours per day, daily except for holidays.

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Exhibit "B"

~~THIRDSECOND~~ AMENDED AND RESTATED
SUBLICENSE FOR USE OF
SITE, FACILITIES AND ACCESSWAYS

Field Code Changed

THIS ~~THIRDSECOND~~ AMENDED AND RESTATED SUBLICENSE FOR USE OF SITE, FACILITIES AND ACCESSWAYS, dated as of _____, ~~2015-August 23, 2010~~ ("Sublicense") is entered into by and between the SAN JOAQUIN WILDLIFE SANCTUARY, INC., a non-profit public benefit corporation, organized and existing under the laws of the State of California, as sublicensor ("Sublicensor") and the SEA AND SAGE AUDUBON SOCIETY, INCORPORATED, a California non-profit corporation, as sublicensee ("Sublicensee").

RECITALS:

A. Sublicensor (as "Licensee") and Irvine Ranch Water District ("IRWD") (as "Licensor") entered into a ~~Second~~ Amended and Restated Sublicense for Use of Site, Facilities and Accessways, dated as of ~~August 23, 2010~~~~February 22, 1999~~ ("~~Second~~~~First~~ Amended License"), which amended, restated and superseded a prior license and amendments and addenda thereto. The term of the ~~Second~~~~First~~ Amended License ~~has previously been extended by Addendum No. 1~~, terminated on July 5, ~~2015~~~~2008~~, and has thereafter been continued in effect by the concurrence of the parties pending the preparation of an amendment and restatement of the ~~Second~~~~First~~ Amended License.

B. Pursuant to Section 7 of the ~~Second~~~~First~~ Amended License, Sublicensor and Sublicensee entered into that certain ~~Second~~ Amended and Restated Sublicense for Use of Site, Facilities and Accessways, dated as of ~~August 23, 2010~~~~February 22, 1999~~ ("~~Second~~~~First~~ Amended Sublicense"), which amended, restated and superseded a prior sub license and amendments and addenda thereto. The term of the ~~Second~~~~First~~ Amended Sublicense ~~has previously been extended by Addendum No. 1~~, terminated on June 30, ~~2015~~~~2008~~, and has

thereafter been continued in effect by the concurrence of the parties pending the preparation of an amendment and restatement of the ~~Second~~^{First} Amended License and ~~Second~~^{First} Amended Sublicense.

C. In order to make clarifications and refinements to their respective rights and obligations, IRWD and Sublicensor have entered into a ~~Third~~^{Second} Amended and Restated License dated as of _____, ~~2015~~^{August 23, 2010} (“License”), which supersedes the ~~Second~~^{First} Amended License. Sublicensor and Sublicensee desire to enter into this Sublicense in order to make corresponding clarifications and refinements to their respective rights and obligations.

D. Under Section 7 of the License, Sublicensor may, with IRWD’s prior approval, enter into a sublicense for the use of the License Area.

E. Sublicensee desires the exclusive use of the “Licensed Buildings,” defined in the License to consist of the building (inclusive of any appurtenant exterior porches, stairs, patios and decks) located on the Premises at 25 Riparian View (referred to as the “Sea and Sage House”) and the building (inclusive of any appurtenant exterior porches, stairs, patios and decks) located on the License Area at 5 Riparian View (referred to as the “Audubon House”) and the non-exclusive use of the remainder of the License Area in carrying out activities in furtherance of its educational purposes related to the San Joaquin Marsh ecology, environment, natural history, birds and wildlife.

F. Sublicensee's proposed activities and use of the License Area will benefit Sublicensor, who has an interest in promoting education, awareness and understanding of the San Joaquin Marsh.

G. Sublicensor and Sublicensee desire and intend by this Sublicense to amend and restate the SecondFirst Amended Sublicense in its entirety and desire and intend that this Sublicense shall supersede the SecondFirst Amended Sublicense.

NOW, THEREFORE, in consideration of the above promises and of the mutual covenants hereinafter contained and for other good and valuable consideration, the parties hereto agree as follows:

Section 1. Sublicense. Sublicensor hereby agrees that Sublicensee shall have a license, on the terms and conditions hereinafter set forth, to use the License Area. The Sublicense shall be exclusive as to the Licensed Buildings (subject to the reservation set forth in Section 8 of the License) and shall be non-exclusive as to the Accessways. "License Area" and the other capitalized terms used in this Sublicense and not otherwise defined herein shall have the meanings given such terms in the License.

Section 2. Term. The term of this Sublicense shall commence on the date hereof and shall end on the earlier of the date of termination of the License or June 30, ~~2020~~2015, unless extended pursuant to Section 3 hereof or unless terminated prior thereto by either party by giving sixty (60) days' notice to the other party in writing.

Section 3. Renewal of Sublicense Term. The Sublicense shall be renewable by the mutual agreement of the parties which shall be evidenced by their execution of an addendum hereto, provided, that the License has been renewed and permits the renewal or continuation of the Sublicense and that the renewal of the Sublicense has been approved by IRWD. In no event shall any such renewed term of the Sublicense extend beyond the fifth calendar day prior to the

expiration of the current term of the License.

Section 4. Terms and Conditions. This Sublicense is given pursuant to the License and shall be subject to all of the terms, conditions and limitations contained in the License. Sublicensee agrees to perform or cause to be performed all of the obligations and covenants of Sublicensor under the License, to the extent such obligations and covenants are applicable to Sublicensee's use of the License and/or Sublicensee's (but not Licensee's) Sanctioned Activities; provided, that, notwithstanding the foregoing limitation, the obligations and covenants of Sublicensor under the License with respect to all persons and activities in the Licensed Buildings on a 24-hour basis and with respect to locking the Licensed Buildings shall be assumed and performed or caused to be performed by Sublicensee. Such obligations and covenants shall include, but are not limited to, Sections, 4, 6, 8, 9, 10 (each of Sublicensor and Sublicensee to provide its own insurance as specified therein), 11 (each of Sublicensor and Sublicensee to perform its own indemnification obligations as specified therein), 12 (except as to damage caused by Sublicensor), 13, 14, 15 and 17+5, which shall be considered obligations and covenants of Sublicensee to the same extent as if they were set forth in full herein.

Section 5. Compensation. Sublicensee shall pay to Sublicensor, upon execution and delivery of this Sublicense and upon each anniversary of the date of this Sublicense until its termination, the sum of One Dollar (\$1.00) as and for compensation to Sublicensor for the use of the License Area. As additional consideration the Sublicensee shall perform all of its promises, covenants and obligations hereunder.

Section 6. Licensed Buildings. Pursuant to Section 9 of the License, as the result of the granting of the exclusive sublicense to the Licensed Buildings herein, the Licensor's master reservation system shall not apply to the Licensed Buildings. Sublicensee shall have the right and obligation to supervise the use of the Licensed Buildings and permit such persons and entities the use thereof as Sublicensee shall deem fit, including Sublicensee's own uses.

Section 7. Notice. Any notice or other written instrument required or permitted by this Agreement to be given to either party shall be deemed received when personally delivered or twenty-four (24) hours after being deposited in the U.S. Mail, postage prepaid, registered or certified and addressed as follows:

Sublicensor: San Joaquin Wildlife Sanctuary, Inc.
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
Attn: President

Sublicensee: Sea and Sage Audubon Society, Incorporated
P.O. Box 5447
Irvine, California 92616
Attn: President

Sublicensor agrees to provide Sublicensee with a copy of any notice given or received by Sublicensor under the License.

Section 8. Successors and Assigns; Entire Agreement; Amendment. Sublicensee may not assign this Sublicense without Sublicensor's prior written consent. This Sublicense shall be binding upon and inure to the benefit of the successors and assigns of Sublicensor and Sublicensee. This Sublicense constitutes the entire agreement between Sublicensor and Sublicensee and supersedes all prior understandings and agreements between the parties with respect to the subjects hereof. This Sublicense may be amended only in writing signed by both parties hereto.

IN WITNESS WHEREOF, this ~~Third~~^{Second} Amended and Restated Sublicense has been

executed by Sublicensor and Sublicensee as of the date first hereinabove written.

Sublicensor
SAN JOAQUIN WILDLIFE SANCTUARY, INC.

By: _____
President

By: _____
Secretary

Sublicensee
SEA AND SAGE AUDUBON SOCIETY, INCORPORATED

By: _____
Title: _____

By: _____
Title: _____

52917

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May 23, 2016
Prepared and
submitted by C. Compton *CC*
Approved by: Paul Cook *Paul Cook*

CONSENT CALENDAR

2016 LEGISLATIVE UPDATE

SUMMARY:

This report provides an update on the 2016 legislative session and IRWD priorities. As legislation develops, staff will provide updates and recommendations to the Water Resources Policy and Communications Committee and the Board, as appropriate.

Staff recommends that the Board consider the following actions/positions:

- *SB 970 (Leyva, D-Chino)- Greenhouse Gas Reduction Fund: Grant Program* — “SUPPORT IN CONCEPT” the development of a State program which would provide grants to wastewater agencies for the development or implementation of projects that would integrate food waste processing at wastewater treatment facilities, result in the diversion of organics from local landfills, and dedicate Cap-and-Trade revenues to the wastewater sector, and
- *Santa Ana Mountains to Sea National Monument Proposal- “SUPPORT”*.

BACKGROUND:

This year, the last day for policy committees to hear fiscal bills was April 22, while May 6 was the policy committee deadline for non-fiscal bills. The last day for fiscal committees to hear and report to the floor any bills introduced in its house is May 27, and the house of origin deadline is June 3.

A copy of the 2016 Legislative Matrix is attached as Exhibit “A”. Exhibit “B” is the 2016 Legislative Update Report Links to Bill Texts, which contains links to the bills discussed below, unless a separate exhibit is noted.

State Budget Update:

March Revenue Numbers:

On April 11, 2016, State Controller Betty Yee released her monthly report on the State’s finances. She announced that the State took in \$7.40 billion during the month of March. This amount was 3 percent higher than the Governor’s proposed Fiscal Year 2016-2017 budget. The discrepancy between the proposed budget and actual amount was due to the fact that both corporate taxes and sales taxes beat expectations. Corporate tax revenues were \$1.71 billion, which was \$47.5 million, or 2.9 percent, higher than expected. Sales tax revenues were \$1.79 billion, which was \$36.0 million, or 2.0 percent, higher than the proposed budget. Personal income tax revenues, which have normally surpassed projections over the past few years, were

below budget estimates. Personal tax revenues were \$3.49 billion or \$31.2 million less than expected.

For the first nine months of Fiscal Year 2015-16, total revenues are still ahead of the estimates included in the Governor's Fiscal Year 2016-2017 proposed budget by \$512.5 million, or 0.7 percent. Compared to the adopted Fiscal Year 2015-2016 budget, revenues for the first nine months of the fiscal year are \$2.26 billion higher than budgeted. The State ended the month of March with an outstanding loan balance of \$14.34 billion, which was approximately \$200.0 million less than projected.

2016 State Legislation:

AB 1755 (Dodd, D- Woodland)— The Open and Transparent Water Data Act:

As previously reported to the Board, Assemblymember Bill Dodd (D, Woodland) introduced AB 1755, The Open and Transparent Water Data Act. The bill would have required the Department of Water Resources (DWR) to establish a public benefit corporation that would create and manage:

- A statewide water information system to improve the ability of the State to meet the growing demand for water supply reliability and healthy ecosystems, and that would integrate existing water data information from multiple databases, and
- An online water transfer information clearinghouse to report on water transactions that would include a database with information on completed water transfers, a public forum to exchange information on water market issues, and information to assist proponents with the water transfer approval processes.

The bill would have also required DWR, the State Water Resources Control Board (SWRCB) and the Department of Fish and Wildlife to develop protocols for data sharing, documentation, quality control, public access, and promotion of open source platforms and decision support tools related to water data.

As amended on May 11, 2016, the provisions of the bill that called for the creation of a public benefit corporation have been deleted. The bill now requires DWR to create, operate and maintain a statewide, integrated water data platform that would integrate existing water and ecological data information from multiple databases and provide data on completed water transfers and exchanges.

Staff has been participating on the ACWA State Legislative Committee's Work Group on Water Transfers which is discussing and seeking amendments to AB 1755 and AB 2304 (Levine, D-Santa Rosa). Staff will provide the Board with an update on any significant developments in these discussions.

AB 2304 (Levine, D-Santa Rosa) — State Water Market Exchange:

As reported to the Board last month, Assembly Water, Parks and Wildlife Chairman Marc Levin (D, Santa Rosa) introduced AB 2304 on behalf of the Environmental Defense Foundation. As introduced, AB 2304 would establish the California Water Market Exchange in the Natural Resources Agency. The statewide exchange would be responsible for creating a centralized water market platform through which information regarding all transfer and exchanges of water occurring after December 31, 2017, would be recorded, and charged a fee. The bill also expresses legislative intent regarding water transfers and exchanges. It states that it is the Legislature's intent that water transfer and exchanges protect and enhance environmental and community benefits including the following:

- Instream flows and ecosystem water supply;
- Improved water monitoring and data networks;
- Ecosystem restoration projects benefiting aquatic and riparian species;
- Improved drinking water supply and quality projects;
- The development of needed technical, managerial and financial capacity for disadvantaged communities; and
- Acquisition through the market exchange of needed water supplies for smaller community water systems.

AB 2304 was significantly amended on May 11, 2016. The bill would now establish the California Water Market Clearinghouse for the purpose of making the water transfer and exchange process more transparent and more efficient, and to enhance access to voluntary water market transactions. All conveyances or transfers across the Sacramento-San Joaquin Delta or from one watershed to another occurring after January 1, 2020, would be required to be submitted to and processed by the Clearinghouse, after paying an administrative fee.

Additionally, the bill as amended would require the Secretary of the Natural Resources Agency to convene a Water Market Clearinghouse Task Force to make recommendations on:

- Information on water transfers;
- Information required for water users and the public to track the progress of proposed transfers; and
- The type of information that the Clearinghouse should be required including prioritization for projects that provide environmental and community benefits.

IRWD has continued to be an active participant on Association of California Water Agencies' Water (ACWA) Transfer Task Force. The District, consistent with Board-adopted policy principles, has advocated for the development of voluntary regional water exchanges to facilitate voluntary water transfer between willing buyers and sellers consistent with existing water rights and priorities. Staff has also been participating on the ACWA State Legislative Committee's Work Group on Water Transfers which is discussing and seeking amendments to AB 1755 and AB 2304 (Levine, D-Santa Rosa). Staff will provide the Board with an update on any significant developments in these discussions.

SB 163 (Hertzberg, D-Van Nuys) — Wastewater Treatment: Recycled Water:

On September 3, 2015, Senator Bob Hertzberg (D, Van Nuys) amended SB 163, which had previously dealt with elections, in order to propose a 100 percent ban on ocean discharge of treated wastewater. Specifically, the bill would declare that the discharge of treated wastewater from ocean outfalls, except in compliance with the bill's provisions, is a waste and unreasonable use of water in light of the cost-effective opportunities to recycle water for further beneficial use. It would require a 50 percent reduction in ocean discharges by January 1, 2026, and a 100 percent reduction by January 1, 2036. Over the past month, staff has continued to work with the coalition led by the California Association of Sanitation Agencies and WateReuse California. The coalition has been meeting with members of the Assembly to discuss SB 163. Staff will provide an oral update on any significant developments from these ongoing discussions.

SB 970 (Leyva, D-Chino)— Greenhouse Gas Reduction Fund: Grant Program:

The Inland Empire Utilities Agency (IEUA) is the sponsor of SB 970, authored by Senator Connie Leyva (D, Chino). Senator Leyva and IEUA are seeking to establish a grant program, which would award matching funds from Cap-and-Trade revenues for wastewater projects, which integrate food waste processing and result in the diversion of organics from local landfills. According to the author, this type of grant program is needed because:

“California must achieve deep reductions in short-lived climate pollutants by 2030 in order to meet future greenhouse gas emission targets and air quality goals. Short lived climate pollutants (SLCP), also known as “Super Pollutants,” have a much greater warming effect than CO₂. This means that reducing SLCPs such as methane will have a significant impact on reducing our greenhouse gas emissions. Cutting methane emissions from solid waste disposal is a key state strategy to slow global warming and reduce the impacts of climate change.

SB 970 will help California achieve its world-leading climate change goals by demonstrating effective and efficient food waste diversion through utilizing existing anaerobic digestion capacity at publicly owned treatment works (POTWs). This bill would create a program that demonstrates regional cooperation between POTWs, local governments, waste haulers, and local businesses to divert food waste and other organics to centralized digesters. The demonstration projects will be designed to maximize resource recovery and better position the state to achieve its organic waste diversion and GHG reduction goals.”

On April 20, 2016, SB 970 was heard by the Senate Environmental Quality Committee. The bill was gutted and amended in the Committee as the author and IEUA continue to work with stakeholders and the Department of Resources, Recycling and Recovery (CalRecycle) on developing a grant program for POTWs. SB 970, as amended, would require CalRecycle to consider the amount of greenhouse gas emissions reductions that may result from a project receiving grants funds, and the amount of organic material that may be diverted from landfills as a result of the project.

Given the ongoing discussions taking place with CalRecycle and others, IEUA has asked wastewater agencies undertaking anaerobic digestion projects to consider adopting a “support in concept” position on the type of grant program SB 970 had originally proposed. Staff recommends that the Board adopt a “support in concept” position on the development of a State program, which would provide grants to wastewater agencies for the development or implementation of projects that would integrate food waste processing at wastewater treatment facilities and which would result in the diversion of organics from local landfills. Staff also recommends that the Board adopt a “support in concept” position on the dedication of Cap-and-Trade revenues to POTWs.

Proposition 218 Reform Efforts and Other Legislative Efforts Related to Water Rates:

Since *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano* and the Board’s discussion regarding the need for legislative clarification on tiered water rates, staff has actively worked with the District’s industry and association partners on concepts that have been put forth seeking to clarify tiered water rates. As part of that effort, staff has participated on the ACWA Proposition 218 Work Group. At the end of April, ACWA shared a legislative concept related to tiered water rates put forward by the Water Foundation with the Proposition 218 Work Group. The Water Foundation’s concept seeks to:

- Define the proportional cost of service attributable to a parcel so that it includes low income rate subsidization;
- Define sewer service to include stormwater capture, treatment, and disposal; and
- Authorize agencies to charge a regulatory fee to create a price signal to encourage or discourage specific water service consumption patterns including to deter excess consumption of a service, such as domestic water service, as determined by the local agency; encourage the adoption of technologies supporting more efficient use of the service; and to comply with goals of avoiding waste and unreasonable use of water pursuant to Article X, Section 2, of the California Constitution.

The Water Foundation recently reached out directly to IRWD to discuss its proposal. A copy of the proposal is attached as Exhibit “C”.

SWRCB Drinking Water Fees:

As part of the Fiscal Year 2015-2016 State Budget, the SWRCB asked and received the ability to increase the fees charged under the Safe Drinking Water Program and to change how those fees are calculated. The Safe Drinking Water Program was previously operated by the Department of Public Health but is now being operated by the SWRCB’s Division of Drinking Water. The program ensures that small and large public water systems meet Safe Drinking Water Act standards.

At the end of last month, the SWRCB released its proposed regulations setting the new fees for this program. The proposed regulation abandons the fee-for-service model previously used by the Department of Public Health and proposes setting the fees charged to water agencies based on the number of connections each agency has. The proposed charges are summarized below:

Proposed Public Water Systems Annual Fee

Water System Type	Fee
Community Water System	
100 or fewer service connections	\$200.00
100 or fewer service connections (severely disadvantaged community)	\$100.00
101 to 1,000 service connections	\$4.00 per service connection
101 to 1,000 service connections (severely disadvantaged community)	\$2.00 per service connection
1,001 or more service connections	\$4.00 per service connection for the first 1,000 service connections plus \$2.00 per service connection greater than 1,000
1,001 or more service connections (severely disadvantaged community)	\$2.00 per service connection
Nontransient Noncommunity Water Systems	\$2.00 per person served, but not less than \$456.00
Wholesaler	\$6,000.00 plus \$1.36 per each million gallons. Million gallons means the annual average, rounded to the nearest million, as reported to the State Board by the wholesaler for 2012, 2013 and 2014, of the total gallons of water that the wholesaler produced from surface water and from groundwater and gallons of finished water that the wholesaler purchased or received from another public water system.

Based on the fee schedule outlined above, IRWD's Drinking Water Program fees would increase from a range of approximately \$40,000 to \$80,000 per year to over \$200,000 per year.

Staff has been working with ACWA and the California Municipal Utilities Association (CMUA) over the last year on the drinking water program fees. Both ACWA and CMUA have expressed concern over the proposed fee structure, and are working to present an alternative to the SWRCB. Staff has been and will continue to be actively involved in these efforts.

2016 Federal Legislation:

Santa Ana Mountains to Sea National Monument Proposal:

The Antiquities Act of 1906 created the federal land designation of “national monument” when it authorized the President to create national monuments on federal lands that contain “historic landmarks, historic or prehistoric structures, or other objects of historic or scientific interest.” (16 U.S.C. § 431) While most national monuments have been established by Executive Order under the Antiquities Act, Congress has also enacted legislation establishing national monuments. Over the last 109 years, more than 140 monuments have been established and are currently being managed by the U.S. Forest Service, U.S. Fish and Wildlife Service, National Parks Service or the Bureau of Land Management based on management plans established for each monument.

Like many types of land use designation, national monument designations have been controversial. According to the Congressional Budget Office, the “primary objection to national monuments is that the declaration changes the property from being federal land available for multiple uses to being a national monument with possible restricted uses.” (www.fas.org/sgp/crs/misc/R41330.pdf) Since the goal of a national monument designation is to protect the resources on the land, a monument designation often restricts use of and activities on the land. Since 1996, monument designations “typically have had protections for valid existing rights for land uses, but the extent to which designations may affect existing rights is not always clear.” (www.fas.org/sgp/crs/misc/R41330.pdf) Additionally, there is often concern that the designation will result in new constraints on development and limitations on the use of motorized vehicles. Supporters of national monument designations often cite environmental protection and stewardship, increased tourism, recreation and economic benefits as reasons to move forward with the designation. Each one of these concerns or benefits is impacted by the Executive Order or legislation establishing the national monument, which includes permissive and prohibited land uses within the monument, and by the management plan established to govern the management of the monument.

Over the past few years, there has been an interest in creating a national monument in Orange County encompassing large portions of the historic Irvine Ranch. Representative Ed Royce (R-Fullerton) has agreed to sponsor legislation designating nearly 100,000 acres in Orange County as the Santa Ana Mountains to Sea National Monument. Given the vast amount of water and wastewater infrastructure within the proposed boundaries of the Santa Ana Mountains to Sea National Monument, IRWD has had an interest in the national monument’s designation because as originally proposed it may have impacted District-owned facilities or its ability to construct needed infrastructure improvements in the future.

In August 2015, the Board adopted a “seek amendments” position on the proposal and authorized staff to seek amendments that would provide water and wastewater utilities and infrastructure the same protections and authorities originally given to electric and communications utilities and infrastructure. Additionally, staff was authorized to seek modifications to the monument’s boundaries to limit potential impacts on IRWD’s operations. Over the last nine months, staff has worked with the Representative Royce’s office and the Irvine Ranch Conservancy to obtain these amendments.

At the beginning of May, Representative Royce's office provided the District with the most recent draft of his proposed legislation, which is expected to be introduced within the next few weeks. As currently drafted, the proposal creates the national monument; establishes an advisory board of local stakeholders of which IRWD is a member to help the National Forest Service manage the monument; permits only those uses and activities that are consistent with the terms and conditions of the management plan to be developed and the Orange County Central Coastal Natural Community Conservation Plan; and provides protection for infrastructure within the monument.

Additionally, staff was able to obtain the amendments sought by the District. The monument boundary has been revised to exclude the Syphon Reservoir and additional language has been added in the most recent version of the proposal to clarify that nothing in the national monument act shall affect existing water and wastewater infrastructure and utility operations. Additionally, as currently drafted, the proposal protects the establishment of new infrastructure facilities and rights-of-way if such facilities are otherwise lawful and necessary for water or wastewater service. Staff, upon reviewing the most recent proposal, inquired if the language related to future infrastructure could be modified slightly to remove the condition of necessity in order to provide greater protection for IRWD. Representative Royce's office has indicated that they are willing to take this amendment conditioned upon IRWD's support of the proposal.

With the Water Resources Policy and Communication's Committee's authorization, IRWD wrote a letter in support of the proposal. Staff recommends that the Board ratify the "support" position communicated in that letter.

A map of the revised boundary of the proposed Santa Ana Mountains to Sea National Monument is attached as Exhibit "D". A copy of the proposed bill language, as provided to the District earlier this month, is attached as Exhibit "E".

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on April 6, 2016.

RECOMMENDATION:

THAT THE BOARD ADOPT A “SUPPORT IN CONCEPT” POSITION ON SB 970 (LEYVA) AND THE DEVELOPMENT OF A STATE PROGRAM WHICH WOULD PROVIDE GRANTS TO WASTEWATER AGENCIES FOR THE DEVELOPMENT OR IMPLEMENTATION OF PROJECTS THAT WOULD INTEGRATE FOOD WASTE PROCESSING BY THE AGENCIES AT ITS WASTEWATER TREATMENT FACILITIES, RESULT IN THE DIVERSION OF ORGANICS FROM LOCAL LANDFILLS, AND DEDICATE CAP-AND-TRADE REVENUES TO THE WASTEWATER SECTOR; AND A “SUPPORT” POSITION ON THE SANTA ANA MOUNTAINS TO SEA NATIONAL MONUMENT PROPOSAL.

LIST OF EXHIBITS:

Exhibit “A” – IRWD Legislative Matrix

Exhibit “B” – 2016 Legislative Update Report Links to Bill Texts

Exhibit “C” – Water Foundation’s Proposal Related to Water and Sewer Rates

Exhibit “D” – Revised Map of the Proposed Santa Ana Mountains to Sea National Monument

Exhibit “E” – Proposed Santa Ana Mountains to Sea National Monument Bill Language

EXHIBIT "A"
IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
AB 12 Cooley (D)	State Government: Administrative Regulations: Review		Requires each state agency after a noticed public hearing, to review the agency's regulations, identify any regulations that are duplicative, overlapping, inconsistent, or out of date, to revise those identified regulations, and report to the Legislature and Governor.	08/27/2015 - In SENATE Committee on APPROPRIATIONS: Held in committee.
AB 45 Mullin (D)	Household Hazardous Waste		Requires the Department of Resources Recycling to adopt model ordinance for a comprehensive program for the collection of household hazardous waste. Authorizes a local jurisdiction proposing to enact an ordinance for the collection and diversion of such waste to adopt a Department model. Requires a determination as to whether a nonprofit organization has been created and funded to make grants to local entities for purposes related to the disposal of such waste.	02/04/2016 - To SENATE Committee on ENVIRONMENTAL QUALITY.
AB 259 Dababneh (D)	Personal Information Privacy		Requires an agency, if the agency was the source of the breach and the breach compromised a person's social security number, driver's license number, or California identification card number, to offer to provide the person with identity theft prevention and mitigation services at no cost for not less than 12 months.	08/27/2015 - In SENATE Committee on APPROPRIATIONS: Held in committee.
AB 291 Medina (D)	Environmental Quality Act: Local Agencies: Water		Authorizes a local agency, for certain water projects, to file a specified notice with the county clerk of the county in which the local agency's principal office is located, along with any required payment to the Department of Fish and Wildlife, and with the Office of Planning and Research and to transmit a copy of the notice to the county clerk of the counties in which the project is located. Requires the notice and the copies of the notice to be available to for public inspection. Relates to challenges.	06/10/2015 - In SENATE. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL QUALITY.
AB 453 Salas (D)	Groundwater: Semitropic Water Storage District		Authorizes, until a groundwater sustainability plan is adopted, a local agency that has adopted a groundwater management plan to impose fees on the extraction of groundwater from a groundwater basin to fund costs of groundwater management and to collect	04/04/2016 - Re-referred to SENATE Committee on NATURAL RESOURCES AND WATER.

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Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			groundwater extraction information, as long as a groundwater management plan adopted before a specified date, is in effect. Authorizes the Semitropic Water Storage District to impose fees and collect groundwater extraction information.	
<u>AB 501</u> Levine (D)	Resources: Delta Research		Relates to the Sacramento-San Joaquin Delta Reform Act of 2009. Requires a person conducting State-funded Delta Research to take specified actions with regard to the sharing of the primary data, metadata, and other supporting materials created or gathered in the course of that research. Relates to ineligibility. Relates to researcher State funding eligibility requirements. Provides conditions for Delta research grants. Relates to the provision of consistent procedural and technical requirements.	02/04/2016 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 577</u> Bonilla (D)	Biomethane: Grant Program		Requires the development and implementation of a grant program to award grants for projects that produce biomethane, that build or develop collection and purification technology or infrastructure, or that upgrade or expand existing biomethane facilities. Authorizes moneys in the Greenhouse Gas Reduction Fund to be used to fund grants awarded under the program.	09/11/2015 - Re-referred to SENATE Committee on RULES.
<u>AB 590</u> Dahle (R)	Greenhouse Gas Reduction Fund		Provides that moneys in the Greenhouse Gas Reduction Fund account may be made available for expenditure by the State Energy Resources Conservation and Development Commission for maintaining the current level of biomass power generation or geothermal energy generation in the State and revitalizing currently idle facilities in strategically located regions. Establishes requirements for an applicant to receive available funding for a facility's eligible electrical generation.	08/27/2015 - In SENATE Committee on APPROPRIATIONS: Held in committee.
<u>AB 615</u> Rendon (D)	Office of Sustainable Water Solutions: Assistance		Amends existing law that establishes the Office of Sustainable Water Solutions to promote permanent and sustainable drinking water and wastewater treatment solutions to ensure the effective and efficient provision of safe, clean, affordable, and reliable	06/18/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.

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Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			drinking water and wastewater treatment services and authorizes the office to provide technical assistance to disadvantaged communities and small drinking water systems and wastewater systems. Specifies the technical assistance that may be provided.	
<u>AB 647</u> Eggman (D)	Beneficial Use: Storing of Water Underground		Declares that the diversion of water to underground storage constitutes a beneficial use of water if the water so stored is thereafter applied to the beneficial purposes for which the appropriation for storage was made, or if the water is so stored consistent with a sustainable groundwater management plan, statutory authority to conduct groundwater recharge, or a judicial degree and is for specified purposes. Requires applying for a permit or petition for a change. Requires including specified conditions.	06/30/2015 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.
<u>AB 723</u> Rendon (D)	Rental Property: Plumbing Fixtures: Replacement		Requires the lease or rental agreement of a single-family residential real property or any portion of a multifamily residential real property or commercial real property that is entered into, renewed, or amended, be accompanied by a disclosure stating the property owner's responsibility to replace all noncompliant plumbing fixtures with water-conserving plumbing fixtures.	07/16/2015 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 935</u> Salas (D)	Water Projects		Requires, upon appropriation by the Legislature, the Department of Water Resources to provide funding for certain projects, provided that certain conditions are met.	09/10/2015 - In SENATE. From third reading. To Inactive File.
<u>AB 937</u> Salas (D)	Groundwater Plan/Assistance: Disadvantaged Communities		Requires the Department of Water Resources to provide technical assistance to disadvantaged communities so that they may participate in groundwater planning, including planning for regional groundwater banking, with any county or other local agency.	08/27/2015 - In SENATE Committee on APPROPRIATIONS: Held in committee.
<u>AB 938</u> Rodriguez (D)	Sustainable Groundwater Management Act: Basins		Amends the Sustainable Groundwater Management Act. Authorizes a watermaster or local agency administering an adjudicated basin to elect that the basin be subject to the provisions	03/09/2016 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			of the Act. Authorizes a court with jurisdiction over the basin to issue and order to set a hearing to determine if the basin shall be subject to the Act. Requires written notice to the Department of Water Resources that the basin is subject to the Act. Requires the notice to be posted on the Department's Web site.	RESOURCES AND WATER.
<u>AB 954</u> Mathis (R)	Water and Wastewater Loan and Grant Pilot Program		Creates the Water and Wastewater Loan and Grant Program. Require the State Water Resources Control Board to establish a pilot program to provide low-interest loans and grants to local agencies for grants to eligible individual homeowners for purposes relating to drinking water and wastewater treatment. Creates a related fund for use under the program. Transfers a specified amount of funds from the General Fund to the fund.	08/27/2015 - In SENATE Committee on APPROPRIATIONS: Held in committee.
<u>AB 1030</u> Ridley-Thomas S (D)	Global Warming Solutions Act of 2006: Greenhouse Gas		Amends existing law that relates to the Greenhouse Gas Reduction Fund. Requires priority be given to projects involving hiring that support the targeted training and hiring of workers from disadvantaged communities for career-track jobs.	08/27/2015 - In SENATE Committee on APPROPRIATIONS: Held in committee.
<u>AB 1144</u> Rendon (D)	Renewables Portfolio Standard Program: Credits		Provides that renewable energy credits may be used to meet certain portfolio content requirements if the credits are earned by electricity that is generated by an entity that would be excluded from the definition of an electrical corporation by operation of the exclusions for entities employing landfill or digester gas technology that meets certain requirements, including that the electricity is used at a wastewater treatment facility. Prohibits certain marketing claims.	08/17/2015 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 1173</u> Williams (D)	Water Equipment: Backflow Prevention Devices Testing		Requires, if a local health officer does not maintain a program for certificate of backflow prevention device testers, the testing and maintenance of such device be performed by a person who has received a California-specific certification for such devices from one of the specified entities or a similar certification provider deemed acceptable by the State Water Resources Control Board.	07/14/2015 - In SENATE Committee on ENVIRONMENTAL QUALITY: Not heard.

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Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 1201</u> Salas (D)	Delta: Predation by Nonnative Species	Support	Requires the State Department of Fish and Wildlife to develop a science-based plan that addresses predation by nonnative species upon species of fish listed pursuant to the State Endangered Species Act that reside all or a portion of their lives in the Sacramento-San Joaquin Delta and that considers predation reduction for all Chinook salmon and other native species not listed pursuant to the Act. Provides for input from the scientific community, water users and fishing communities.	08/27/2015 - In SENATE Committee on APPROPRIATIONS: Held in committee.
<u>AB 1242</u> Gray (D)	Water Quality and Storage		Provides provisions of law requiring a specified increase in statewide water storage capacity, and updating water strategies and implementation plans. Requires the Water Resources Control Board, in formulating policy for water quality control and adopting or approving a water quality control plan for the Sacramento-San Joaquin Delta, to take into consideration any applicable groundwater sustainability plan or alternative and available information on impacts of groundwater use and beneficial uses of water.	09/02/2015 - Re-referred to SENATE Committee on RULES.
<u>AB 1463</u> Gatto (D)	Onsite Treated Water		Requires the State Water Resources Control Board, in consultation with the Department of Public Health, the Building Standards Commission, and stakeholders, to establish water quality standards and distribution, monitoring, and reporting requirements for onsite water recycling systems prior to authorizing the use of onsite treated water in internal plumbing of residential and commercial buildings. Requires onsite treated water to be considered the same as recycled water that is produced on site.	09/04/2015 - In SENATE. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL QUALITY.
<u>AB 1550</u> Gomez (D)	Greenhouse Gases: Investment Plan: Communities		Relates to greenhouse gases and investments in communities. Requires the Greenhouse Investment Fund plan to allocate a minimum percentage of the available moneys in the Greenhouse Gas Reduction Fund to projects located within disadvantaged communities and a separate and an additional unspecified	04/11/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			percentage to projects that benefit low-income households, with a fair share of the moneys targeting households with incomes below a percentage of the federal poverty level.	
<u>AB 1586</u> Mathis (R)	Environmental Quality Act: Temperance Flat Reservoir		Prohibits the court, in an action or proceeding alleging a violation of the California Environmental Quality Act, from staying or enjoining the construction or operation of the Temperance Flat Reservoir unless the court makes certain findings.	04/04/2016 - In ASSEMBLY Committee on NATURAL RESOURCES: Reconsideration granted.
<u>AB 1587</u> Mathis (R)	Groundwater		Requires, in implementing competitive grants under the Water Quality, Supply, and Infrastructure Improvement Act of 2014, for projects that develop and implement groundwater planning requirements, special consideration be given to those projects that would create groundwater recharge basins in areas of fallow farmland. Appropriates a specified amount of funding from the proceeds of the Act for the purposes of the grant program.	04/27/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
<u>AB 1588</u> Mathis (R)	Water and Wastewater Loan and Grant Program		Requires the State Water Resources Control Board to establish a program to provide funding to counties to award low-interest loans and grants to eligible applicants for specified purposes relating to drinking water and wastewater treatment. Authorizes a county to apply for such funds. Creates the Water and Wastewater Loan and Grant Fund and provides the moneys in this fund are available to the Board to administer and implement the program. Transfers funds from the General Fund to the loan and grant fund.	04/06/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
<u>AB 1589</u> Mathis (R)	Environmental Quality Act: Exemption:Drought Mitigation		Exempts from the requirements of the California Environmental Quality Act, for the duration of a state of emergency proclaimed by the Governor due to drought conditions, certain projects that are undertaken, carried out, or approved by a public agency to mitigate those drought conditions.	04/04/2016 - In ASSEMBLY Committee on NATURAL RESOURCES: Reconsideration granted.
<u>AB 1590</u> Mathis (R)	State Water Resources Control Board:		Requires that additional members be appointed to the State Water Resources Control Board by the Legislature. Requires that	03/10/2016 - In ASSEMBLY. Read second time and amended. Re-referred

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
	Appointments		vacancies be immediately filled by the appointing power.	to Committee on WATER, PARKS AND WILDLIFE.
AB 1647 Waldron (R)	Environmental Quality: Water Storage Facilities		Exempts from the Environmental Quality Act a project to expand the storage capacity of an existing surface water storage facility, or to replace an existing surface water storage facility, that is owned and operated by a public entity if that public entity adopts, by resolution, findings and declarations that the project meets specified criteria.	04/04/2016 - In ASSEMBLY Committee on NATURAL RESOURCES: Not heard.
AB 1649 Salas (D)	State Water Policy: Storage: Joint Powers Authorities		Requires the Department of Water Resources to develop a State water policy giving priority to the formation of joint powers authorities to address critical surface water storage needs and to funding of surface water projects. Provides that specified projects will meet statewide goals and provide specified public benefits to the greatest extent.	04/27/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
AB 1694 Lackey (R)	Grant Program for School Drinking Water		Requires the State Water Resources Control Board to establish a grant program for grants to public elementary and secondary schools to improve access to, and the quality of drinking water. Specifies various types of projects for which the grants could be awarded. Provides the priority for such grants. Requires the establishment of grant application procedures. Appropriates funds therefor. Provides such funds would supplement not supplant other state funds apportioned to these local agencies.	03/31/2016 - Re-referred to ASSEMBLY Committees on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS and EDUCATION.
AB 1704 Dodd (D)	Water Rights		Requires the registrant to provide a copy of the registrant's registration form to the Department of Fish and Wildlife and agree to general conditions. Requires the State Water Resources Control Board to consult with the Department of Fish and Wildlife in establishing these general conditions and make compliance with certain Fish and Game Code requirements applicable to the diversion of water one of those conditions. Requires general conditions for small irrigation use. Imposes certain fees.	04/27/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.

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<u>AB 1713</u> Eggman (D)	Sacramento-San Joaquin Delta: Peripheral Canal	Oppose	Prohibits the construction of a peripheral canal in the Sacramento-San Joaquin Delta unless expressly authorized by an initiative voted on by the voters of California, and requires the Legislative Analyst's Office to complete a prescribed economic feasibility analysis prior to a vote authorizing the construction of a peripheral canal.	04/27/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1738</u> McCarty (D)	Building Standards: Dark Graywater		Defines dark graywater as a specified wastewater that comes from kitchen sinks and dishwashers. Requires the Department of Housing and Community Development, at the next triennial building standards rulemaking cycle, to develop and submit for approval building standards for the construction, installation, and alteration of dark graywater systems for indoor and outdoor uses.	04/20/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1749</u> Mathis (R)	Environmental Quality Act: Exemption: Recycled Water		Amends the California Environmental Quality Act which exempts projects that provide for the expansion of recycled water pipeline and directly related infrastructure within existing rights of way, and directly related groundwater replenishment, if the project does not affect wetlands or sensitive habitat where construction impacts are mitigated and undertaken to mitigate drought conditions for which an emergency was proclaimed. Exempts construction of recycled water treatment facilities and pipelines.	05/03/2016 - From ASSEMBLY Committee on NATURAL RESOURCES: Do pass to Committee on APPROPRIATIONS.
<u>AB 1755</u> Dodd (D)	Open and Transparent Water Data Act		Enacts the Open and Transparent Water Data Act. Requires the Department of Water Resources to establish a public benefit corporation that would create and manage a statewide water information accounting system to improve the ability of the State to meet the growing demand for water supply reliability and healthy ecosystems that would integrate existing water data information from multiple databases and a related clearinghouse. Requires the development of related protocols. Creates a related fund.	04/19/2016 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>AB 1773</u> Oberholte (R)	Local Government Renewable Energy		Amends existing law that authorizes a local governmental entity to receive a bill credit to a designated benefiting account, for	05/05/2016 - In ASSEMBLY. Read second time. To Consent Calendar.

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	Program		electricity exported to the electrical grid by an eligible renewable generating facility. Includes as a local governmental entity for this purpose a joint powers authority.	
<u>AB 1815</u> Alejo (D)	Global Warming Solutions Act of 2006		Requires the Environmental Protection Agency to establish a comprehensive technical assistance program, upon the appropriation of moneys from the Greenhouse Gas Reduction Fund, for eligible applicants assisting eligible communities. Requires the Agency to provide technical assistance to communities based on a specified priority. Requires the Department of Finance to include in a specified investment plan an allocation to the Agency for the technical assistance program.	05/02/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 1842</u> Levine (D)	Water: Pollution: Fines		Imposes a civil penalty for each gallon or pound of polluting material discharged. Requires that the civil penalty be reduced for every gallon or pound of the illegally discharged material that is recovered and properly disposed of by the responsible party. Prohibits a person from being subject to multiple civil penalties for the same act or failure to act.	04/27/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 1866</u> Wilk (R)	High-Speed Rail Bond Proceeds: Water Projects		Provides that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, except as specifically provided with respect to an existing appropriation for high-speed rail purposes for early improvement projects. Requires redirection of the unspent proceeds received from outstanding bonds issued for other high-speed rail purposes to fund capital expenditures for water projects.	04/11/2016 - In ASSEMBLY Committee on TRANSPORTATION; Reconsideration granted.
<u>AB 1871</u> Waldron (R)	Coastal Resources: Development: Water Supply Projects		Limits the growth-inducing impacts the Coastal Commission may consider in its review of a coastal development permit for a water supply project.	03/18/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES.
<u>AB 1882</u>	Oil and Gas: Groundwater		Requires the Division of Oil, Gas, and Geothermal Resources to	04/20/2016 - In ASSEMBLY

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Williams (D)	Monitoring		provide an opportunity and the information necessary for the State Water Resources Control Board and the appropriate regional water quality control board to review, comment on, and propose additional requirements for Class II underground injection well projects.	Committee on APPROPRIATIONS: To Suspend File.
AB 1925 Chang (R)	Desalination: Statewide Goal		Requires the State Department of Water Resources to establish a goal of a specific number of acre-feet of drinking water to be desalinated per year by a specified year and a greater number of acre-feet by a later year, as part of a comprehensive water plan that fully evaluates other, specified options.	05/04/2016 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.
AB 1928 Campos (D)	Water Efficiency Landscape Irrigation Equipment		Postpones the date by which the Resources Conservation and Development Commission is to adopt the performance standards and labeling requirements for landscape irrigation equipment prohibit the sale of that equipment unless it meets the performance standards and labeling requirements.	04/27/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
AB 1986 Wilk (R)	Water Resources: Permit to Appropriate: Application		Requires, if the State Water Resources Control Board has not rendered a final determination on an application for a permit to appropriate water within a specified time period from the date the application to appropriate water was filed, the Board to issue a notice and provide an opportunity for protests before rendering a final determination.	04/27/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
AB 1989 Jones (R)	Water and Greenhouse Gas Emissions Reduction		Requires the State Water Resources Control Board to develop and implement a grant and low-interest loan program for water projects that result in the net reduction of water-related greenhouse gas emissions.	03/30/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
AB 2022 Gordon (D)	Advanced Purified Demonstration Water	Support	Authorizes the operator of an advanced purified demonstration water facility to cause the advanced purified demonstration water to be bottled and distributed as samples for educational purposes and to promote water recycling. Prohibits the advanced purified	05/05/2016 - To SENATE Committee on ENVIRONMENTAL QUALITY.

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			demonstration water in each bottle from exceeding a specified amount. Prohibits the water from being distributed unless it meets or is superior to all federal and state drinking water standards. Requires a recycling program for distributed bottles.	
AB 2040 Melendez (R)	Outdoor Water Efficiency Act of 2016: Tax Credits		Allows, under the Personal Income Tax Law, a credit for a percentage of the amount paid or incurred by a qualified taxpayer for water-efficiency improvements on qualified real property in the state. Requires the qualified taxpayer to obtain and retain a certification of such improvements from the appropriate regional or local water agency after completion of the improvements and to provide a copy of this certification to the Franchise Tax Board upon request.	04/06/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on REVENUE AND TAXATION.
AB 2076 Garcia (D)	Water and Energy Use Efficiency: Breweries		Requires the Department of Water Resources to develop water and energy use efficiency certification guidelines for the production of beer that includes certification seals. Requires the Department of Alcoholic Beverage Control to consult in label design and approval for the use of a seal on a beer bottle. Provides the procedures for the application of certification of a brewery. Requires the submission of a certification fee.	04/11/2016 - Re-referred to ASSEMBLY Committees on WATER, PARKS AND WILDLIFE and GOVERNMENTAL ORGANIZATION.
AB 2099 Stone (D)	Safe Drinking Water Benefit		Requires the State Department of Social Services to convene a workgroup to develop recommendations for delivering a water benefit to supplement that purchase of drinking water for low-income households with inadequate access to safe drinking water. Requires a plan for identification of eligible households and the delivery of the benefit to those households. Requires the submission of a report with the recommendations to specified entities.	04/14/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
AB 2139 Williams (D)	Ocean Protection Council: Ocean Acidification		Requires the Ocean Protection Council to facilitate research and compile data on the causes and effects of ocean acidification and, to adopt recommendations for further legislative and executive actions	05/04/2016 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.

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			to address ocean acidification.	
AB 2257 Maienschein (R)	Local Agency Meeting: Agenda: Online Posting		Amends the Ralph M. Brown Act, which enables the legislative body of a local agency to call both regular and special meetings. Requires an online posting of an agenda by a local agency to have a prominent direct link to the current agenda itself. Requires the link to be on the local agency's Internet Web site homepage, not in contextual menu on the homepage. Requires the agenda to be posted in an open format meeting specified requirements, including the agenda is platform independent and machine readable.	04/25/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
AB 2292 Gordon (D)	Global Warming Solutions Act: Disadvantaged Communities		Requires the State Environmental Protection Agency to update the State Communities Environmental Health Screening Tool that identifies disadvantaged communities regarding the monitoring and regulation of sources of emissions of greenhouse gases, when it comes to investment opportunities in the multiyear investment plan for moneys in the Greenhouse Gas Reduction Fund.	04/14/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
AB 2304 Levine (D)	State Water Market Exchange	Seek Amendments	Establishes the State Water Market Exchange which requires the market exchange to create a centralized water market platform on its Internet Web site that provides ready access to information about water available for transfer or exchange. Requires the submission of certain data and information to the market exchange and the payment of an administrative fee to the exchange. Requires the development of specified procedures by the exchange.	04/12/2016 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
AB 2389 Ridley-Thomas S (D)	Special Districts: District- Based Elections		Relates to special districts, district-based elections and reapportionment. Authorizes a governing body of a special district, to require, by resolution, that the election of the members of its governing body be elected using district-based elections without being required to submit the resolution to the voters for approval. Requires the resolution to include a declaration that the change in the method of election is being made in furtherance of the purposes of the California Voting Rights Act of 2001.	05/04/2016 - From ASSEMBLY Committee on LOCAL GOVERNMENT: Do pass as amended.

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AB 2438 Waldron (R)	Environmental Quality Act		Relates to the Environmental Quality Act (CEQA). Exempts from CEQA a project for the construction and installation of a new pipeline or the maintenance, repair, restoration, reconditioning, relocation, replacement, removal, or demolition of an existing pipeline for the distribution of recycled water within a public street, highway, or right-of-way. Requires a public hearing.	04/21/2016 - In ASSEMBLY. Read second time. To third reading.
AB 2444 Garcia E (D)	Water, Climate, Coastal Protection and Outdoor Access		Enacts the California Parks, Water, Climate, and Coastal Protection and Outdoor Access for All Act of 2016 which would authorize the issuance of bonds in a specified amount pursuant to the State General Obligation Bond Law to finance a water, climate, and coastal protection and outdoor access for all program.	04/26/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
AB 2446 Gordon (D)	State Water Resources Control Board: Judicial Review		Updates provisions regarding an aggrieved party to petition the superior court for a writ of mandate for review of a decision or order issued by the State Water Resources Control Board. Provides that a decision or order under the Safe Drinking Water Act by the Board is not subject to court review if no aggrieved party petitions for such writ within a specified time period after a service of a copy of the order or decision issued by the Board.	04/19/2016 - From ASSEMBLY Committee on JUDICIARY: Do pass to Committee on APPROPRIATIONS.
AB 2456 Cooley (D)	Public Employee Retirement Benefits: Prefunding		Requires the Board of Administration of the Public Employee's Retirement System to develop, establish, and administer the State Employer's Pension Prefunding Trust Program in order to encourage State and local public employers that provide a defined benefit pension plan to their employees to effectively manage their pension contributions.	03/17/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on PUBLIC EMPLOYEES, RETIREMENT AND SOCIAL SECURITY.
AB 2468 Hadley (R)	Public Employees' Retirement System		Authorizes a public agency that has contracted with the Board of Administration of PERS to offer an alternative formula from that required by the California Public Employees Pension Reform Act to be applicable to certain miscellaneous, nonsafety employees, if specified contingencies are satisfied. Requires that such employees	04/12/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on PUBLIC EMPLOYEES, RETIREMENT AND SOCIAL SECURITY.

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			who are not new members, that were employed by a public employer that did not contract with PERS until a specified date, be covered by a default benefit formula.	
<u>AB 2480</u> Bloom (D)	Source Watersheds: Financing		Requires the State Water Resources Control Board to develop investment plans that prioritize actions for restoration and conservation to improve watershed function in the watershed that flow into the Shasta Reservoir and the Oroville Reservoir.	04/12/2016 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>AB 2488</u> Dababneh (D)	Protected Species: Stickleback: Possession	Support	Permits the Department of Fish and Wildlife to authorize, under the State Endangered Species Act, the take of unarmored threespine stickleback attributable to the periodic dewatering, inspection, maintenance, or repair of the Metropolitan Water District of Southern California's Foothill Feeder water supply facility from Castaic Dam to the Joseph Jensen Treatment Plant in the County of Los Angeles, if certain conditions are satisfied.	05/05/2016 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 2550</u> Patterson (R)	Instream Flow Curtailments and Compensation		Requires the State Water Resources Control Board to financially compensate a person who is unable to divert the full amount of water authorized under his or her permit or license due to a board-issued instream flow curtailment, and a person who is required to file a statement of diversion and use is unable to divert the same amount of water in the succeeding year due to a board-issued instream flow curtailment.	03/08/2016 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.
<u>AB 2551</u> Gallagher (R)	Contract Procurement: Surface Storage Projects		Allows a local agency to use the construction management at-risk, design-build, or design-build operate method of delivery on a surface storage project. Requires such contracts to be awarded on the best value basis or to the lowest responsible bidder. Establishes a procurement process for these contracts. Provides reasons which would prohibit a contracting entity from being prequalified or short-listed.	04/27/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 2578</u>	Environmental Quality		Exempts from the requirements of the California Environmental	03/18/2016 - In ASSEMBLY. Read

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Bigelow (R)	Act: Exemptions: Water Service		Quality Act, a project within a public street or highway or other public right-of-way for the maintenance, repair, restoration, reconditioning, relocation, replacement, removal or demolition of an existing water distribution pipeline to address water leakage. Exempts activities undertaken by a local agency in response to a drought to acquire water supplies, extend service, or provide water for drinking and sanitation.	second time and amended. Re-referred to Committee on NATURAL RESOURCES.
AB 2583 Frazier (D)	Sacramento-San Joaquin Delta Reform Act of 2009	Oppose	Relates to the Sacramento-San Joaquin Delta Reform Act of 2009, the Delta Stewardship Council, the Delta Plan and the California Water Fix. Provides that the new Delta water conveyance infrastructure is interdependent parts of a system. Amends the point of diversion to a point on the Sacramento River. Prohibits construction of a new Delta conveyance facility until contracts are signed by contractors who will receive the water that commit them to pay costs and to mitigate facility property taxes.	04/19/2016 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Failed passage.
AB 2594 Gordon (D)	Stormwater Resources: Use of Captured Water		Authorizes a public entity that captures stormwater, in accordance with a stormwater resource plan, before the water reaches a natural channel to use the captured stormwater.	04/19/2016 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
AB 2601 Eggman (D)	Building Standard: Residential Property: Graywater		Requires the Department of Housing and Community Development to adopt and submit to Building Standards Commission for approval amendments to the building standards adopted pursuant to these provisions that require that all new single-family and duplex residential dwelling units include specified components to allow the separate discharge of graywater for direct irrigation.	03/10/2016 - To ASSEMBLY Committee on HOUSING AND COMMUNITY DEVELOPMENT.
AB 2617 Mayes (R)	Water Efficiency Measures		Requires the Energy Commission to develop and solicit comments on a proposed report, in consultation with certain subject matter experts to issue a final report that contains the projected benefits of recommended voluntary water efficiency measures and an analysis of any unintended adverse environmental impacts.	04/14/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.

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<u>AB 2801</u> Gallagher (R)	Local Government: Fees and Charges: Protest		Requires a local agency to keep written protests securely stored and sealed until a public hearing. Prohibits an agency from requiring such protest to include property identification other than street address unless there is not a street address, and from requiring such protest to be submitted on an agency form. Requires the agency maintain such protests for a minimum time period following the date of the hearing to consider the protests.	05/04/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 2890</u> Env Safety & Toxic Material Cmt	Drinking Water and Wastewater Operator Certification		Requires the State Water Resources Control Board to appoint an advisory committee to examine and certify people to operate water treatment plants and water distribution systems, and to review all proposed regulations and make recommendations to the Board. Relates to water treatment operator-in-training. Revises procedures for the suspension or revocation of a valid operator license. Authorizes certificate reciprocity. Provides certificate application fraud civil liability.	04/28/2016 - In ASSEMBLY. Read second time. To third reading.
<u>AB 2910</u> Local Government Cmt	Local Government: Organization: Omnibus Bill		Revises provisions of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 to remove references to a public agency's current service area and instead include references to the public agency's jurisdictional boundaries. Provides that a purpose of a local agency formation commission is to encourage government services efficiency. Relates to commission membership. Relates to agency reorganization. Relates to uncollected revenues and taxes upon disincorporation.	05/05/2016 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>ACA 8</u> Bloom (D)	Local Government Financing: Water Facilities: Voters		Proposes an amendment to the Constitution to create an exception to a limit for a rate imposed by a city, county, city and county, or special district to service bonded indebtedness incurred to fund the construction, reconstruction, rehabilitation, or replacement of wastewater treatment facilities and related infrastructure, potable water producing facilities and related infrastructure, nonpotable water producing facilities and related infrastructure, and stormwater treatment facilities and infrastructure.	02/18/2016 - INTRODUCED.

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SB 7 Wolk (D)	Housing: Water Meters: Multi-unit Structures		Requires a landlord to make submeter disclosures to a tenant prior to executing a rental agreement. Relates to tenant billing procedures and requirements. Authorizes building standards that require the installation of water submeters in multiunit residential buildings. Provides structure exemptions. Relates to landlord requirements. Relates to the use of meters or submeters in new mixed-use residential and commercial structures as a condition for service. Requires licensed contractors do the installation.	09/08/2015 - In ASSEMBLY. Motion to reconsider.
SB 20 Pavley (D)	State Water Resiliency Investment Act		Creates the State Water Resiliency Investment Fund. Provides that moneys in the Fund are available for the purpose of providing a more dependable water supply in the State. Creates various accounts within the Fund for prescribed purposes.	08/26/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
SB 32 Pavley (D)	Global Warming Solutions Act of 2006		Requires the State Air Resources Board to approve a specified statewide greenhouse gas emission limits that are the equivalent to a specified percentage below the 1990 level to be achieved by 2030. Revises current provisions of existing law regarding the implementation of the next update of a greenhouse gas scoping plan under existing law. Requires reports regarding reaching these limits.	09/10/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES.
SB 122 Jackson (D)	Environmental Quality Act: Record of Proceedings		Amends the Environmental Quality Act. Relates to a database for the collection, storage, retrieval, and dissemination of environmental documents, notices of exemption, notices of preparation, notices of determination, and notices of completion provided to the office that shall be available online to the public through the internet. Provides for the phase-in of electronic documents. Requires the lead agency to submit to the State Clearinghouse a sufficient number of environmental documents for review.	08/27/2015 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.
SB 163	Wastewater Treatment:	Oppose	Declares the discharge of treated wastewater from ocean outfalls is	09/08/2015 - Re-referred to

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Hertzberg (D)	Recycled Water		a waste and unreasonable use of water in light of certain conditions. Requires such facility to achieve a specified percentage of reuse of the actual annual flow for beneficial purposes. Prohibits such discharge except as backup discharge. Provides procedures for related exemption requests. Requires a prescribed plan to meet these provisions.	ASSEMBLY Committee on RULES.
SB 223 Galgiani (D)	Division of Boating and Waterways: Oversight Committee		Requires the Division of Boating and Waterways to establish an advisory and oversight committee to evaluate and monitor the activities of the Division relating to the management and control or eradication of invasive aquatic plants. Provides the expertise of members of the committee. Requires the committee to meet a specified amount of times per year and to communicate any findings or recommendations to the Division.	08/19/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.;08/27/2015 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
SB 248 Pavley (D)	Oil and Gas		Provides for an inspection program for all activities regulated pursuant to provisions concerning drilling, operation, maintenance, and abandonment of oil and gas wells and certain tanks and facilities. Requires inspections to be reported and posted, and the recording of information in a well history, including fluid injection, chemical composition, and waste disposal injection. Provides for shutdown. Requires updating related regulations. Requires notification and clearance of chemical injection.	08/27/2015 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.
SB 286 Hertzberg (D)	Electricity: Direct Transactions		Requires the Public Utilities Commission to adopt and implement a schedule that implements a specified phase-in period for expanding direct transactions for individual retail nonresidential end-use customers over a maximum time period, raising the allowable limit of kilowatthours that can be supplied by other electrical corporation's distribution service territory to that corporation's share of the gigawatthours. Requires such customers to be responsible for their share of the costs of specified programs.	03/01/2016 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
SB 471	Water, Energy, Reduction		Includes reduction of greenhouse emissions associated with water	08/27/2015 - In ASSEMBLY

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Pavley (D)	of Greenhouse Gas Emissions		treatment among the investments that are eligible for funding from the Greenhouse Gas Reduction Fund. Requires the State Water Resources Control Board to establish a grant and loan program for water projects that result in the net reduction of water-related greenhouse gas emissions.	Committee on APPROPRIATIONS: Held in committee.
SB 551 Wolk (D)	State Water Policy: Water and Energy Efficiency	Seek Amendments	Declares the policy of the state that water use and water treatment shall operate in a manner that is as energy efficient as is feasible and energy use and generation shall operate in a manner that is as water efficient as is feasible. Requires all relevant state agencies to consider this state policy when revising, or establishing policies, regulations, and grant criteria when pertinent to these uses of water and energy.	08/27/2015 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
SB 552 Wolk (D)	Public Water Systems: Disadvantaged Communities		Requires the State Water Resources Control Board to hold at least one initial public meeting prior to ordering the consolidate or extension of public water system service and to obtain the consent of any domestic well owner. Provides any affected resident and domestic well owner within the service area who does not consent is ineligible for any future water-related grant funding. Requires the Board to compensate certain water systems. Prohibits a charge increase for certain customers.	02/26/2015 - 07/09/2015 - Re-referred to ASSEMBLY Committee on RULES.
SB 554 Wolk (D)	Delta Levee Maintenance		Relates to the maintenance or improvement of project or nonproject levees in the Sacramento-San Joaquin Delta. Declares legislative intent to reimburse up to a certain percent of costs incurred in any year for the maintenance or improvement of levees in excess of a specified sum per mile of levee and authorizes a specified board to advance funds in an amount that does not exceed a certain percent of the estimated state share to an eligible local agency.	04/28/2016 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.
SB 814 Hill (D)	Drought: Excessive Water Use: Urban Retail Water Supply	Support Amendments	Requires each urban retail water supplier to establish a method to identify and restrict excessive water use. Authorizes the establishment of a rate structure that penalizes such excessive water	05/03/2016 - In SENATE. Read second time. To third reading.

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			users. Authorizes an excessive water use ordinance, rule, or tariff condition. Makes a violation thereof an infraction with specified monetary penalties.	
SB 885 Wolk (D)	Construction Contracts: Indemnity	Oppose	Specifies, for construction contracts, that a design professional only the has the duty to defend claims that arise out of, or pertain or relate to, negligence, recklessness, or willful misconduct of the design professional. Provides that a design professional would not have a duty to defend claims or lawsuits against any other person or entity arising from a construction project, except that person or entity's reasonable defense costs arising out of the design professional's degree of fault.	05/03/2016 - From SENATE Committee on JUDICIARY: Do pass as amended.
SB 919 Hertzberg (D)	Water Supply: Creation or Augmentation of Local Water		Requires the Public Utilities Commission to address the oversupply of renewable energy resources through a tariff or other economic incentive for electricity purchased by customers operating facilities that create or augment local water supplies to reduce the cost of electricity to those facilities.	05/03/2016 - In SENATE. Read second time. To third reading.
SB 970 Leyva (D)	Greenhouse Gas Reduction Fund: Grants: Recyclables		Requires the Department of Resources Recycling and Recovery, in awarding a grant under the grant program under the Greenhouse Gas Reduction Fund for financial assistance to reduce such gas emissions, to consider the amount of greenhouse gas emission reductions that may result from the project and the amount of organic material that may be diverted from landfills as a result of the project.	04/25/2016 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
SB 974 Governance and Finance Cmt	Local Government: Omnibus	Support	Amends existing law regarding local government to include a county recorder storing survey records, fees for copies of military discharges, notary public commissioning, local financial reporting, city financial condition reporting, investment of local sinking fund moneys, public hearings under the Subdivision Map Act, local safety land use elements, the redevelopment and reuse of Fort Ord, sewage services and facilities fees, use of design-build, vehicle	05/02/2016 - To ASSEMBLY Committee on LOCAL GOVERNMENT.

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			license fees, and income tax collection.	
SB 995 Pavley (D)	Well Standards		Requires the Department of Water Resources to update well standards for certain types of wells based on existing knowledge. Establishes an advisory panel to identify critical gaps in existing knowledge about the best practices for well construction, alteration, maintenance, and destruction for these wells.	04/20/2016 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on APPROPRIATIONS.
SB 1026 Nielsen (R)	Lake or Streambed Alteration Agreements		Relates to lake or streambed alteration agreement. Limits the diversions and obstructions governed by alteration agreement requirements to the diversions and obstructions that alter the bed, channel, or bank of a river, stream or lake. Exempts routine maintenance and repair of facilities for instream agricultural diversions.	04/12/2016 - In SENATE Committee on NATURAL RESOURCES AND WATER: Failed passage.
SB 1043 Allen (D)	Biogas and Biomethane		Requires the State Air Resources Board to consider and adopt policies to significantly increase the sustainable production and use of biogas. Requires the Board, to ensure the production and use of renewable gas provides direct environmental benefits and identify barriers to the rapid development and use of biogas and potential sources of funding. Revises the definition of biogas and biomethane for pipeline integrity and safety purposes.	04/25/2016 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
SB 1173 Hertzberg (D)	Plumbing Fixtures: CalConserve Water Use Efficiency		Requires for commercial property the replacement of any noncompliant fixture or fitting in specified additions, alterations, and improvements to such property and the replacement of any noncompliant plumbing fixture or fitting in all such property in accordance with a specified schedule based on floor space. Provides related definitions. Authorizes county offices of education and school district boards to receive moneys from the CalConserve Water Use Efficiency Fund for efficiency projects.	03/30/2016 - In SENATE. Read second time and amended. Re-referred to Committee on TRANSPORTATION AND HOUSING.
SB 1213 Wieckowski	Renewable Energy: Biosolids: Matching Grants		Requires the Energy Resources Conservation Commission to develop and implement the Biosolids to Clean Energy Grant	05/02/2016 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
(D)			Program to provide matching funds to local wastewater agencies for biosolids to clean energy capital projects. Appropriates a specified amount of funds annually to the Commission for purposes of the program.	
SB 1233 McGuire (D)	Joint Powers Authority: Water Bill Savings Act		Enacts the Water Bill Savings Act. Authorizes a joint powers authority to provide funding for a customer of a local agency or its publicly owned utility to acquire, install, or repair water efficiency improvement on the customer's property served by the local agency or its publicly owned utility. Requires the customer to repay the authority through an efficiency charge on the customer's water bill to be established and collected by the local agency or its publicly owned utility on behalf of the authority.	05/04/2016 - In SENATE. Read second time and amended. To third reading.
SB 1260 Allen (D)	Stormwater: Municipalities: Online Resource Center		Requires the State Water Resources Control Board to establish an online resource center that addresses measures available for municipalities to comply with municipal stormwater permit requirements. Authorizes the inclusion of certain information.	04/20/2016 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on APPROPRIATIONS.
SB 1262 Pavley (D)	Water Supply Planning		Requires a city or county that determines a project is subject to the California Environmental Quality Act to identify any water system whose service area includes the project site and any water system adjacent to the project site. Requires additional assessment information if the water is not drinking water quality. Provides that hauled water or groundwater from a probationary basin are not sources of water for the purposes of an assessment. Revises the definition of sufficient water supply.	04/27/2016 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
SB 1263 Wieckowski (D)	Public Water System: Permits		Relates to public water systems permits. Prohibit an application for a permit for a new public water system from being deemed complete unless the applicant has submitted a preliminary technical report to the state board. Allows the state board to impose technical, financial, or managerial requirements on the permit.	05/03/2016 - In SENATE. Read second time. To third reading.

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
SB 1317 Wolk (D)	Conditional Use Permit: Groundwater Extraction	Oppose Unless Amended	Requires a city or county overlying a basin designated as a high- or medium- priority basin to establish a process for the issuance of conditional use permits for the development of a groundwater extraction facility in order to prevent a new groundwater extraction facility from contributing to or creating an undesirable result. Requires a conditional use permit to develop such facility. Provides a city or county does not need a process for the issuance of such permit, under specified conditions.	04/26/2016 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
SB 1318 Wolk (D)	Local Government: Drinking Water and Wastewater Service		Extends a prohibition in existing law the prohibits a local agency formation commission from approving a specified annexation of land to a qualified special district. Prohibits such commission from approving a sphere of influence unless it results in improved service to a disadvantaged community. Relates to required processes regarding safe drinking water or adequate wastewater treatment in disadvantaged communities.	04/20/2016 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on APPROPRIATIONS.
SB 1340 Wolk (D)	Water Conservation in Landscaping Act		Adds to the model water efficient landscape ordinance a permit requirement for the installation or replacement of specified automatic irrigation systems, or the expansion of the same specified automatic irrigation system to increase the irrigated area by a specified percentage or more, for a landscape project. Allows the governing body of a local agency to adopt an ordinance prescribing fees for filing an application for the permit, subject to the restrictions.	04/13/2016 - In SENATE. Read second time. To third reading.
SB 1383 Lara (D)	Short-Lived Climate Pollutants		Requires the State Air Resources Board to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a specified reduction in methane, hydro-fluorocarbon gases, and anthropogenic black carbon below 2013 levels by 2030.	05/02/2016 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
SB 1415 Bates (R)	Environmental Quality Act: Local Water Projects		Amends the Environmental Quality Act which requires a lead agency to call a scoping meeting for transportation-related projects	04/21/2016 - Re-referred to SENATE Committee on APPROPRIATIONS.

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			and projects of statewide, regional, or areawide significance to require that lead agency to call a scoping meeting to receive public comments for local projects for stormwater or dry weather runoff capture and reuse, water recycling, or wastewater treatment to improve water quality.	
<u>SB 1425</u> Pavley (D)	Water Energy Nexus Registry		Requires the State Air Resources Board to develop a registry of greenhouse gas emission resulting from the water-energy nexus using the best available data including specified actions of a former registry as they relate to the water-energy nexus.	05/02/2016 - In SENATE Committee on APPROPRIATIONS: To Suspend File.
<u>SB 1440</u> Cannella (R)	Water Supply and Infrastructure Improvement		Requires a lead agency, in certifying the environmental impact report and in granting approvals for certain water storage projects funded, in whole or in part, by Proposition I, to comply with specified procedures. Authorizes the lead agency to concurrently prepare the record of proceedings for the project. Requires the Judicial Council to adopt a rule of court to establish procedures applicable to actions or proceedings seeking judicial review.	03/10/2016 - To SENATE Committees on ENVIRONMENTAL QUALITY and JUDICIARY.
<u>SB 1456</u> Galgiani (D)	Safe Drinking Water State Revolving Fund Law		Amends an existing law which establishes the Safe Drinking Water State Revolving Fund. Authorizes certain costs to be funded by loans or other repayable financing, grants, principal forgiveness, or a combination of grants and loans or other financial assistance, regardless of whether a public water system is a community public water system or a not-for-profit noncommunity public water system. Limits the principal forgiveness to capital improvements serving specified severely disadvantaged communities.	04/27/2016 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>HR 2689</u> Walters (R)	Eligible Water Resources Projects	Support	Clarifies the scope of eligible water resources projects under the Water Resources Development Act of 1986 and the Water Resources Reform and Development Act of 2014.	06/10/2015 - In HOUSE Committee on TRANSPORTATION & INFRASTRUCTURE: Referred to Subcommittee on WATER RESOURCES AND ENVIRONMENT.
<u>HR 4615</u>	Water Department Gross	Support	Amends the Internal Revenue Code of 1986 to exclude from gross	02/25/2016 - To HOUSE Committee on

IRWD 2016 LEGISLATIVE MATRIX
Updated 05/09/2016

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
Huffman (D)	Income Exclusion		income amounts received from a water department for water conservation efficiency measures and water runoff management improvements.	WAYS AND MEANS.
<u>S 2533</u> Feinstein (D)	Water Supplies for California and Drought Resiliency		Provides short-term water supplies to drought-stricken California, provides for long-term investments in drought resiliency throughout the Western United States.	02/10/2016 - To SENATE Committee on ENERGY AND NATURAL RESOURCES.

Exhibit "B"

2016 Legislative Update Report Links to Bill Texts

Bill Number/Version Date	Link to Bill Text
AB 1755 (Dodd), as amended May 11, 2016	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1755
AB 2304 (Levine), as amended May 11, 2016.	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB2304
SB 163 (Hertzberg), as amended September 3, 2015	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB163
SB 970 (Leyva), as amended May 105, 2016	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB970

EXHIBIT “C”
Water Foundation’s Proposal Related to Water and Sewer Rates

3/31/16

Proposed Amendments to Proposition 218 Omnibus Implementation Act

Amendment 1. Amend Section 53750 of the Government Code to read:

53750. For purposes of Article XIII C and Article XIII D of the California Constitution and this article:

(a) “Agency” means any local government as defined in subdivision (b) of Section 1 of Article XIII C of the California Constitution.

(b) “Assessment” means any levy or charge by an agency upon real property that is based upon the special benefit conferred upon the real property by a public improvement or service, that is imposed to pay the capital cost of the public improvement, the maintenance and operation expenses of the public improvement, or the cost of the service being provided. “Assessment” includes, but is not limited to, “special assessment,” “benefit assessment,” “maintenance assessment,” and “special assessment tax.”

(c) “District” means an area that is determined by an agency to contain all of the parcels that will receive a special benefit from a proposed public improvement or service.

(d) “Drainage system” means any system of public improvements that is intended to provide for erosion control, for landslide abatement, or for other types of water drainage.

(e) “Extended,” when applied to an existing tax or fee or charge, means a decision by an agency to extend the stated effective period for the tax or fee or charge, including, but not limited to, amendment or removal of a sunset provision or expiration date.

(f) “Flood control” means any system of public improvements that is intended to protect property from overflow by water.

(g) “Identified parcel” means a parcel of real property that an agency has identified as having a special benefit conferred upon it and upon which a proposed assessment is to be imposed, or a parcel of real property upon which a proposed property-related fee or charge is proposed to be imposed.

(h) (1) “Increased,” when applied to a tax, assessment, or property-related fee or charge, means a decision by an agency that does either of the following:

(A) Increases any applicable rate used to calculate the tax, assessment, fee, or charge.

1 (B) Revises the methodology by which the tax, assessment, fee, or charge is calculated, if
2 that revision results in an increased amount being levied on any person or parcel.

3 (2) A tax, fee, or charge is not deemed to be “increased” by an agency action that does
4 either or both of the following:

5 (A) Adjusts the amount of a tax, fee, or charge in accordance with a schedule of
6 adjustments, including a clearly defined formula for inflation adjustment that was adopted
7 by the agency prior to November 6, 1996.

8 (B) Implements or collects a previously approved tax, fee, or charge, so long as the rate is
9 not increased beyond the level previously approved by the agency, and the methodology
10 previously approved by the agency is not revised so as to result in an increase in the
11 amount being levied on any person or parcel.

12 (3) A tax, assessment, fee, or charge is not deemed to be “increased” in the case in which
13 the actual payments from a person or property are higher than would have resulted when
14 the agency approved the tax, assessment, fee, or charge, if those higher payments are
15 attributable to events other than an increased rate or revised methodology, such as a
16 change in the density, intensity, or nature of the use of land.

17 (i) “Notice by mail” means any notice required by Article XIII C or XIII D of the California
18 Constitution that is accomplished through a mailing, postage prepaid, deposited in the
19 United States Postal Service and is deemed given when so deposited. Notice by mail may be
20 included in any other mailing to the record owner that otherwise complies with Article
21 XIII C or XIII D of the California Constitution and this article, including, but not limited to,
22 the mailing of a bill for the collection of an assessment or a property-related fee or charge.

23 (j) “Proportional cost of the service attributable to the parcel.” when applied to a fee or
24 charge for water or sewer service, means the share of the total cost of providing water or
25 sewer service to users within the service area reasonably attributable to the parcel. The
26 total cost of providing water or sewer service includes all costs of acquiring water and
27 water rights, costs of collecting, conveying, treating, and managing water and wastewater,
28 costs of satisfying all regulatory requirements lawfully imposed on water and sewer
29 service providers, and costs of providing communitywide water service in an equitable
30 manner, including the cost of lifeline water rates.

31 ~~(j)~~(k) “Record owner” means the owner of a parcel whose name and address appears on
32 the last equalized secured property tax assessment roll, or in the case of any public entity,
33 the State of California, or the United States, means the representative of that public entity at
34 the address of that entity known to the agency.

35 (l) “Sewer service” means services provided by all real estate, fixtures, and personal
36 property owned, controlled, operated, or managed in connection with or to facilitate
37 sewage collection, treatment, or disposition for sanitary or drainage purposes, including
38 any and all lateral and connecting sewers, interceptors, trunk and outfall lines and sanitary
39 sewage treatment or disposal plants or works, and any and all drains, conduits, and outlets
40 for surface or storm waters, and any and all other works, property or structures necessary

1 or convenient for the collection or disposal of sewage, industrial waste, or surface or storm
2 waters. "Sewer system" shall not include a sewer system which merely collects sewage on
3 the property of a single owner.

4 ~~(k)~~(m) "Registered professional engineer" means an engineer registered pursuant to the
5 Professional Engineers Act (Chapter 7 (commencing with Section 6700) of Division 3 of the
6 Business and Professions Code).

7 ~~(l)~~(n) "Vector control" means any system of public improvements or services that is
8 intended to provide for the surveillance, prevention, abatement, and control of vectors as
9 defined in subdivision (k) of Section 2002 of the Health and Safety Code and a pest as
10 defined in Section 5006 of the Food and Agricultural Code.

11 ~~(m)~~(o) "Water service" means services provided by any system of public improvements
12 intended to provide for the production, storage, supply, treatment, or distribution of water
13 from any source.

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16 **Amendment 2.** Amend Section 53755 of the Government Code, to read:

17 53755. (a) (1) The notice required by paragraph (1) of subdivision (a) of Section 6 of
18 Article XIII D of the California Constitution of a proposed increase of an existing fee or
19 charge for a property-related service being provided to a parcel may be given by including
20 it in the agency's regular billing statement for the fee or charge or by any other mailing by
21 the agency to the address to which the agency customarily mails the billing statement for
22 the fee or charge.

23 (2) The notice required by paragraph (1) of subdivision (a) of Section 6 of Article XIII D of
24 the California Constitution of a proposed new fee or charge may be given in the manner
25 authorized for notice of an increase of a fee or charge if the agency is currently providing an
26 existing property-related service to the address.

27 (3) If the agency desires to preserve any authority it may have to record or enforce a lien
28 on the parcel to which service is provided, the agency shall also mail notice to the
29 recordowner's address shown on the last equalized assessment roll if that address is
30 different than the billing or service address.

31 (b) One written protest per parcel, filed by an owner or tenant of the parcel, shall be
32 counted in calculating a majority protest to a proposed new or increased fee or charge
33 subject to the requirements of Section 6 of Article XIII D of the California Constitution.

34 (c) One vote per parcel, filed by an owner or tenant of the parcel, shall be counted in
35 determining whether a proposed fee or charge is approved by a majority vote pursuant to
36 subdivision (c) of Section 6 of Article XIII D of the California Constitution.

37 ~~(e)~~(d) Any agency that bills, collects, and remits a fee or charge on behalf of another agency
38 may provide the notice required by Section 6 of Article XIII D of the California Constitution
39 on behalf of the other agency.

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Amendment 3. Add Section 53756.5 to the Government Code, to read:

53756.5. (a) An agency with authority to levy a property-related fee or charge for any purpose may also levy a regulatory fee or charge for that purpose. If the agency determines to levy a regulatory fee or charge pursuant to this section, it shall levy a property related fee or charge for the identified purpose at a rate or pursuant to a schedule of rates sufficient to and with the primary purpose of funding provision of the service at a service level sufficient to support the reasonable use of the property, as determined by the agency. The levy of the property related fee or charge shall satisfy all of the requirements for a property related fee or charge set out in Article 13D, Section 6, of the California Constitution, including that the amount of the fee or charge shall be proportional to the cost of providing the service to the parcel.

(b) The agency may additionally levy a separate and distinct fee or charge for the service for which the property-related fee or charge is levied to achieve an identified regulatory purpose, primarily by creating price signals to encourage or discourage specific service consumption patterns or other related behavior. Allowable regulatory purposes include but are not limited to:

(1) To deter excess consumption of a service, such as domestic water service, as determined by the local agency.

(2) To encourage adoption of technologies supporting more efficient use of the service.

(3) To comply with goals of avoiding waste and unreasonable use of water pursuant to Article X, Section 2, of the California Constitution.

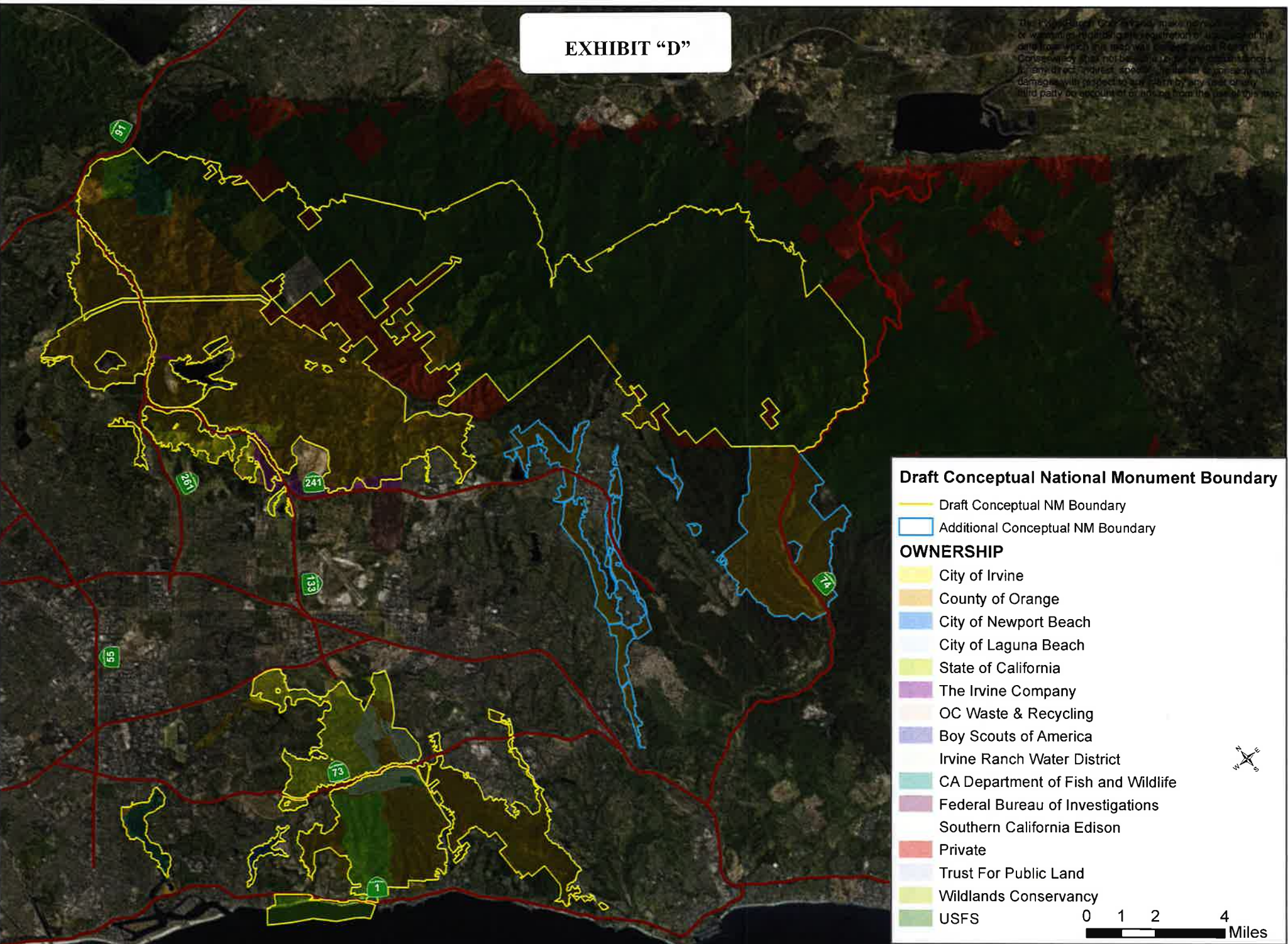
(c) A regulatory fee or charge may raise revenue as an incident to its regulatory purpose, and any revenue produced shall be used only to pay the costs of providing the service or for lowering the rate or rate structure of the associated property related fee. A regulatory fee or charge meeting the requirements of this subsection shall not be construed to exceed the reasonable costs to the local agency of providing water service.

(d) Consideration and adoption of a property-related and an associated regulatory fee or charge shall comply with the notice, hearing, protest, and election requirements, if any, required by Article 13D, Section 6, of the California Constitution. However, the requirements of subdivision (b)(3) of Section 6 shall not apply to any regulatory fee or charge levied pursuant to this section.

(e) Nothing in this section shall be construed to require that any local agency adopt a regulatory fee or take other measures to create incentives to alter water use practices.

EXHIBIT "D"

This map and any data provided herein are for informational purposes only and do not constitute a warranty, representation or agreement of any kind. The data from which this map was prepared is the best available information and is not guaranteed to be accurate. No responsibility is assumed for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user of any third party on account of or arising from the use of this map.



Draft Conceptual National Monument Boundary

- Draft Conceptual NM Boundary
- Additional Conceptual NM Boundary

OWNERSHIP

- City of Irvine
- County of Orange
- City of Newport Beach
- City of Laguna Beach
- State of California
- The Irvine Company
- OC Waste & Recycling
- Boy Scouts of America
- Irvine Ranch Water District
- CA Department of Fish and Wildlife
- Federal Bureau of Investigations
- Southern California Edison
- Private
- Trust For Public Land
- Wildlands Conservancy
- USFS



[DISCUSSION DRAFT]

114TH CONGRESS
2^D SESSION

H. R. _____

To establish the Santa Ana Mountains to Sea National Monument consisting of nationally significant natural and cultural resources of the historic Santa Ana Mountains, Cleveland National Forest, and other lands in Orange County, California, to provide for conservation, collaborative stewardship, and public use and enjoyment of these resources, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. ROYCE introduced the following bill; which was referred to the Committee on _____

A BILL

To establish the Santa Ana Mountains to Sea National Monument consisting of nationally significant natural and cultural resources of the historic Santa Ana Mountains, Cleveland National Forest, and other lands in Orange County, California, to provide for conservation, collaborative stewardship, and public use and enjoyment of these resources, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

2 (a) **SHORT TITLE.**—This Act may be cited as the
3 “Santa Ana Mountains to Sea National Monument Estab-
4 lishment Act”.

5 (b) **TABLE OF CONTENTS.**—The table of contents of
6 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings.
- Sec. 3. Establishment of Santa Ana Mountains to Sea National Monument.
- Sec. 4. Management of the Monument.
- Sec. 5. Monument plan.
- Sec. 6. Acquisition of land.
- Sec. 7. Advisory Committee.
- Sec. 8. Clarification of Effect of Act.
- Sec. 9. Definitions.

7 **SEC. 2. FINDINGS.**

8 The Congress makes the following findings:

9 (1) In the heart of densely populated southern
10 California lies a magnificent over 100,000 acre net-
11 work of permanently preserved land and open space,
12 38,000 acres of which were designated in 2006 as a
13 National Natural Landmark by the Department of
14 the Interior and as California’s first Natural Land-
15 mark in 2008 for the land’s exceptional biological
16 and geological attributes.

17 (2) The Cleveland National Forest, established
18 in 1908 by President Theodore Roosevelt and named
19 for President Grover Cleveland, is the southernmost
20 national forest in California. The west-facing slope
21 of the northern and central Santa Ana Mountains

1 are dominant features within this landscape, includ-
2 ing elevations ranging from approximately 1,200 feet
3 at the mouth of Silverado Canyon to over 5,600 feet
4 at Santiago Peak.

5 (3) The National Forest is an important habi-
6 tat link to surrounding regional wildlife preserves.
7 Chaparral and coastal sage scrub habitats are char-
8 acteristic of the local landscape. The area contains
9 a number of oak woodlands and grassy meadows.
10 Certain creeks have been designated as critical habi-
11 tat for one or more threatened or endangered spe-
12 cies, including southern steelhead (*Oncorhynchus*
13 *mykiss*), speckled dace (*Rhinichthys osculus*), the
14 southwestern pond turtle (*Clemmys marmorata*
15 *pallida*), and southwestern arroyo toad (*Bufo*
16 *californicus*). Other endangered, threatened and sen-
17 sitive species in this habitat include California
18 gnatcatcher (*Polioptila californica*), California spot-
19 ted owl (*Strix occidentalis*), and least Bell's vireo
20 (*Vireo bellii pusillus*). Chiquito Basin, a Special In-
21 terest Area in the upland portion of the Santa Ana
22 Mountains, has a number of endemic and rare
23 plants, including San Miguel savory (*Satureja*
24 *chandleri*) and Fish's milkwort (*Polygala cornuta*
25 *var. fishiae*).

1 (4) Historic and prehistoric sites can be found
2 in several of the canyons. Plant materials tradition-
3 ally used by Native Americans thrive in several loca-
4 tions.

5 (5) The Cleveland National Forest is the
6 wildland backdrop for millions of Orange County
7 residents, whose communities are minutes away
8 from this part of the National Forest System. The
9 Santa Ana Mountains are an important day-use area
10 for Orange County, offering open-space links to sur-
11 rounding communities, and providing opportunities
12 for challenge, solitude, and contemplation close to
13 urban populations, as well as exceptional trail-based
14 and riparian recreation.

15 (6) Since 1866, when the Rancho San Joaquin,
16 Rancho Lomas de Santiago, and Rancho Santiago
17 Santa Ana were combined by James Irvine and his
18 partners to establish the Irvine Ranch, its history
19 has reflected the rich tradition of California agri-
20 culture and the bounty made possible by industrious
21 settlers, fertile land, and abundant sunshine.

22 (7) Owing to the continuing stewardship of The
23 Irvine Company since its founding in 1864, along
24 with the extraordinary efforts of a wide variety of
25 government, private, nonprofit, and other partners,

1 more than half of the original Irvine Ranch has been
2 permanently protected and shall remain undeveloped
3 in perpetuity.

4 (8) The historic Irvine Ranch, along with por-
5 tions of the Trabuco Ranger District of the Cleve-
6 land National Forest and wilderness parks and pre-
7 serves owned by the County of Orange and other
8 local governments, comprise a 156-square mile
9 swath of preserved land and natural open space ex-
10 tending from the crest of the coastal mountains to
11 the Pacific Ocean.

12 (9) The open space of the historic Irvine Ranch
13 and adjacent areas of the California Floristic Prov-
14 ince are home to a wide array of threatened and en-
15 dangered plant and animal species found nowhere
16 else, and many of these lands were the setting of the
17 first Natural Community Conservation Planning
18 Agreement in 1996, which protected the California
19 gnatcatcher and a large list of protected species
20 while allowing responsible, well-considered develop-
21 ment.

22 (10) Designation of open space within the
23 boundary of the historic Irvine Ranch and a sur-
24 rounding landscape of other connected protected
25 open space as a National Monument would perma-

1 nently protect the unique biological, cultural, geo-
2 logical, and historic values of the area for present
3 and future generations, while enhancing opportuni-
4 ties for collaborative stewardship, scientific research,
5 public education, and continued recreation on,
6 among other things, the 22-mile Mountains to Sea
7 National Recreational Trail.

8 (11) Reaches of the Mountains to Sea National
9 Recreational Trail within the boundary of the Monu-
10 ment will be managed consistent with the commit-
11 ments of that designation and the Monument Plan.

12 (12) There is a great need nationwide to estab-
13 lish, facilitate, and support new institutional models
14 of collaborative management and stewardship of na-
15 tionally significant landscapes that do not rely en-
16 tirely on Federal land ownership or funding.

17 **SEC. 3. ESTABLISHMENT OF SANTA ANA MOUNTAINS TO**
18 **SEA NATIONAL MONUMENT.**

19 (a) ESTABLISHMENT.—The approximately 100,000
20 acres of land owned or controlled by the Federal, State,
21 or local government depicted on the Map as
22 _____ are hereby established as the “Santa
23 Ana Mountains to Sea National Monument”. The Sec-
24 retary may make minor adjustments to the boundary of
25 the Monument.

1 (b) PURPOSES.—The purposes of the Monument are
2 to—

3 (1) preserve and protect the nationally signifi-
4 cant biological, cultural, recreational, geological, edu-
5 cational, historic, scenic, and scientific values of fea-
6 tures and lands within its boundaries;

7 (2) secure the opportunity for present and fu-
8 ture generations to experience and enjoy the mag-
9 nificent flora and fauna, wildlife, land forms, and
10 natural and cultural resources of the Monument;

11 (3) provide access and opportunities for envi-
12 ronmental education, exploration, and scientific re-
13 search;

14 (4) foster and support collaborative stewardship
15 across ownership boundaries toward a common vi-
16 sion of the highest standards of conservation and
17 recreation;

18 (5) establish, facilitate, and support new insti-
19 tutional models of collaborative management and
20 stewardship of nationally significant landscapes that
21 do not rely entirely on Federal land ownership or
22 funding; and

23 (6) inspire public support for land conservation
24 and stewardship in one of the most densely popu-
25 lated regions of the United States.

1 (c) MAP; LEGAL DESCRIPTIONS.—

2 (1) LEGAL DESCRIPTION.—As soon as prac-
3 ticable after the date of the enactment of this Act,
4 the Secretary shall submit legal descriptions of the
5 Monument, as generally depicted on the Map, to—

6 (A) the Committee on Natural Resources
7 of the House of Representatives; and

8 (B) the Committee on Energy and Natural
9 Resources of the Senate.

10 (2) CORRECTIONS.—The Map and legal descrip-
11 tions of the Monument shall have the same force
12 and effect as if included in this Act, except that the
13 Secretary may correct clerical and typographical er-
14 rors in the Map and legal descriptions.

15 (3) AVAILABILITY OF MAP.—The Map, updated
16 as necessary to reflect any boundary changes to the
17 Monument, shall be on file and available for public
18 inspection in the appropriate offices of the Forest
19 Service and the Office of the County Clerk of Or-
20 ange County, California.

21 **SEC. 4. MANAGEMENT OF THE MONUMENT.**

22 (a) INTERIM MANAGEMENT.—Pending completion of
23 the Monument Plan, the Federal and other non-private
24 land owners shall manage lands within the Monument in

1 accordance with then-current authority, including the
2 Cleveland National Forest Management Plan.

3 (b) IN GENERAL.—The Monument shall be adminis-
4 tered in accordance with the Monument Plan and other
5 applicable laws.

6 (c) COLLABORATIVE MANAGEMENT.—The Secretary
7 shall collaboratively manage, along with non-Federal pub-
8 lic entities, the non-private land within the exterior bound-
9 aries of the Monument to protect the resources of the
10 Monument, subject to valid existing rights.

11 (d) COOPERATIVE AGREEMENTS; GENERAL AUTHOR-
12 ITY.—To better implement the Monument Plan and com-
13 ply with existing authorities applicable to the Monument,
14 the Secretary may enter into cooperative agreements and
15 otherwise foster interagency cooperation, including the
16 transfer of funds from the Secretary to participating enti-
17 ties and administer the Monument.

18 **SEC. 5. MONUMENT PLAN.**

19 (a) ADMINISTRATOR.—The Secretary, in consultation
20 with the Advisory Committee, shall appoint a Forest Serv-
21 ice employee as Administrator. The Administrator shall
22 assist with the development and implementation of the
23 Monument Plan and shall serve in this capacity at the
24 pleasure of the Secretary.

25 (b) DEVELOPMENT AND SUBMISSION.—

1 (1) DEVELOPMENT OF PLAN.—The Secretary,
2 in consultation with the Administrator, the Advisory
3 Committee, and interested private property owners
4 and holders of valid existing rights within the Monu-
5 ment, shall develop a Monument Plan for the con-
6 servation, protection, and administration of the
7 Monument, in accordance with the National Envi-
8 ronmental Policy Act of 1969 (42 U.S.C. 4321 et
9 seq.) and other applicable laws.

10 (2) SUBMISSION OF PLAN.—Not later than 3
11 full fiscal years after the date of the enactment of
12 this Act, the Secretary shall—

13 (A) submit the completed Monument Plan
14 to—

15 (i) the Committee on Natural Re-
16 sources of the House of Representatives;
17 and

18 (ii) the Committee on Energy and
19 Natural Resources of the Senate; and

20 (B) make the completed Monument Plan
21 available to the public.

22 (c) REQUIREMENTS FOR PLAN.—The Secretary shall
23 ensure that the provisions of the Monument Plan comply
24 with the following requirements:

1 (1) GENERAL CRITERIA FOR USES.—Only allow
2 uses of the Monument that—

3 (A) further the purposes of the Monument;

4 (B) are consistent with legal protection in-
5 struments on the land, including conservation
6 easements, grant deeds, the National Forest
7 Management Act of 1976, or the Central Coast-
8 al Orange County Natural Community Con-
9 servation Plan/Habitat Conservation Plan;

10 (C) are included in cooperative agreements
11 entered into with the owners of land within the
12 Monument which, in the judgment of the Advi-
13 sory Committee, are consistent with the Monu-
14 ment Plan; and

15 (D) are required by this Act to be allowed.

16 (2) INTERACTION WITH PLANS AND RIGHTS.—
17 Incorporate or be consistent with existing conserva-
18 tion easements, grant deeds, approved resource
19 plans, the approved Cleveland National Forest Man-
20 agement Plan, and the Orange County Central
21 Coastal Natural Community Conservation Plan/
22 Habitat Conservation Plan (and activities antici-
23 pated by that plan), and permits and its Planned
24 Activities. To the extent possible while still com-
25 plying or being consistent with such easements,

1 deeds, plans, and permits, and its Planned Activi-
2 ties, the Monument Plan shall also include provi-
3 sions to—

4 (A) address regional fire management
5 planning and coordination between the Chief of
6 the Forest Service, the State, and other fire
7 management authorities and organizations in
8 the County;

9 (B) assess the need for and eventual estab-
10 lishment of a visitor center or other visitor fa-
11 cilities such as trails to serve the Monument, in-
12 cluding identifying opportunities for education
13 and engagement of the public in stewardship of
14 the land and in study and enjoyment of the
15 unique natural, cultural and historical elements
16 of the Monument;

17 (C) provide for continued collaborative
18 stewardship of the Monument among land-
19 owners and managers including the State,
20 County, local government, and private and not-
21 for-profit organizations;

22 (D) provide for continued active involve-
23 ment of the non-private land owners in the
24 Monument, respecting their authority as to land
25 use and related matters within their purview;

1 (E) reflect the necessity of incorporating
2 applicable provisions of existing approved man-
3 agement plans, resource plans, conservation
4 easements, or other cooperative agreements per-
5 taining to land in the Monument, and allow ad-
6 ditional lands in the Monument boundary to be
7 covered by the Orange County Central Coastal
8 Natural Community Conservation Plan and per-
9 mit; and

10 (F) provide for the operation, maintenance,
11 upgrade, repair, relocation, replacement, and
12 construction of, access for utility-company vehi-
13 cles, infrastructure facilities, and rights-of-way
14 in the Monument.

15 (3) OVERFLIGHTS.—

16 (A) PROHIBITED.—Except as provided by
17 subparagraph (B), prohibit nonemergency over-
18 flights below 250 meters and nonemergency and
19 commercial aircraft landings in the Monument.

20 (B) EXCEPTIONS.—No matter whether an
21 aircraft can be seen or heard in the Monument,
22 allow overflights or landings of such aircraft in
23 the Monument as follows:

24 (i) For management purposes.

1 (ii) Overflights of military and com-
2 mercial.

3 (iii) For the operation, maintenance,
4 upgrade, repair, relocation, replacement,
5 and construction of, access for utility-com-
6 pany vehicles, infrastructure facilities, and
7 rights-of-way in the Monument, but only to
8 the extent such overflights and landings
9 were allowed before the date of the enact-
10 ment of this Act.

11 (iv) As otherwise approved by the Sec-
12 retary.

13 (4) MOTORIZED VEHICLES.—

14 (A) IN GENERAL.—Except as provided by
15 subparagraph (B), allow use of motorized vehi-
16 cles in the Monument only on roads and trails
17 specifically designated for use by motorized ve-
18 hicles.

19 (B) EXCEPTIONS.—Allow use of motorized
20 vehicles in the Monument as necessary or ap-
21 propriate—

22 (i) for administrative purposes;

23 (ii) for the operation, maintenance,
24 upgrade, repair, relocation, replacement,
25 and construction of, access for utility-com-

1 pany vehicles, infrastructure facilities, and
2 rights-of-way in the Monument, but only to
3 the extent the use of motorized vehicles
4 were allowed for those purposes before the
5 date of the enactment of this Act; and

6 (iii) to respond to an emergency.

7 (5) ACCESS TO PRIVATE LAND.—Ensure that
8 reasonable access is given to each owner of private
9 land in the exterior boundary of the Monument in
10 accordance with applicable Federal law to ensure the
11 reasonable use and enjoyment of the land by the
12 owner.

13 **SEC. 6. ACQUISITION OF LAND.**

14 (a) IN GENERAL.—The Secretary is authorized to ac-
15 quire for inclusion in the Monument any non-Federal land
16 or interests in land within the boundary of the Monument
17 only by—

18 (1) donation;

19 (2) exchange with a willing party; or

20 (3) purchase from a willing seller for fair mar-
21 ket value.

22 (b) INCORPORATION OF AFTER-ACQUIRED LAND AND
23 INTERESTS IN LAND.—Land or interest in land within the
24 exterior boundaries of the Monument that is acquired by
25 the United States or any non-Federal public entity for the

1 Monument shall be added to and administered as part of
2 the Monument.

3 **SEC. 7. ADVISORY COMMITTEE.**

4 (a) ESTABLISHMENT.—The Secretary shall establish
5 a permanent advisory committee for the Monument.

6 (b) DUTIES.—The duties of the Advisory Committee
7 shall be to—

8 (1) advise the Secretary and Administrator with
9 respect to the preparation and implementation of the
10 Monument Plan;

11 (2) encourage and facilitate ongoing, collabo-
12 rative, multiowner stewardship of the Monument;
13 and

14 (3) otherwise represent the public interest and
15 non-Federal owners and managers of non-private
16 land in the Monument.

17 (c) MEMBERSHIP.—To the extent practicable, the
18 Advisory Committee shall include the following members,
19 to be appointed by the Secretary:

20 (1) A representative with expertise in applied
21 natural science and research nominated by the Uni-
22 versity of California at Irvine.

23 (2) A representative of the California Natural
24 Resources Agency, who shall represent State agen-
25 cies including the California Department of Fish and

1 Wildlife and the California Department of Parks and
2 Recreation.

3 (3) A representative of the County.

4 (4) A representative of each of the Cities (other
5 than the County).

6 (5) A representative of the Irvine Ranch Water
7 District.

8 (6) A representative of the nonprofit Irvine
9 Ranch Conservancy representing managers of non-
10 Federal non-private lands in the Monument.

11 (7) A representative of an investor-owned elec-
12 tric utility primarily serving and owning infrastruc-
13 ture facilities within the areas identified on the Map.

14 (8) A representative of the Orange County Fire
15 Authority or other fire service agency in the vicinity
16 of the Monument.

17 (9) A representative of an organization dedi-
18 cated to compatible passive recreation and environ-
19 mental conservation.

20 (10) A representative of the non-profit coordi-
21 nating organization for the Orange County Central
22 Coastal NCCP.

23 (d) TERMS.—

24 (1) IN GENERAL.—In appointing members
25 under subsection (c), the Secretary shall appoint one

1 primary member and one alternate member who
2 meet the qualifications described in each of the para-
3 graphs in that subsection.

4 (2) VACANCY.—

5 (A) PRIMARY MEMBER.—A vacancy on the
6 Advisory Committee with respect to a primary
7 member shall be filled by the applicable alter-
8 nate member, who shall then be the primary
9 member.

10 (B) ALTERNATE MEMBER.—The Secretary
11 shall appoint new alternate members in the
12 event of a vacancy with respect to an alternate
13 member of the Advisory Committee.

14 (3) TERM OF MEMBERS.—

15 (A) IN GENERAL.—The term of a member
16 of the Advisory Committee shall be three years.
17 At the pleasure of the Secretary, members may
18 serve up to 10 terms for a total of 30 years.

19 (B) SUCCESSORS.—Notwithstanding the
20 expiration of a three-year term of a member of
21 the Advisory Committee, a member may con-
22 tinue to serve on the Advisory Committee
23 until—

24 (i) the member is reappointed by the
25 Secretary; or

1 (ii) a successor is appointed.

2 (4) **TERM OF ALTERNATE MEMBER.**—An alter-
3 nate member appointed to fill a vacancy of the Advi-
4 sory Committee—

5 (A) shall serve for the remainder of the
6 term for which the predecessor was appointed;
7 and

8 (B) may be nominated for a subsequent
9 term.

10 (e) **QUORUM.**—A quorum of the Advisory Committee
11 shall consist of a majority of the primary members.

12 (f) **CHAIRPERSON AND PROCEDURES.**—The Advisory
13 Committee shall elect a chairperson and establish such
14 rules and procedures as it deems necessary or desirable.

15 (g) **SERVICE WITHOUT COMPENSATION.**—Members
16 of the Advisory Committee shall serve without pay for
17 their service as members.

18 (h) **TERMINATION.**—Members of the Advisory Com-
19 mittee shall serve at the pleasure of the Secretary.

20 (i) **FEDERAL ADVISORY COMMITTEE ACT.**—The Fed-
21 eral Advisory Committee Act (5 U.S.C. App.) shall not
22 apply to the Advisory Committee established by this Act.

23 **SEC. 8. CLARIFICATION OF EFFECT OF ACT.**

24 (a) **EFFECT ON ADJACENT LAND.**—

1 (1) IN GENERAL.—Nothing in this Act creates
2 or is intended to create any protective perimeter or
3 buffer zone around the Monument.

4 (2) ACTIVITIES OUTSIDE MONUMENT.—The
5 fact that an activity or use on land outside the
6 Monument can be seen or heard in the Monument
7 shall not preclude the activity or use outside the
8 boundary of the Monument.

9 (3) NO ADDITIONAL REGULATION.—Nothing in
10 this Act authorizes additional regulation of activities
11 on land outside the boundary of the Monument.

12 (b) AIR AND WATER QUALITY.—Nothing in this Act
13 affects the standards governing air or water quality out-
14 side the boundary of the Monument, or is intended to do
15 so.

16 (c) STATE AND LOCAL JURISDICTION.—Nothing in
17 this Act alters, modifies, or diminishes any right, responsi-
18 bility, power, authority, jurisdiction, or entitlement of the
19 State, any political subdivision thereof, or any local agency
20 under existing Federal, State, and local law (including
21 regulations).

22 (d) WATER RIGHTS.—Nothing in this Act shall con-
23 stitute or be construed to constitute either an express or
24 implied reservation by the United States of any water or
25 water rights or affect any water rights existing on the date

1 of the enactment of this Act, including any water rights
2 held by the United States.

3 (e) INFRASTRUCTURE FACILITIES AND RIGHTS-OF-
4 WAY.—Nothing in this Act shall—

5 (1) affect the existence, use, operation, mainte-
6 nance (including vegetation control), repair, con-
7 struction, reconfiguration, expansion, inspection, re-
8 newal, reconstruction, alteration, addition, reloca-
9 tion, improvement, funding, removal, or replacement
10 of any infrastructure facility or appurtenant right-
11 of-way in or adjacent to the Monument;

12 (2) affect necessary or efficient access to any
13 infrastructure facility or right-of-way in or adjacent
14 to the Monument;

15 (3) preclude the establishment of new infra-
16 structure facilities or rights-of-way (including
17 instream sites, routes, and areas) in the Monument
18 if such facilities are otherwise lawful and necessary
19 for public health and safety, transportation, elec-
20 tricity supply, telecommunications, water service,
21 wastewater service, or other utility services;

22 (4) expand, restrict, or otherwise affect the au-
23 thority, access, or use of any entity whose responsi-
24 bility is to maintain utilities such as water, waste-
25 water, electrical, or communications infrastructure.

1 (f) FISH AND WILDLIFE.—Nothing in this Act shall
2 be construed as—

3 (1) affecting the authority, jurisdiction, or re-
4 sponsibility of the State to manage, control, or regu-
5 late fish and resident wildlife under State law or
6 regulations, including the regulation of hunting, fish-
7 ing, trapping, and recreational shooting on land
8 managed by the Forest Service; or

9 (2) limiting access for hunting, fishing, trap-
10 ping, or recreational shooting, though such activities
11 may be prohibited by the landowners in the Monu-
12 ment in their respective jurisdictions.

13 (g) GRAZING.—Nothing in this Act modifies any valid
14 grazing allotment in effect on the date of the enactment
15 of this Act for lands in the Monument.

16 (h) PAYMENT OF EXPENSES.—

17 (1) IN GENERAL.—Except as otherwise pro-
18 vided in this subsection, nothing in this Act shall be
19 construed to all for the expenditure of Federal funds
20 to pay the costs of managing or maintaining non-
21 Federal.

22 (2) CROSS-BOUNDARY FUNCTIONS.—Federal
23 funds may be expended to support management
24 functions that are common to adjacent Federal and

1 non-private lands, such as invasive species control
2 and fire management.

3 (3) CAPITAL IMPROVEMENTS.—The Secretary,
4 in consultation with the Advisory Committee, may
5 expend Federal funds for capital improvements in
6 the Monument, no matter where situated, such as a
7 visitor center, parking access, or other types of fa-
8 cilities. These capital improvements may be funded,
9 built, staffed, or maintained, in whole or in part, by
10 volunteers and non-private landowners, as appro-
11 priate.

12 (4) COOPERATIVE MANAGEMENT.—The Sec-
13 retary may provide to the State, County, or local
14 government goods and services to be used in the co-
15 operative management of the land in the Monument.
16 Use of donated funds, in-kind contributions, and
17 services shall conform to the purposes for which the
18 Monument is established.

19 (i) PRIVATE LAND EXCLUSION.—Privately owned
20 land within the boundaries depicted on the Map shall be
21 excluded from the Monument.

22 (j) EXISTING AUTHORITY.—Nothing in this Act di-
23 minishes existing authority applicable to Federal land
24 within the Monument.

1 (k) EFFECT ON OTHER LAND-USE PLANS.—Nothing
2 in this Act shall be deemed to modify a duly approved
3 land-use plan of the Forest Service, including the Cleve-
4 land National Forest Land Management Plan.

5 **SEC. 9. DEFINITIONS.**

6 In this Act:

7 (1) ADMINISTRATOR.—The term “Adminis-
8 trator” means the Forest Service employee des-
9 ignated under this Act as responsible for assisting
10 with the development and implementation of the
11 Monument Plan in consultation with the Advisory
12 Committee.

13 (2) ADVISORY COMMITTEE.—The term “Advi-
14 sory Committee” means the committee established
15 under this Act.

16 (3) COUNTY.—The term “County” means Or-
17 ange County, California.

18 (4) LOCAL GOVERNMENT.—The term “local
19 government” means:

20 (A) The City of Irvine, California.

21 (B) The City of Newport Beach, Cali-
22 fornia.

23 (C) The City of Laguna Beach, California.

24 (D) The County.

1 (E) Subordinate agencies of the entities
2 listed in subparagraphs (A) through (D).

3 (5) MAP.—The term “Map” means the map en-
4 titled “_____” and dated _____.

5 (6) MONUMENT.—The term “Monument”
6 means the Santa Ana Mountains to Sea National
7 Monument established by this Act.

8 (7) MONUMENT PLAN.—The term “Monument
9 Plan” means the plan for the Monument developed
10 under this Act.

11 (8) PLANNED ACTIVITIES.—The term “Planned
12 Activities” means any and all permitted activities de-
13 scribed in the Central/Coastal Natural Community
14 Conservation Plan/Habitat Conservation Plan.

15 (9) SECRETARY.—The term “Secretary” means
16 the Secretary of Agriculture.

17 (10) STATE.—The term “State” means the
18 State of California.

19 (11) INFRASTRUCTURE FACILITY.—The term
20 “infrastructure facility” means all public, quasi-pub-
21 lic, and utility service facilities and structures, in-
22 cluding—

23 (A) roads, landfills, and flood control facili-
24 ties;

1 (B) any and all existing and future electric
2 generation facilities owned by a regulated elec-
3 tric utility, including electric storage facilities,
4 overhead and underground electrical supply
5 transport systems and communication systems
6 consisting of electric substations, electric and
7 telecommunication lines, poles and towers made
8 of various materials, “H” frame structures, guy
9 wires and anchors, crossarms, wires, under-
10 ground conduits, cables, vaults, manholes,
11 handholes, above-ground enclosures, markers
12 and concrete pads and other fixtures, appli-
13 ances and communication circuits, and other
14 fixtures, appliances and appurtenances con-
15 nected therewith necessary or efficient for the
16 construction, operation, regulation, control,
17 grounding, and maintenance of electric genera-
18 tion, storage, lines and communication circuits,
19 for the purpose of transmitting intelligence and
20 generating, storing, distributing, regulating,
21 and controlling electric energy to be used for
22 light, heat, power, communication, and other
23 purposes; and

24 (C) any and all existing and future water
25 and wastewater facilities and infrastructure, in-

1 cluding pipelines, storage facilities, storage res-
2 ervoires, pump stations, manholes, vaults, treat-
3 ment facilities, system valves, telemetry equip-
4 ment, turn outs, and all other appurtenances
5 connected therewith necessary or convenient for
6 the construction, operation, regulation, control,
7 distribution, and maintenance of a water and
8 wastewater system and its associated services.

May 23, 2016

Prepared by: C. Kessler/K. Lew

Submitted by: K. Burton *(KB)*

Approved by: Paul Cook *(Paul Cook)*

CONSENT CALENDAR

ON-CALL PLAN CHECK SERVICES

SUMMARY:

The current Development Services plan check workload for capital, development and operational improvement projects continues to exceed a level that can be supported by the District's Development Services staff. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Stantec Consulting Services, Inc. for a not-to-exceed amount of \$250,000 for one engineer to perform on-call plan check services.

BACKGROUND:

The District's Development Services group continues to utilize three engineering consulting firms to assist with plan checking during times of high development. Utilization of any one consultant depends on available staff and the plan check consultant not being involved with the actual preparation of the plans. Accordingly, one of the consulting firms, Stantec, is utilized considerably more than Hunsaker Associates and PacRim Engineering.

Stantec's plan checker, Nahid Heidarbashi, currently assists Development Services with plan checking between 16 to 24 hours a week. She is knowledgeable of IRWD's specifications and standards and is an important part of the Development Services team during this time of unprecedented development activity.

Funds for the current agreement in the amount \$174,820 with Stantec will be expended by May 2016. Due to the experience, attention to detail and quality work of Ms. Heidarbashi, staff requests a new Professional Service Agreement for continued plan check services. After four years without any increases to hourly billing rates, Stantec proposes an increase from \$115 to \$125 per hour with a 2.5% annual increase or CPI, whichever is lower. The proposed increase is comparable to the other two plan check consultant rates. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Stantec for a not-to-exceed amount of \$250,000 for on-call plan checking services. Stantec's proposal is attached as Exhibit "A".

FISCAL IMPACTS:

Funding for plan check services will be provided from the various developer and capital projects being constructed as part of each project's budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

Consent Calendar: On-Call Plan Check Services
May 23, 2016
Page 2

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 17, 2016.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH STANTEC CONSULTING SERVICES, INC. FOR A NOT-TO-EXCEED AMOUNT OF \$250,000 FOR ON-CALL PLAN CHECK SERVICES.

LIST OF EXHIBITS:

Exhibit "A" – Stantec's Plan Check Services Proposal

EXHIBIT "A"



Stantec Consulting Services Inc.
38 Technology Drive Suite 100, Irvine CA 92618-5312

May 2, 2016
File: 204281006

Attention: Kelly Lew, P.E.
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92619

Dear Kelly,

Reference: Proposal to Provide On-Call Plan Check Services

Stantec Consulting Services Inc. (Stantec) is pleased to submit this proposal to provide On-Call Plan Check Services to assist with technical review and approval of engineering document submittals for the implementation of Irvine Ranch Water District (IRWD, District) infrastructure projects.

Understanding of the Work

IRWD seeks the services of an engineering firm to assist you with the plan checking of submittals received from consultants in various phases of design. These projects may involve potable water, recycled water, sewer and/or storm runoff facility improvements. Plan check services will be provided as requested by IRWD for all technical submittals including, but not limited to, technical memoranda, basis of design calculations and reports, preliminary design reports, design plans, and Project Manuals.

Stantec will conduct plan check services at the IRWD offices; although, in certain cases as directed by the District, Stantec may conduct plan checks at our Irvine corporate office.

Plan Check Team

For this work Stantec has assigned Robert Reid, P.E. as Project Manager, and Nahid Heidarbaghi, P.E. as primary Plan Checker. The Stantec team will be supported by our engineering staff as needed to address specialty disciplines such as storm drainage or structural designs.

Proposed Fees

We have provided Stantec's 2016 Standard Schedule of Billing Rates as an attachment to this proposal. The proposed special hourly rate for Ms. Heidarbaghi, as a Plan Checker, is \$125/hr. This hourly rate will be annually escalated at a rate of 2.5%, or the CPI, whichever is lower. Stantec's services will be conducted as requested, by the District, and be billed on a time-and-materials basis, per assignment, throughout the duration of this contract. The proposed contract limit is \$250,000.

Design with community in mind



May 2, 2016
Kelly Lew, P.E.
Page 2 of 2

Reference: Proposal to Provide On-Call Plan Check Services

We look forward to the opportunity to continue to provide plan check services to IRWD. Should you have questions, please feel free to contact me at (949) 923-6037 or Max Vahid at (949) 474-1401, ext. 212.

Best regards,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in black ink that reads "Robert Reid".

Robert Reid, PE, CPA
Senior Associate
Phone: (949) 923-6037
Fax: (949) 923-6121
Robert.Reid@stantec.com

Attachment: Rate Schedule

c. Max Vahid

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Design with community in mind

SCHEDULE OF BILLING RATES – 2016

Billing Level	Hourly Rate	Description												
1	\$58	Entry Level Position <input type="checkbox"/> Works under the supervision of a senior professional <input type="checkbox"/> Recent graduate from an appropriate post-secondary program or equivalent <input type="checkbox"/> Generally, less than four years' experience												
2	\$66													
3	\$73	Junior Level Position <input type="checkbox"/> Independently carries out assignments of limited scope using standard procedures, methods and techniques <input type="checkbox"/> Assists senior staff in carrying out more advanced procedures <input type="checkbox"/> Completed work is reviewed for feasibility and soundness of judgment <input type="checkbox"/> Graduate from an appropriate post-secondary program or equivalent <input type="checkbox"/> Generally, one to three years' experience												
4	\$81													
5	\$90													
6	\$98	Fully Qualified Professional Position <input type="checkbox"/> Carries out assignments requiring general familiarity within a broad field of the respective profession <input type="checkbox"/> Makes decisions by using a combination of standard methods and techniques <input type="checkbox"/> Actively participates in planning to ensure the achievement of objectives <input type="checkbox"/> Works independently to interpret information and resolve difficulties <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, three to six years' experience												
7	\$105													
8	\$113													
9	\$121	First Level Supervisor or First Complete Level of Specialization <input type="checkbox"/> Provides applied professional knowledge and initiative in planning and coordinating work programs <input type="checkbox"/> Adapts established guidelines as necessary to address unusual issues <input type="checkbox"/> Decisions accepted as technically accurate, however may on occasion be reviewed for soundness of judgment <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, five to nine years' experience												
10	\$131													
11	\$140													
12	\$150	Highly Specialized Technical Professional or Supervisor of Groups of Professionals <input type="checkbox"/> Provides multi-discipline knowledge to deliver innovative solutions in related field of expertise <input type="checkbox"/> Participates in short and long range planning to ensure the achievement of objectives <input type="checkbox"/> Makes responsible decisions on all matters, including policy recommendations, work methods, and financial controls associated with large expenditures <input type="checkbox"/> Reviews and evaluates technical work <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, ten to fifteen years' experience with extensive, broad experience												
13	\$161													
14	\$171													
15	\$179	Senior Level Consultant or Management <input type="checkbox"/> Recognized as an authority in a specific field with qualifications of significant value <input type="checkbox"/> Provides multi-discipline knowledge to deliver innovative solutions in related field of expertise <input type="checkbox"/> Independently conceives programs and problems for investigation <input type="checkbox"/> Participates in discussions to ensure the achievement of program and/or project objectives <input type="checkbox"/> Makes responsible decisions on expenditures, including large sums or implementation of major programs and/or projects <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, more than twelve years' experience with extensive experience												
16	\$207													
17	\$237													
18	\$278	Senior Level Management Under Review by Vice President or Higher <input type="checkbox"/> Recognized as an authority in a specific field with qualifications of significant value <input type="checkbox"/> Responsible for long range planning within a specific area of practice or region <input type="checkbox"/> Makes decisions which are far reaching and limited only by objectives and policies of the organization <input type="checkbox"/> Plans/approves projects requiring significant human resources or capital investment <input type="checkbox"/> Graduate from an appropriate post-secondary program, with credentials or equivalent <input type="checkbox"/> Generally, fifteen years' experience with extensive professional and management experience												
19	\$314													
20	\$349													
21	\$385													
Survey Crews		<table border="1"> <thead> <tr> <th>Crew Size</th> <th>Regular Rate</th> <th>Overtime Rate</th> </tr> </thead> <tbody> <tr> <td>1-Person</td> <td>\$180</td> <td>\$205</td> </tr> <tr> <td>2-Person</td> <td>\$250</td> <td>\$350</td> </tr> <tr> <td>3-Person</td> <td>\$315</td> <td>\$445</td> </tr> </tbody> </table>	Crew Size	Regular Rate	Overtime Rate	1-Person	\$180	\$205	2-Person	\$250	\$350	3-Person	\$315	\$445
Crew Size	Regular Rate	Overtime Rate												
1-Person	\$180	\$205												
2-Person	\$250	\$350												
3-Person	\$315	\$445												

T-2 2016

May 23, 2016

Prepared by: I. Swift

Submitted by: P. Sheilds

Approved by: Paul Cook 

CONSENT CALENDAR

HERITAGE FIELDS DISTRICT 8 BIORETENTION BASIN

SUMMARY:

To achieve compliance with Municipal Separate Storm Sewer System (MS4) permit requirements, Heritage Fields El Toro, LLC's (Developer) District 8 development proposed a modified Natural Treatment System (NTS) design to treat dry weather urban runoff. This treatment method included the use of a basin with an engineered filter medium to infiltrate and remediate runoff flows. Due to the unique nature of this approach for large-scale treatment, IRWD conditionally approved this treatment alternative based on its ability to meet or exceed pollutant removal capabilities at existing NTS sites. After 22 months of monitoring and several operational adjustments to the site by the developer, IRWD's water quality monitoring of the facility has demonstrated equivalency with traditional NTS basins. Staff recommends that the Board approve acceptance of the District 8 Bioretention NTS facility subject to the terms and conditions set forth in the Application for Service and stated in the attached addendum, and approve the Grant of Easement subject to non-substantive changes.

BACKGROUND:

In 2012, the Developer approached IRWD with the concept of an alternative NTS approach. This approach involved an engineered filter medium to infiltrate and remediate pollution from urban runoff flow within a water quality basin, as opposed to the typical wetland pond and channel concept outlined in the NTS Master Plan. This treatment alternative, variously referred to as a *Bioretention Cell*, is widely used to treat urban and storm runoff, but usually on a much smaller scale, i.e., less than five acres. Thus, its use on a larger scale for a portion of the 46-acre District 8 neighborhood was unique in Orange County. As a result, the Board conditionally approved the project, based on meeting or exceeding levels of pollutant removal documented at similar traditional NTS basins. The Bioretention Cell was subsequently issued a consistency determination from the Santa Ana Regional Water Quality Control Board.

Construction of the site was completed in December of 2013 and IRWD then started its monthly water quality monitoring. After several operational and maintenance fixes following full build-out of the development, the site began to perform similar to comparably-sized traditional NTS basins by mid-2015.

During the extended performance and evaluation period the site experienced some clogging due to build up of silt and fine particulate matter likely due to ongoing construction activities in the development area. As a result, pollutant removal performance was reduced. The Developer mitigated the clogging issues by removing and reinstalling the top layer of the soil matrix which resulted in improved permeability of the matrix and increased pollutant removal.

In late 2015, as part of negotiations with the Developer for District 8, the applicant agreed to maintain the Bioretention Cell using the development's homeowner's association (HOA) landscape contractor. In addition, the HOA would retain fee title to the basin as well. The District would then have responsibility for ensuring site functionality, maintaining the underdrain system, and any future water quality monitoring, if necessary; currently, no monitoring is required by the Regional Board.

In early 2016, the District amended its standard Service Agreement and Grant of Easement to include language that allowed IRWD to maintain the basin's underdrain system, but incentivized the HOA to maintain the treatment matrix and prevent clogging.

FISCAL IMPACTS:

Costs associated with the monitoring and inspection of this site are included in the 2016/17 operating budget.

ENVIRONMENTAL COMPLIANCE:

The site and the surrounding development were approved as part of Heritage Fields El Toro, LLC's Environmental Impact Report (SCH#2002101020) for Planning Areas 30 and 51 in the City of Irvine.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 17, 2016.

RECOMMENDATION:

THAT THE BOARD APPROVE ACCEPTANCE OF THE DISTRICT 8 BIORETENTION NTS FACILITY SUBJECT TO THE TERMS AND CONDITIONS SET FORTH IN THE APPLICATION FOR SERVICE, ADDENDUM THERETO, AND GRANT OF EASEMENT SUBJECT TO NON-SUBSTANTIVE CHANGES AS THE GENERAL MANAGER MAY APPROVE.

LIST OF EXHIBITS:

- Exhibit "A" – Addendum to Section 18(b) of the Application for Service and Agreement with Irvine Ranch Water District
- Exhibit "B" – Grant of Easement and Maintenance and Cost Sharing Agreement

EXHIBIT A

DATE: _____
W.O.: _____
TRACT: _____
I/D #: _____

**ADDENDUM TO SECTION 18(b) OF THE
APPLICATION FOR SERVICE AND AGREEMENT WITH
IRVINE RANCH WATER DISTRICT**

Special Service Conditions

The following “Special Service Conditions” are hereby incorporated into Section 18(b) of the “Application for Service and Agreement with Irvine Ranch Water District” dated _____, 201__, (the “Agreement”) by and between Irvine Ranch Water District (the “District”) and the Applicant named therein (individually a “Party” and jointly the “Parties”) as though set forth in full therein, and modify and supplement the provisions of the Agreement as set forth herein. (Various capitalized words and phrases used herein are defined in either the Agreement or in that certain “Grant of Easement and Maintenance and Cost Sharing Agreement” attached hereto as **Exhibit “A”** [the “Easement Agreement”], and unless otherwise expressly indicated herein, such words and phrases shall have the same meaning herein as is ascribed to them in the Agreement or in the Easement Agreement.)

Notwithstanding the preamble paragraphs on page 1 of the Agreement, the Parties acknowledge and agree that the service requested is for natural treatment system (“NTS”) only. The NTS improvements consist of subsurface bioretention facilities (the “NTS Facilities”) which are more particularly depicted and described on those certain Construction Plans for the NTS Facilities (also referred to as the bioretention facilities) prepared by ENGEO Incorporated and approved by IRWD on August 27, 2013, with Deltas A, B, and C approved by IRWD in October and November of 2013.

The Parties acknowledge the following facts regarding the NTS Facilities: Construction of the NTS Facilities was initiated by the Applicant in September 2013 and substantially completed in December 2013. The District initiated the pilot program in early 2014 with the first documented surface water influent and effluent sampling occurring in April 2014. Subsequent sampling events were conducted by the District through 2014 and into 2015. Housing construction by the merchant builders within the tributary area of the NTS Facilities was substantially completed around July 2015 and final homeowner move-ins were substantially completed in late August 2015. The final “punch-list” walkover at the NTS Facilities by representatives from the Applicant and the District was performed in August 2015, at which time no construction related punch list items remained.

Upon the District’s agreement and authorization to execute, and the execution of, (i) the Agreement; (ii) the Easement Agreement; and (iii) the “Bill of Sale” for the NTS Facilities attached hereto as **Exhibit “B”** and upon Applicant’s payment of fees described hereinbelow, the

EXHIBIT A

Parties acknowledge that as of the date hereof set forth above, Sections 3, 4, 5, 6, 7, 8 and 12 of the Agreement have been fully performed by the Applicant to the reasonable satisfaction of the District, and that the Applicant has fully performed Sections 1 and 2 of the Agreement to the reasonable satisfaction of the District, however, the Applicant acknowledges that Sections 1 and 2 constitute ongoing obligations of Applicant. The Parties further acknowledge that the Easement Agreement and the Bill of Sale are in form and content acceptable to the District.

Without limiting the foregoing, the Parties acknowledge and agree that notwithstanding the provisions of Section 8, only the NTS Facilities (referred to as the "Operational Component" in the Easement Agreement) will be operated and maintained by the District in accordance with the Easement Agreement and that the District shall not have any obligation whatsoever to maintain the "Landscape Material" or the "Landscape Irrigation System" (jointly referred to as the "Aesthetic Component" in the Easement Agreement"), which shall remain the sole obligation of the Applicant and its successors, assigns and grantees.

The real property upon which the NTS Facilities have been installed (i.e., Lot W of Tract 17467 [Lot W"]) is currently owned by the Applicant. Applicant conveyed to the Great Park Neighborhoods Community Association, a California nonprofit mutual benefit corporation (the "Master Association") a nonexclusive easement for the installation, maintenance, repair and replacement of landscaping and the related landscape irrigation systems and for the removal of garbage and debris on, over, under, across and through Lot W pursuant to that certain Grant Deed recorded August 20, 2014 as Instrument No. 2014000337022 in the Official Records of Orange County, California (the "Grant Deed").

Applicant will cause Lot W to be annexed into the Great Park Neighborhoods master planned community (the "Community") and conveyed in fee simple to the Master Association, subject to the Easement Agreement. Upon such annexation and conveyance, Lot W will be subject to the "Master Declaration of Covenants, Conditions and Restrictions, and Reservation of Easements for Great Park Neighborhoods" (the "Master Declaration") and to the jurisdiction of the Master Association. The Master Association shall maintain the Landscape Material and the Landscape Irrigation System installed on Lot W, subject to periodic inspection by the District, all as more particularly set forth in the Easement Agreement.

Applicant acknowledges that in view of the fact that the NTS and the NTS Facilities will operate by natural processes, nothing in the Agreement or the Easement Agreement shall be construed as a representation by the District that the NTS or the NTS Facilities will satisfy regulatory requirements imposed on Applicant by any federal, state or local agency or that the operation and maintenance of same will produce any particular result, and nothing in the Agreement or in the Easement Agreement shall be interpreted or construed to create any obligation on the District other than as specified herein and in the Easement Agreement.

Applicant acknowledges that the District assumes no responsibility or liability for flood control functions of the NTS or the subject NTS Facilities and further acknowledges that the responsibility for regulation and enforcement of surface water runoff discharges, including without limitation the definition and enforcement of permitted discharges into the NTS, shall remain with the County of Orange and/or the City of Irvine.

EXHIBIT A

Notwithstanding the provisions of Section 8 or any other provisions of the Agreement or the Easement Agreement, Applicant and the District each acknowledge and agree that the District does not, and shall not, have any ownership interest in or to Lot W, save and except for the easement rights on, over, under, across and through Lot W conveyed to the District in the Easement Agreement.

Applicant has submitted to the District a copy of each applicable federal, state, local and other permit for the NTS Facilities that is currently in effect, and the District acknowledges receipt of same.

With reference to Section D of Exhibit A to the Agreement, the basis for calculation of the fees and charges to be paid by the Applicant is the District's actual costs related to the plan checking, inspection, evaluation of water quality function, and other review of the NTS Facilities prior to acceptance for operation and maintenance (excluding landscaping) of the Operational Component as outlined in the Natural Treatment System (NTS) Fees and Charges on the Application of Service.

The Parties acknowledge and agree that the provisions of Sections 9, 11, 13 and 15 shall not apply to the Agreement. The Parties further acknowledge and agree that with respect to provisions of Section 10 and 14 of the Agreement, the provisions of the Easement Agreement supersede the provisions of said Sections 10 and 14 of the Agreement.

Other Conditions: None

Attachments:

Exhibit "A" – Grant of Easement and Maintenance and Cost Sharing Agreement

Exhibit "B" – Bill of Sale (NTS Facilities)

EXHIBIT "B"

RECORDING REQUESTED BY:

FIRST AMERICAN TITLE INSURANCE COMPANY

WHEN RECORDED MAIL TO:

HERITAGE FIELDS EL TORO, LLC
c/o Five Point Communities Management, Inc.
25 Enterprise, Suite 400
Aliso Viejo, CA 92656
Attn: General Counsel

WITH A CONFORMED COPY TO:

IRVINE RANCH WATER DISTRICT
15600 Sand Canyon Avenue
Irvine, CA 92619
Attn: Fiona Sanchez

(Space Above For Recorder's Use)

**GRANT OF EASEMENT
AND
MAINTENANCE AND COST SHARING AGREEMENT
(Lot W of Tract 17467)**

This GRANT OF EASEMENT AND MAINTENANCE AND COST SHARING AGREEMENT (hereinafter referred to as the "**Agreement**") is made this _____ day of _____, 2016 by and between HERITAGE FIELDS EL TORO, LLC, a Delaware limited liability company (hereinafter referred to as "**Declarant**") and IRVINE RANCH WATER DISTRICT, a California water district organized pursuant to California Water Code Section 34000 *et seq.* (hereinafter referred to as "**IRWD**"). (Declarant and IRWD are hereinafter individually referred to as a "**Party**" and jointly as the "**Parties**." (Various capitalized words and phrases used in this Agreement are defined herein or in the Master Declaration referenced below, and unless otherwise indicated herein, such words and phrases shall have the same meaning herein as is ascribed to them herein or in the Master Declaration.)

RECITALS:

A. Declarant is the developer of that certain residential master planned community commonly known as the "Great Park Neighborhoods" located in the City of Irvine, County of Orange, State of California (hereinafter referred to as the "**Community**");

GREAT PARK NEIGHBORHOODS/PAVILION PARK
GRANT OF ESMT & MAINT & COST SHARING AGMT
(LOT W)-010 (5/3/16)

EXHIBIT "B"

B. In furtherance of the development of the Community, Declarant caused that certain "Master Declaration of Covenants, Conditions and Restrictions, and Reservation of Easements for Great Park Neighborhoods" to be recorded on October 25, 2013 as Instrument No. 2013000599972 in the Official Records of Orange County, California, as same may be re-recorded, restated and/or amended from time to time (hereinafter referred to as the "**Master Declaration**") and also caused the Great Park Neighborhoods Community Association to be formed as a California nonprofit mutual benefit corporation (hereinafter referred to as the "**Master Association**") for the purposes of managing the Community;

C. The Master Declaration provides, among other things, that the Master Association is responsible for owning and maintaining the Master Association Property which has been annexed into the Community and conveyed to the Master Association so as to be subject to the Master Declaration and to the jurisdiction of the Master Association;

D. Declarant owns fee title to that certain real property located in the City of Irvine, County of Orange, State of California more particularly described as follows:

Lot W of Tract 17467 as shown on a map recorded in Book 912, Pages 25 through 41, inclusive, of the Miscellaneous Maps of Orange County, California (hereinafter referred to as "**Lot W**");

E. In accordance with conditions of approval imposed by the City and other Public Agencies in connection with the development of the Community, Declarant developed and improved Lot W as a natural treatment system ("**NTS**") water quality basin/bioretention facility (hereinafter referred to as the "**NTS Facility**") to collect runoff waters from a portion of the Community for the purpose of treating pollutants in such runoff waters by natural means before such waters are discharged into the storm drain system;

F. Declarant conveyed to the Master Association a nonexclusive easement in gross for the installation, maintenance, repair and replacement of landscaping and related landscape irrigation systems and for the removal of garbage and debris on, over, under, across and through Lot W, as more particularly set forth in that certain "Grant Deed" recorded on August 20, 2014 as Instrument No. 2014000337022 in the Official Records of Orange County, California (hereinafter referred to as the "**Deed of Easement**");

G. As acknowledged in the Deed of Easement, Declarant intends to convey fee title to Lot W to the Master Association, subject to, among other things, this Agreement which grants an easement in favor of IRWD as more fully set forth herein; and

H. To carry out this intent, the Parties desire to enter into this Agreement and to cause same to be recorded in the Official Records of Orange County, California prior to the conveyance of fee title to Lot W to the Master Association so that such conveyance will be subject to the provisions of this Agreement and the provisions of this Agreement will be binding

EXHIBIT “B”

upon and inure to the benefit of (i) Declarant (prior to the conveyance to the Master Association of fee title to Lot W), (ii) the Master Association (after the conveyance to the Master Association of fee title to Lot W), and (iii) IRWD and its successors and assigns.

NOW THEREFORE, for and in consideration of the mutual promises set forth herein and other good and valuable consideration, the Parties hereby agree as follows:

1. **Definitions of Terms.** The following definitions shall apply to this Agreement and to any amendments or supplements hereto:

1.1 **“Aesthetic Component”** shall mean and refer jointly to the Landscape Material and the Landscape Irrigation System.

1.2 **“Bio-Retention Soils Mix Layer”** shall mean and refer to the layer (approximately two feet [2’] in depth located below the Landscape Material and above the Permeable Drain Layer) consisting of a bio-retention soils mix which is intended to treat pollutants in the runoff waters that percolate through the Matrix.

1.3 **“Cost Sharing Commencement Date”** shall mean and refer to January 1, 2016, being the date upon which the cost sharing calculation provisions set forth in Paragraph 5 below commence.

1.4 **“Landscape Irrigation System”** shall mean and refer to the irrigation system (e.g., lines and sprinkler heads) installed in and around the Landscape Material to irrigate the Landscape Material, and also includes the electrical systems (e.g., timers and electrical valve systems), wherever located, which operate and control the flow of waters through the Landscape Irrigation System.

1.5 **“Landscape Material”** shall mean and refer to the various forms of plants planted in the upper most layer of the NTS Basin Floor (i.e., approximately four inches [4’] to six inches [6’] in depth). The plants are planted in a bio-retention soils mix, augmented with washed sand materials that help preserve the permeability of the NTS Basin Floor. The Parties acknowledge and agree that the Landscape Material currently planted in the upper most layer of the NTS Basin Floor is intended to consist solely of “approved plant species” as listed on the “IRWD Approved Plant Palette” attached hereto as **Exhibit “1”**. The Parties acknowledge that as plants are replaced in the future, such plants must be listed on the latest version of IRWD’s NTS Design Guidelines which are then in effect and on file with IRWD.

1.6 **“Lot W Owner”** shall mean and refer to Declarant prior to the Ownership Conveyance Date and to the Master Association from and after the Ownership Conveyance Date.

EXHIBIT "B"

1.7 "Matrix" shall mean and refer collectively to the Landscape Material, the Landscape Irrigation System, the Bio-Retention Soils Mix Layer, the Permeable Drain Layer and the Sub-Drain System, all of which are installed within the NTS Basin Floor. A cross section of the Matrix is generally depicted on **Exhibit "2"** attached hereto.

1.8 "NTS Basin Floor" shall mean and refer to that portion of Lot W in which the Matrix is installed, as generally depicted and described on **Exhibit "3"** (including Exhibits "A", "B" and "C" to **Exhibit "3"**) attached hereto.

1.9 "Operational Component" shall mean and refer collectively to the Bio-Retention Soils Mix Layer, the Permeable Drain Layer and the Sub-Drain System and shall not include any of the Landscape Material or the Landscape Irrigation System.

1.10 "Ownership Conveyance Date" shall mean and refer to the date upon which both (i) a Grant Deed conveying fee title to Lot W from Declarant to the Master Association is recorded in the Official Records of Orange County, California, and (ii) a Notice of Annexation annexing fee title to Lot W into the Community is recorded concurrently therewith in the Official Records of Orange County, California.

1.11 "Permeable Drain Layer" shall mean and refer to the layer (approximately six inches [6"] to twelve inches [12"] in depth located below the Bio-Retention Soils Mix Layer and above the Sub-Drain System) consisting of specialized permeable materials designated by IRWD.

1.12 "Sub-Drain System" shall mean and refer to the system of drains, pipes, lines and related facilities located beneath the Permeable Drain Layer which collects the runoff waters that have percolated through the Matrix and connects to pipes and related facilities that convey such waters to the storm drain system located within and/or adjacent to Lot W.

2. **Conveyance to IRWD of Easement for Maintenance, Repair and Reconstruction of the Operational Component.** Effective concurrently with the recordation of this Agreement in the Official Records of Orange County, California, Declarant hereby grants and conveys to IRWD a nonexclusive easement in gross on, over, under, across and through the NTS Basin Floor to install, operate, maintain, repair and reconstruct the Operational Component. Such easement includes rights of ingress, egress and access on, over, under, across and through such portions of Lot W as reasonably necessary to perform such work. The Parties acknowledge and agree that the conveyance to IRWD of the foregoing easement is and shall be subject to the provisions of this Agreement. The Parties acknowledge and agree that all costs and expenses to maintain, repair and reconstruct the Operational Component shall be borne solely by IRWD. The Parties also acknowledge and agree that if any maintenance, repairs and/or reconstruction of the Operational Component by IRWD would necessitate repairs and/or replacements to any portions of the Aesthetic Component as contemplated in Paragraph 5 below, all of the costs of

EXHIBIT "B"

such repairs and/or replacements to the Aesthetic Component shall be subject to the cost sharing provisions set forth in said Paragraph 5.

3. Maintenance of Lot W by the Master Association.

(a) Maintenance of Lot W Prior to the Ownership Conveyance Date.

Except as otherwise provided in the Deed of Easement, prior to the Ownership Conveyance Date, the Master Association shall, at its sole cost and expense, maintain, repair and replace the landscaping and related irrigation system installed on Lot W and shall remove all garbage, debris, accumulated silt and plants which were never listed on an IRWD Approved Plant Palette so as to keep Lot W in a neat, clean, safe and first class condition comparable to other areas within the Community, as more fully set forth in the Deed of Easement.

(b) Maintenance of Lot W After the Ownership Conveyance Date.

Except as otherwise provided in this Agreement and except as otherwise provided in any other document of record (e.g., accepted offer of dedication, recorded easement, etc.), from and after the Ownership Conveyance Date, Lot W shall constitute part of the Master Association Property and accordingly, the Master Association shall be solely responsible, at its sole cost and expense, for the maintenance, repair and replacement of the landscaping, landscape irrigation systems and other improvements installed on Lot W (including, without limitation, the Aesthetic Component, but excluding the Operational Component) in accordance with the provisions of this Agreement and the provisions of the Master Declaration. Such maintenance shall be performed at least monthly as part of a regularly scheduled monthly maintenance program. Additionally, the NTS Basin Floor shall be inspected and cleaned of trash and debris prior to the commencement of the rainy season (e.g., on or before October 15th of each year) and after each major storm event. Without limiting the foregoing, the Parties acknowledge and agree that the Master Association shall be solely responsible, at its sole cost and expense, for removing silt and debris that may have accumulated from time to time on the NTS Basin Floor. Further, the Master Association shall replace any dead or dying Landscape Material from time to time as reasonably necessary. In the event of a conflict between the maintenance provisions in this Agreement and the maintenance provisions set forth in the Master Declaration, the maintenance provisions set forth herein shall control.

(c) Removal of Non-Approved Plants. The Master Association shall cause all plants which were never listed on an IRWD Approved Plant Palette to be removed from the NTS Basin Floor during the course of the Master Association's regularly scheduled monthly maintenance program. The Parties acknowledge that as plants are replaced in the future, such plants must be listed on the latest version of the IRWD NTS Design Guidelines which is then in effect and on file with IRWD.

4. Right of the Master Association Not to Restore the Aesthetic Component. If, at any time whatsoever, any maintenance, repair or reconstruction work on the

EXHIBIT "B"

Operational Component required by IRWD necessitates the removal of all or any portion of the Aesthetic Component, the Master Association shall have the right, in its sole discretion, to elect not to re-plant the Landscape Material and not to re-install the Landscape Irrigation System, and in such case, the cost sharing provisions set forth in Paragraph 5 below shall not be applicable, and the Master Association shall not have any further maintenance obligations regarding the Landscape Material or the Landscape Irrigation System under this Agreement, but shall continue to have the obligation to remove accumulated silt, trash and debris and non-approved plants as provided in Paragraph 3 above. The Parties acknowledge and agree that the NTS Basin Floor may only be used for landscape purposes in accordance with this Agreement or in the event of any election by the Master Association pursuant to this Paragraph 4, may be left in a natural condition. Any other use of the NTS Basin Floor by the Master Association shall require the prior written consent of IRWD.

5. **Restoration of the Aesthetic Component After Maintenance, Repairs or Reconstruction of the Operational Component by IRWD; Cost Sharing Provisions.**

Subject to the provisions of Paragraph 4 above, the Parties acknowledge and agree that commencing on the Cost Sharing Commencement Date (i.e., January 1, 2016) for each completed calendar year thereafter (i.e., January 1 through December 31) that the Matrix functions to the reasonable satisfaction of IRWD so as not to necessitate any maintenance, repairs and/or reconstruction work to the Operational Component which necessitates the removal of all or any portion of the Aesthetic Component, five percent (5%) of the future costs to replace and restore the Aesthetic Component to the condition that existed prior to the commencement of the maintenance, repairs and/or reconstruction work shall be assumed by IRWD. To illustrate, if IRWD were to deem it necessary to perform maintenance, repair or reconstruction work on the Operational Component during the thirteenth (13th) year following the Cost Sharing Commencement Date (sometime during calendar year 2028), sixty percent (60%) (i.e., twelve [12] completed calendar years times 5% for each completed calendar year) of the then actual costs to replace and restore the Aesthetic Component to the same condition that existed prior to the commencement of such work shall be borne by IRWD and forty percent (40%) shall be borne by the Master Association. The Parties further acknowledge and agree that at such time as the Operational Component has been fully repaired and/or reconstructed by IRWD and the Aesthetic Component has been restored, the foregoing cost sharing calculation provisions shall be restarted on the next succeeding January 1 as if commencing from the original Cost Sharing Commencement Date. Subject to the provisions of Paragraph 4 above, in each instance where replacement and restoration of the Aesthetic Component is necessitate by maintenance, repair or reconstruction of the Operational Component, the Master Association shall perform the work to replace and restore the Aesthetic Component and IRWD shall reimburse the Master Association for its share of the actual costs and expenses reasonably incurred by the Master Association to replace and restore the Aesthetic Component within forty-five (45) days after receipt of an invoice from the Master Association, which invoice shall be accompanied by copies of all receipts documenting the actual amount of the costs and expenses incurred to replace and restore the Aesthetic Component as provided herein. Such amount shall bear interest at the rate of ten percent (10%) per annum from the end of such forty-five (45) day period until paid in full.

EXHIBIT "B"

6. **Inspection of the Aesthetic Component by IRWD and IRWD Remedies Upon Maintenance Default.** IRWD shall inspect the Aesthetic Component in accordance with IRWD's inspection protocol for water quality basins maintained by IRWD, but not less frequently than twice each calendar year to verify that the Aesthetic Component is being reasonably maintained by the Master Association pursuant to this Agreement. IRWD shall keep reasonable written field notes and photographs of each inspection. If IRWD observes an unreasonable maintenance deficiency including, without limitation, a failure by the Master Association to promptly complete replacement or restoration of the Aesthetic Component as provided in Paragraph 5 above, it shall notify the Master Association in writing of same within fifteen (15) days after the inspection and shall provide reasonable details of such maintenance deficiency (hereinafter referred to as the "**Maintenance Deficiency Notice**"). The Master Association shall correct the maintenance deficiency within thirty (30) days of receipt of the Maintenance Deficiency Notice. If the maintenance deficiencies are not corrected by the Master Association within said thirty (30) day period (or if the maintenance deficiencies cannot be corrected within said thirty [30] day period, if corrective action is not commenced within such thirty [30] day period and thereafter diligently pursued to completion), IRWD shall have the right, but not the obligation, to correct the maintenance deficiencies. The Master Association shall reimburse IRWD for all actual costs and expenses reasonably incurred by IRWD to correct the maintenance deficiencies within thirty (30) days of receipt of the invoice from IRWD, which invoice shall be accompanied by copies of all receipts documenting the actual amount of the costs and expenses incurred to cure the maintenance deficiencies. Such amount shall bear interest at the rate of ten percent (10%) per annum from the end of such thirty (30) day period until paid in full. Any dispute between the Parties regarding a maintenance deficiency shall be resolved in accordance with the dispute resolution procedures referenced in Paragraph 11 below.

7. **Mechanic's Liens.** Neither IRWD nor the Lot W Owner shall permit or suffer any liens of any kind (including, but not limited to mechanics' liens) to be filed against any portion of Lot W. If IRWD or the Lot W Owner (each hereinafter referred to as the "**Defaulting Party**") shall allow any lien to be filed against any portion of Lot W arising from, caused by or in any way related to any work performed by such Defaulting Party, such Defaulting Party shall, at its sole cost and expense, take such actions (including, without limitation, paying the full amount of such lien or posting a bond) as necessary to cause the lien to be satisfied and discharged or to cause such lien to be removed of record. Notwithstanding the forgoing, if the Defaulting Party shall in good faith desire to contest the validity of any lien, such Defaulting Party shall furnish to the other Party a surety bond in the amount mutually satisfactory to the other Party and the Defaulting Party, and thereafter, the Defaulting Party, at its sole cost and expense, shall defend itself, the other Party and Lot W against such lien and shall pay and satisfy any adverse judgment that may be rendered thereon before the enforcement thereof against Lot W. As of the Ownership Conveyance Date, Declarant shall obtain from the insuring title company and cause to be delivered to the Master Association a policy of title insurance for Lot W showing title free and clear of all liens and monetary encumbrances (including mechanic's liens), and if the statutory period for the filing of mechanics' liens against

EXHIBIT "B"

Lot W (hereinafter referred to as the "Statutory Period") shall not have expired, Declarant shall also obtain from the insuring title company and cause to be delivered to the Master Association an endorsement against recorded and unrecorded mechanics' liens in the event a mechanic's lien is filed against Lot W during the Statutory Period.

8. Indemnification.

(a) Indemnification by the Lot W Owner. Except as otherwise provided in subparagraph (b) below, the Lot W Owner shall indemnify, defend with counsel reasonably acceptable to IRWD and hold IRWD free and harmless from and against any and all claims, liens, damages, costs, expenses and any other liabilities of any kind whatsoever (including, but not limited to attorneys' fees), whether asserted against or incurred by IRWD or any third party (hereinafter collectively referred to as the "Claims") for damage to property and/or death or injury to any person arising from or relating to the performance of any work on Lot W by or on behalf of the Lot W Owner, any negligent or intentional acts or omissions of the Lot W Owner or any of its officers, directors, employees, contractors, agents and/or representatives, and/or any breach of this Agreement by the Lot W Owner, save and except to the extent any such Claim is caused by the negligence or willful misconduct of IRWD or any of its officers, directors, employees, contractors, agents and/or representatives.

(b) Indemnification by Declarant. The Declarant shall indemnify, defend with counsel reasonably acceptable to IRWD and hold IRWD free and harmless from and against any and all claims, liens, damages, costs, expenses and any other liabilities of any kind whatsoever (including, but not limited to attorneys' fees) incurred by IRWD (hereinafter collectively referred to as "CD Claims") arising from or relating to alleged defects in the design, construction, installation and/or repair of the NTS Facility pursuant to Declarant's Application for Service and Agreement with Irvine Ranch Water District dated _____, 2016, and/or Addendum to Section 18(b), including, without limitation, CD Claims which are proximately caused by any negligence or intentional acts or omissions of Declarant, its employees, agents and/or contractors, or by any act or omission for which Declarant, its employees, agents and/or contractors are liable without fault under California law, save and except to the extent any CD Claim is caused by any negligence or willful misconduct of IRWD or any of its officers, directors, employees, contractors, agents and/or representatives. The Parties acknowledge and agree that (i) this indemnification obligation is the sole obligation of Declarant and shall not pass with the conveyance of title to Lot W to Declarant's successors, assigns and/or grantees, and (ii) that Declarant's indemnification obligations under this subparagraph (b) shall forever cease and terminate at midnight on December 31, 2018 (being the agreed fifth [5th] anniversary date of the substantial completion of the NTS Facility to IRWD's reasonable satisfaction.)

EXHIBIT "B"

(c) Indemnification by IRWD. IRWD shall indemnify, defend with counsel reasonably acceptable to the Lot W Owner and hold the Lot W Owner free and harmless from and against any and all claims, liens, damages, costs, expenses and any other liabilities of any kind whatsoever (including, but not limited to attorneys' fees), whether asserted against or incurred by the Lot W Owner or any third party (hereinafter collectively referred to as the "Claims") for damage to property and/or death or injury to any person arising from or relating to the performance of any work on Lot W by or on behalf of IRWD, any negligent or intentional acts or omissions of IRWD or any of its officers, directors, employees, contractors, agents and/or representatives, and/or any breach of this Agreement by IRWD, save and except to the extent any such Claim is caused by the negligence or willful misconduct of the Lot W Owner, or any of its officers, directors, employees, contractors, agents and/or representatives.

9. Insurance.

(a) Insurance Coverage Provided by the Lot W Owner. The Lot W Owner shall provide, and shall cause each contractor performing work on Lot W on its behalf to provide, IRWD with certificates of insurance issued by the Lot W Owner's insurance carrier and by the contractor's insurance carrier evidencing that the following insurance coverage is then in effect and will be in effect for the remainder of the calendar year (or in the case of a contractor, through the duration of the contract): (i) comprehensive general liability insurance (which includes coverage for operations, completed operations, independent professionals, contractual liability, broad form property damage, severability of interest and cross-liability clauses, personal injury and explosion, collapse and underground hazards) on an "occurrence" basis with a combined single limit for bodily injury and property damage of at least One Million Dollars (\$1,000,000), with reasonable deductibles determined by the Lot W Owner; (ii) if the Lot W Owner or contractor has employees who will be performing any work contemplated by this Agreement to be performed by the Lot W Owner, worker's compensation insurance, including employer's liability at a minimum limit of One Million Dollars (\$1,000,000.) for all persons it employs in carrying out such work; and (iii) automobile liability insurance (including owned, hired and non-owned automobile) on a "occurrence basis," with reasonable deductibles determined by the Lot W Owner, covering all automobiles, trucks and other motor vehicles used on or in connection with Lot W, with a combined single limit for bodily injury and property damage of One Million Dollars (\$1,000,000). In addition to the foregoing certificates, the Lot W Owner shall provide, and cause its contractor to provide, IRWD with: (a) an endorsement to the comprehensive general liability insurance policy naming IRWD as an additional insured; (b) an endorsement to each policy containing waivers of subrogation by the insurance carrier with respect to IRWD; and (c) an endorsement to each policy providing that the insurance coverage is primary and any other insurance maintained by IRWD is excess and noncontributing. Each certificate of insurance and endorsement shall provide that such

EXHIBIT "B"

policy shall not be subject to cancellation or non-renewal without at least thirty (30) days prior written notice delivered to both the Lot W Owner and IRWD.

(b) Insurance Coverage Provided by IRWD. IRWD shall provide, and shall cause each contractor performing work on Lot W on its behalf to provide, the Lot W Owner with certificates of insurance issued by IRWD's and by the contractor's respective insurance carriers evidencing that the following insurance coverage is then in effect and will be in effect for the remainder of the calendar year (or in the case of a contractor, through the duration of the contract): (i) comprehensive general liability insurance (which includes coverage for operations, completed operations, independent professionals, contractual liability, broad form property damage, severability of interest and cross-liability clauses, personal injury and explosion, collapse and underground hazards) on an "occurrence" basis with a combined single limit for bodily injury and property damage of at least One Million Dollars (\$1,000,000), with reasonable deductibles determined by IRWD; (ii) if IRWD or the contractor has employees who will be performing any work contemplated by this Agreement to be performed by IRWD, worker's compensation insurance, including employer's liability at a minimum limit of One Million Dollars (\$1,000,000.) for all persons it employs in carrying out such work; and (iii) automobile liability insurance (including owned, hired and non-owned automobile) on a "occurrence basis," with reasonable deductibles determined by IRWD, covering all automobiles, trucks and other motor vehicles used on or in connection with Lot W, with a combined single limit for bodily injury and property damage of One Million Dollars (\$1,000,000). In addition to the foregoing certificates, IRWD shall provide, and shall cause its contractor to provide, the Lot W Owner with: (a) an endorsement to the comprehensive general liability insurance policy naming the Lot W Owner as an additional insured; (b) an endorsement to each policy containing waivers of subrogation by the insurance carrier with respect to the Lot W Owner; and (c) an endorsement to each policy providing that the insurance coverage is primary and any other insurance maintained by the Lot W Owner is excess and noncontributing. Each certificate of insurance and endorsement shall provide that such policy shall not be subject to cancellation or non-renewal without at least thirty (30) days prior written notice delivered to both the Lot W Owner and IRWD.

10. No Monetary Encumbrances. Neither IRWD nor the Lot W Owner shall permit or allow any monetary encumbrance to be recorded against Lot W.

11. Dispute Resolution. The Parties acknowledge and agree that any dispute between them arising from or relating to this Agreement (including Declarant's Application for Service and Agreement with Irvine Ranch Water District and Addendum to Section 18(b) thereto) shall be resolved by binding arbitration in accordance with the procedures set forth in Section 19.10 of the Master Declaration. A copy of the procedures set forth in Section 19.10 is attached hereto as **Exhibit "4"**. Each Party shall bear its own attorneys' fees and costs at its own cost and expense.

EXHIBIT "B"

12. General Provisions.

(a) Enforcement. Subject to the provisions of Paragraph 11 above, each Party shall have the right to enforce all of the provisions of this Agreement, which right shall include, without limitation, the right to enforce the provisions of this Agreement, to enjoin or prevent a Party from violating the provisions of this Agreement, to cause a violation to be remedied or to recover damages, or both, for said violation.

(b) Remedies Upon Default. Each Party acknowledges and agrees that a default by the other Party under this Agreement shall not entitle the non-defaulting Party to terminate, cancel, modify or otherwise rescind this Agreement. Each Party further acknowledges and agrees that in the event of a monetary default by the other Party, the sole and exclusive remedy of the non-defaulting Party on account of such monetary default shall be an action for monetary damages which shall be subject to the dispute resolution provisions referenced in Paragraph 11 of this Agreement. In the event of any other default hereunder, the non-defaulting Party may bring an action for damages or for specific performance which shall be subject to the dispute resolution provisions referenced in Paragraph 11 of this Agreement.

(c) Entire Agreement. This Agreement constitutes the entire agreement between the Parties and supersedes all prior agreements, negotiations, arrangements, and understandings by and between the Parties with respect to the subject matter hereof. The Parties acknowledge and agree that the provisions of this Agreement together with the provisions of Declarant's Application for Service and Agreement with Irvine Ranch Water District dated _____ 2016, including, without limitation, Addendum to Section 18(b), are intended, and shall be construed to the maximum extent possible to be consistent with each other, but in the event of a conflict between the provisions of this Agreement and the provisions of Declarant's Application for Service and Agreement with Irvine Ranch Water District dated _____ 2016, including, without limitation, Addendum to Section 18(b), the provisions of this Agreement shall control. The Parties further acknowledge that no representations, inducements, promises, or agreements, whether oral or otherwise, have been made by any Party or anyone acting on behalf of any Party, which are not embodied herein. No amendments or other modifications of this Agreement shall be binding unless executed in writing by both Parties hereto.

(d) No Third Party Beneficiary. The Parties acknowledge and agree that it is their mutual intent that this Agreement be enforceable solely by and between themselves, and their respective successors and assigns, and that no other person or entity (including, without limitation, any Owner of a Lot or Condominium in the Community) shall be deemed a third party beneficiary of this Agreement or have any rights whatsoever to enforce any of the provisions of this Agreement.

EXHIBIT "B"

(e) Waiver. The failure of either Party hereto to enforce any provision set forth herein shall not constitute a waiver of the right to enforce the same provision, or any other provision thereafter. No waiver of any provision herein shall be deemed or shall constitute a waiver of any other provision herein (whether or not similar) and no waiver shall constitute a continuing waiver.

(f) Interpretation. All pronouns and any other variation thereof shall be deemed to refer to the masculine, feminine or neuter, and to the singular or plural, as the identity of the person or entity may require for proper interpretation of this Agreement.

(g) Severability. In the event any clause, sentence, term or provision of this Agreement shall be held by arbitrator (or by any court of competent jurisdiction) to be illegal, invalid or unenforceable for any reason, the remaining portions of this Agreement shall nonetheless remain in full force and effect.

(h) Successors and Assigns. Except as expressly provided herein, all of the terms and provisions of this Agreement are intended to and shall constitute covenants running with the land shall be binding upon, and inure to the benefit of the Parties and their respective successors, assigns and grantees. The Parties acknowledge and agree that Declarant intends to promptly convey fee title to Lot W to the Master Association after the recordation of this Agreement and that from and after the Ownership Conveyance Date, Declarant shall have no further rights or obligations hereunder, save and except for (i) Declarant's indemnification obligations relating to CD Claims as provided in Paragraph 8(b), and (ii) any other indemnification obligation which arose prior to the Ownership Conveyance Date. The Parties further acknowledge and agree that from and after the Ownership Conveyance Date, the easement and rights and obligations of the Master Association as to Lot W under the Deed of Easement referenced in Recital F above shall be merged by operation of law with the fee title to Lot W, and the provisions of this Agreement shall supersede the provisions of said Deed of Easement as to the Master Association's easement, rights and obligations as to Lot W under said Grant Deed.

(i) Notices. All notices or other communications made pursuant to this Agreement shall be delivered personally or mailed by certified or registered mail, postage prepaid, to the parties at the following addresses:

Master Association: Great Park Neighborhoods Community Association
c/o FirstService Residential
15241 Laguna Canyon Road
Irvine, CA 92618

EXHIBIT "B"

With a copy to : Fred Whitney
Neuland & Whitney APC
22342-A Avenida Empresa, Suite 100
Rancho Santa Margarita, CA 92688

Declarant: HERITAGE FIELDS EL TORO, LLC,
c/o Five Point Communities Management, Inc.
25 Enterprise, Suite 400
Aliso Viejo, CA 92656
Attn: General Counsel

With a copy to: Julia Moriarty
ENGEO Incorporated
2010 Crow Canyon Pl, Suite 250
San Ramon, CA 94583

IRWD: Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92619
Attn: General Manager

With a copy to: Joan Arneson
Bowie, Arneson, Wiles & Giannone
4920 Campus Drive
Newport Beach, CA 92660

All notices so mailed shall be deemed received three (3) business days after deposit in the United States mail. Either party may change its address by giving notice of such change to the other party in the manner provided herein.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year first written above.

(End of text; signatures follow on the next page)

EXHIBIT “B”

“DECLARANT”

HERITAGE FIELDS EL TORO, LLC,
a Delaware limited liability company

By: Heritage Fields El Toro Sole Member LLC,
a Delaware limited liability company
Its: Sole Member

By: Heritage Fields LLC,
a Delaware limited liability company
Its: Sole Member

By: Lennar Heritage Fields, LLC,
a California limited liability company
Its: Administrative Member

By: Lennar Homes of California, Inc.,
a California corporation
Its: Sole Member

By: _____
Print Name: _____
Print Title: _____

“IRWD”

IRVINE RANCH WATER DISTRICT,
a _____

By: _____

Its: _____

By: _____

Its: _____

EXHIBIT "B"

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

On _____, 2016, before me, _____, Notary Public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(SEAL)

EXHIBIT "B"

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

On _____, 2016, before me, _____, Notary Public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(SEAL)

EXHIBIT "B"

CONSENT OF THE MASTER ASSOCIATION

The Board of Directors of the Great Park Neighborhoods Community Association, a California nonprofit mutual benefit corporation (the "Master Association"), acknowledges that Heritage Fields El Toro, LLC, a Delaware limited liability company (the Declarant named in the "Grant of Easement and Maintenance and Cost Sharing Agreement" to which this Consent is attached) intends to grant and convey fee title to Lot W of Tract 17467 to the Master Association promptly after the recordation of said Agreement, and in furtherance thereof, will assign its rights and delegate its duties thereunder to the Master Association. The Board of Directors represents that it has reviewed the Agreement and hereby agrees to assume the rights and obligations of Declarant, including, without limitation, the rights and obligations of the Lot W Owner, from and after the "Ownership Conveyance Date" (as defined in the Agreement) and agrees to be bound by the provisions of this Agreement.

Dated: _____, 2016

"MASTER ASSOCIATION"

GREAT PARK NEIGHBORHOODS
COMMUNITY ASSOCIATION, a California
nonprofit mutual benefit corporation

By: _____

Its: _____

By: _____

Its: _____

EXHIBIT “B”

EXHIBIT “1”

IRWD APPROVED PLANT PALETTE

(See the attached)

GREAT PARK NEIGHBORHOODS/PAVILION PARK
GRANT OF ESMT & MAINT & COST SHARING AGMT
(LOT W)-010 (5/3/16)

EXHIBIT "B"

EXHIBIT "2"

GENERAL DEPICTION OF THE CROSS SECTION OF THE MATRIX

(See the attached)

GREAT PARK NEIGHBORHOODS/PAVILION PARK
GRANT OF ESMT & MAINT & COST SHARING AGMT
(LOT W)-010 (5/3/16)

EXHIBIT "B"

EXHIBIT "3"

LEGAL DESCRIPTION AND DEPICTION OF THE NTS BASIN FLOOR

(See the attached)

GREAT PARK NEIGHBORHOODS/PAVILION PARK
GRANT OF ESMT & MAINT & COST SHARING AGMT
(LOT W)-010 (5/3/16)

EXHIBIT “B”

EXHIBIT “4”

**COPY OF THE ALTERNATIVE DISPUTE RESOLUTION PROCEDURES SET
FORTH IN SECTION 19.10 OF THE MASTER DECLARATION**

(See the attached)

GREAT PARK NEIGHBORHOODS/PAVILION PARK
GRANT OF ESMT & MAINT & COST SHARING AGMT
(LOT W)-010 (5/3/16)

May 23, 2016

Prepared by: J. McGehee/R. Mori

Submitted by: K. Burton *(KLB)*

Approved by: Paul Cook *(Signature)*

CONSENT CALENDAR

PETERS CANYON WASH CHANNEL WATER CAPTURE AND REUSE PIPELINE CONTRACT CHANGE ORDER

SUMMARY:

The Peters Canyon Wash Channel Water Capture and Reuse Pipeline project is under construction and is about 95 percent complete. The project will divert nuisance surface and perched groundwater flows with high concentrations of selenium and nitrates from selected tributaries to Peters Canyon Wash Channel and deliver them in a pressure pipeline to the Main Street sewer that discharges to the Orange County Sanitation District (OCSD) for treatment and reuse. The project will discharge to OCSD under the terms of OCSD's Dry Weather Urban Runoff Discharge Program (Resolution No. OCSD 13-09). Staff recommends that the Board approve Contract Change Order No. 6 in the amount of \$128,296.20 with E.J. Meyer Company for the Peters Canyon Wash Channel Water Capture and Reuse Pipeline, Project 4985.

BACKGROUND:

The City of Irvine, City of Tustin, Orange County Flood Control District (OCFCD), County of Orange (County) and California Department of Transportation (Caltrans) are all "Funding Parties" that have agreed to pay the capital costs to design and construct the project. While IRWD is not contributing to the capital cost of the project, staff is responsible for managing the design and construction phases and for operations and maintenance costs of the constructed project up to a maximum of \$60,000 per year. By participating in the project, IRWD will receive "Nitrogen and Selenium Credits" expected to be generated by the project which can be used throughout the San Diego Creek watershed including the San Joaquin Marsh.

Caltrans currently discharges shallow groundwater from its SR-261 dewatering operations at the Caltrans Ground Water Treatment Facility (GWTF) to IRWD's Harvard Avenue Trunk Sewer (HATS). This project will also connect to the GWTF, which will allow delivery of the Caltrans' dewatering flows to OCSD through the project pipeline.

Contract Change Order No. 6:

Staff and E.J. Meyer Company completed negotiations for Contract Change Order No. 6, attached as Exhibit "A", for additional work associated with unknown conditions encountered during construction of the Como Channel inlet structure. Como Channel is an existing open, rip-rap lined trapezoidal channel that discharges to Peters Canyon Channel. The inlet structure is being constructed at the bottom of Como Channel to capture and divert dry weather flow in the channel to the project pipeline. During initial excavation activities in Como Channel, E.J. Meyer discovered an unknown and unidentified concrete mass located about two feet below the channel invert. E.J. Meyer planned to construct a temporary diversion structure to divert channel flows by gravity around the inlet structure construction area, but were unable to proceed due to the presence of the concrete. The concrete was not shown on record drawings for the channel, and

the limits of the concrete extended continuously from the proposed temporary diversion structure to the proposed channel inlet structure. To complete construction of the channel inlet structure, the concrete needed to be removed. E.J. Meyer was also required to develop a new approach to divert the existing channel flows around the construction area, which resulted in the use of a pumped system that needed to remain in service 24 hours per day throughout the construction period.

To compound the concrete issue further, the elevation, as shown on the record drawings, of the concrete discharge apron from Como Channel to Peters Canyon Channel was determined to be incorrect after a field survey of the existing conditions was conducted. The elevation discrepancy resulted in the need to lower both the inlet structure discharge pipeline and the connection point to the desilting basin by core drilling new penetrations into the desilting basin.

The total cost for the work summarized above is \$128,296.20, and E.J. Meyer requested an additional 10 calendar days be added to the contract time to account for the additional time associated with the work described above. Staff reviewed the contract change order and recommends approval of Contract Change Order No. 6 in the amount of \$128,296.20. Although this change order extends the contract completion date to October 1, 2016, staff anticipates the work to be complete in June 2016, about three months ahead of schedule. A summary of the change orders to date is provided as Exhibit "B".

Although this change order does not require formal approval of the Peters Canyon Project Committee, staff discussed the change order with the Project Committee and they concur with its approval.

FISCAL IMPACTS:

Project 4985 is included in the FY 2015-16 Capital Budget. The existing budget is sufficient to fund the recommendations presented herein.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration was filed with the County of Orange on January 15, 2015. Pursuant to State Guideline § 15073, the IS/MND was made available for public review for a period of 30 days from January 15, 2015 through February 13, 2015. The IS/MND was adopted by IRWD Board of Directors at its April 27, 2015 meeting. A Notice of Determination was filed with the Orange County Clerk/Recorder and the CA State Clearinghouse on April 28, 2015.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 17, 2016.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO APPROVE CONTRACT CHANGE ORDER NO. 6 IN THE AMOUNT OF \$128,296.20 WITH E.J. MEYER COMPANY FOR THE PETERS CANYON WASH CHANNEL WATER CAPTURE AND REUSE PIPELINE, PROJECT 4985.

LIST OF EXHIBITS:

- Exhibit "A" – Contract Change Order No. 6
- Exhibit "B" – Contract Change Order Summary

EXHIBIT "A"

CONTRACT CHANGE ORDER

IRVINE RANCH WATER DISTRICT
 15600 Sand Canyon Avenue
 P. O. Box 57000
 Irvine, California 92619-7000
 (949) 453-5300



C.O. No. 6
 Final

Project No. 21163 (4985)

Peters Canyon Channel Water Capture and Reuse Pipeline

Project Title

Date: 5/2/2016

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Change Request 14 - Unknown conditions at Como Channel during construction of the inlet structure.	128,296.20	0.00	10
Revised Contract Completion Date: October 1, 2016			
TOTAL	128,296.20	0.00	10

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=	128,296.20	10
2. ORIGINAL CONTRACT AMOUNT	=	7,877,777.00	450
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	365,919.39	33
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	8,243,696.39	483
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	8,371,992.59	493

We hereby agree to make the above change subject to the terms of this change order for the sum of:

One Hundred Twenty Eight Thousand Two Hundred Ninety Six and 20/100 ----- Dollars

5-3-16
Date

E.J. Meyer Company
Contractor

[Signature]
By: Kristina Corona

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
<i>[Signature]</i>	5/4/16	Department Director Approval Required <input type="checkbox"/> Executive Director Approval Required <input type="checkbox"/> General Manager Approval Required <input type="checkbox"/> Board Approval Required <input checked="" type="checkbox"/>
IRWD Engineer or Consulting Engineer	Date 05/04/16	
<i>[Signature]</i>	Date 5/4/16	
Principal Engineer		
<i>[Signature]</i>	Date	By _____ Date _____
Executive Director of Engineering & Water Quality		525108
General Manager	Date	Purchase Order No.

NOTE: The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

CHANGES: All workmanship and materials called for by this Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

EXHIBIT "B"

Peters Canyon Channel Water Capture and Reuse Pipeline Project PR 4985 Construction Change Order Summary

Contractor: E.J. Meyer
Design Engineer: Tetra Tech
Award Date: 5/27/2015

Change Order		Description	Contract Amount					Contract Days				Original Completion Date:	
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
			Original Contract Amount: \$7,877,777.00					Original Days: 450				8/19/2016	
1		Approved by Executive Director Approved on Septemer 9, 2015 CR No. 1 CR No. 2 CR No. 4	\$ 1,600.00 \$ 666.35 \$ 5,964.45	\$8,230.80	\$0.00	\$8,230.80	0.10%	\$7,886,007.80	0	0	0	450	8/19/2016
2		Approved by Executive Director Approved on January 12, 2016. CR No. 5 CR No. 7 CR No. 8	\$ 22,507.44 \$ 32,740.82 \$ 8,736.50	\$63,984.76	\$8,230.80	\$72,215.56	0.92%	\$7,949,992.56	2	0	2	452	8/21/2016
3		Approved by Board of Directors Approved on March 30, 2016 CR No. 6 CR No. 9 CR No. 10 CR No. 11	\$ (87,800.00) \$ 108,857.09 \$ 233,238.22 \$ (44,258.80)	\$210,036.51	\$72,215.56	\$282,252.07	3.58%	\$8,160,029.07	25	2	27	477	9/15/2016
4		Approved by Executive Director Approved on March 7, 2016 CR No. 12	\$ 62,356.03	\$62,356.03	\$282,252.07	\$344,608.10	4.37%	\$8,222,385.10	6	27	33	483	9/21/2016
5		Approved by Executive Director Approved on April 28, 2016 CR No. 13	\$ 21,311.29	\$21,311.29	\$344,608.10	\$365,919.39	4.64%	\$8,243,696.39	0	27	33	477	9/21/2016
6		Approved by Board of Directors Approved on CR No. 14	\$ 128,296.20	\$128,296.20	\$365,919.39	\$494,215.59	6.27%	\$8,371,992.59	10	33	43	493	10/1/2016

TOTAL CHANGE ORDERS	494,215.59	6.27%
REVISED CONTRACT AMOUNT	8,371,992.59	

May 23, 2016

Prepared by: A. Murphy/M. Cortez

Submitted by: K. Burton *K.B.*

Approved by: Paul Cook *P. Cook*

CONSENT CALENDAR

MICHELSON WATER RECYCLING PLANT FILTER PUMP STATION 2 AND DYER ROAD WELLFIELD WELLS 12 AND 13 ROOF MODIFICATIONS CONSTRUCTION AWARD

SUMMARY:

This project will modify the existing building roofs at the Michelson Water Recycling Plant (MWRP) Filter Pump Station 2 (FPS2) and Dyer Road Wellfield (DRWF) Wells 12 and 13 to allow the pump equipment to be lifted and removed vertically. Staff recommends that the Board:

- Authorize a budget increase in the amount of \$44,500, from \$340,500 to \$385,000, for Project 5453;
- Authorize a budget increase in the amount of \$278,600, from \$256,000 to \$534,600, for Project 5469; and
- Authorize the General Manager to execute a construction contract with Schuler Constructors in the amount of \$501,469 for the MWRP FPS2, Project 5469, and DRWF Wells 12 and 13 Roof Modifications, Project 5453.

BACKGROUND:

The MWRP FPS2 and DRWF Wells 12 and 13 Roof Modifications project will modify the building roofs at these facilities to allow the pump equipment to be lifted in one piece and removed vertically through hatches. Currently at FPS2, pumps are serviced by lifting them with a three-ton bridge crane, disassembling them in place, and then removing them horizontally through roll up doors in the building's front wall. At DRWF Wells 12 and 13, the roof section over the pump has to be lifted off in order to remove the pump for maintenance. Additionally, new exhaust fans and roll-up doors at FPS2 will be installed to provide increased ventilation and cooling in the pump room and the existing fluorescent light fixtures at all three sites will be replaced with light emitting diode light fixtures. The three project sites are shown in Exhibit "A".

Construction Bid

The MWRP FPS2 and DRWF Wells 12 and 13 Roof Modifications project was advertised to a select list of 14 mechanical contractors. The bid opening was held on May 3, 2016 with bids received from two contractors: Pacific Hydrotech and Schuler Constructors. Schuler is the apparent low bidder with a bid amount of \$501,469; Pacific Hydrotech submitted a bid of \$508,536. Staff reviewed Schuler's bid and determined that the bid is responsive. The bid summary is attached as Exhibit "B".

FISCAL IMPACTS:

Projects 5453 and 5469 are included in the FY 2016-17 Capital Budget. Budget increases are required to fund the construction and engineering support services for the projects as shown in the table below.

Project No.	Current Budget	Addition <Reduction>	Total Budget
5453	\$340,500	\$44,500	\$385,000
5469	\$256,000	\$278,600	\$534,600
Total	\$596,500	\$323,100	\$919,600

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption for the project was prepared and filed with the County of Orange on May 29, 2015.

COMMITTEE STATUS:

Construction awards are not routinely taken to Committee prior to submittal to the Board.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE A BUDGET INCREASE IN THE AMOUNT OF \$44,500, FROM \$340,500 TO \$385,000, FOR PROJECT 5453; AUTHORIZE A BUDGET INCREASE IN THE AMOUNT OF \$278,600, FROM \$256,000 TO \$534,600, FOR PROJECT 5469; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH SCHULER CONSTRUCTORS IN THE AMOUNT OF \$501,469 FOR THE MICHELSON WATER RECYCLING PLANT FILTER PUMP STATION 2, PROJECT 5469, AND DYER ROAD WELLFIELD WELLS 12 AND 13 ROOF MODIFICATIONS, PROJECT 5453.

LIST OF EXHIBITS:

- Exhibit "A" – Location Map
- Exhibit "B" – Bid Summary

EXHIBIT A: PROJECT LOCATION MAP

FILTER PUMP STATION 2

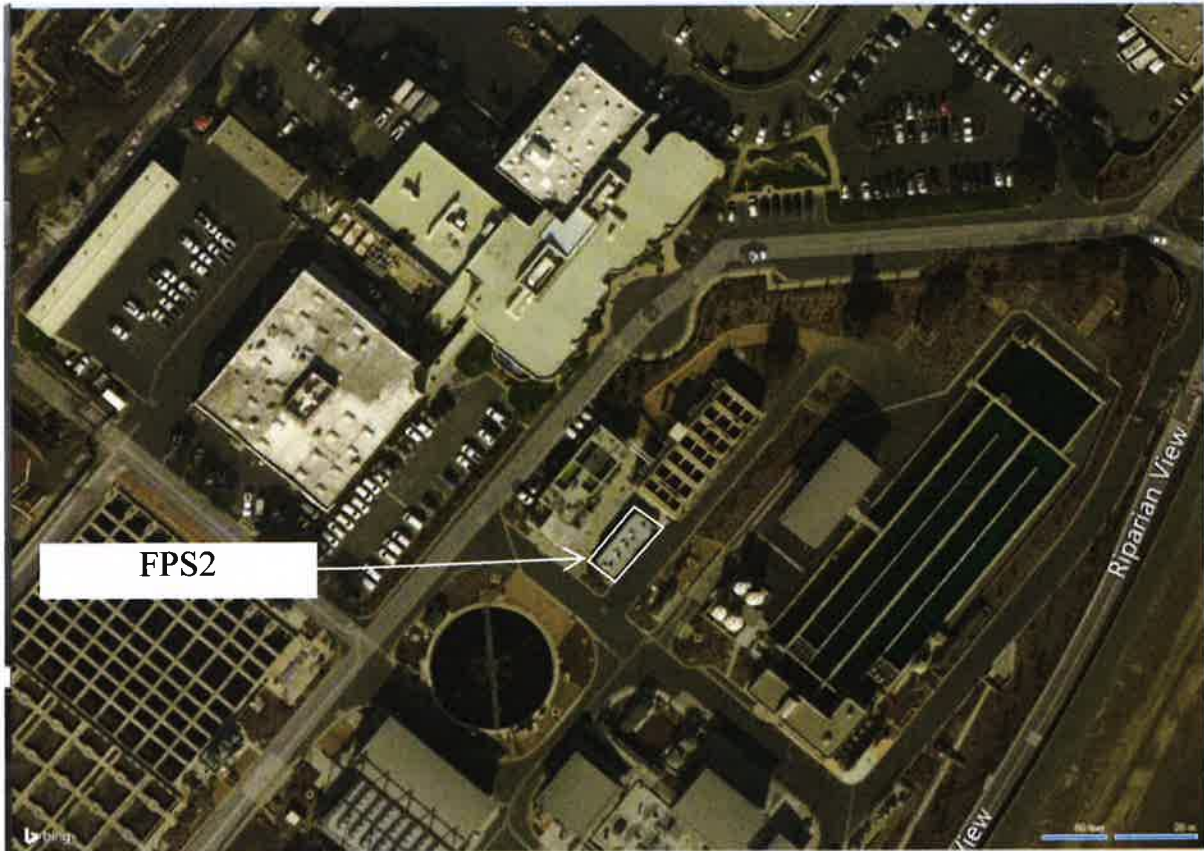


EXHIBIT A: PROJECT LOCATION MAP

WELL 12



EXHIBIT A: PROJECT LOCATION MAP

WELL 13



EXHIBIT "B"

Michelson

Station 2

Entered By: J.K. Troy

and Wells 12 and 13 Roof Modifications
PR 5453 5469

Item No.	Description	Qty	Unit	Engineer's Estimate		1 Schuler Constructors, Inc Corona, CA		2 Pacific Hydrotech Corp. Perris, CA	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
1	Bonds, Insurance and Permits	1	LS	\$14,600.00	\$14,600.00	\$6,000.00	\$6,000.00	\$20,000.00	\$20,000.00
2	Mobilization & Demobilization	1	LS	\$5,700.00	\$5,700.00	\$19,000.00	\$19,000.00	\$20,000.00	\$20,000.00
FILTER PUMP STATION NO. 2									
3	Lead Abatement	1	LS	\$11,600.00	\$11,600.00	\$22,600.00	\$22,600.00	\$2,000.00	\$2,000.00
4	Installation of Protection At Existing Pumps	1	LS	\$9,800.00	\$9,800.00	\$14,000.00	\$14,000.00	\$5,100.00	\$5,100.00
5	Demolition of Existing Roof and Decking	990	Sq. Ft.	\$15.00	\$14,850.00	\$11.38	\$11,266.20	\$25.00	\$24,750.00
6	Shoring and Scaffolding	1	LS	\$11,400.00	\$11,400.00	\$16,500.00	\$16,500.00	\$20,000.00	\$20,000.00
7	Saw Cutting of Existing Beam	1	LS	\$2,000.00	\$2,000.00	\$10,500.00	\$10,500.00	\$20,000.00	\$20,000.00
8	Installation of New Beams	1	LS	\$59,500.00	\$59,500.00	\$61,000.00	\$61,000.00	\$94,500.00	\$94,500.00
9	Installation of New Decking	990	Sq. Ft.	\$9.00	\$8,910.00	\$27.18	\$26,908.20	\$14.00	\$13,860.00
10	Miscellaneous Framing	1,176	Sq. Ft.	\$2.00	\$2,352.00	\$8.44	\$9,925.44	\$1.00	\$1,176.00
11	Beam Splices (if required)	5	EA	\$281.00	\$1,405.00	\$0.00	\$0.00	\$0.00	\$0.00
12	Installation of Roof Access Hatches	4	EA	\$8,408.00	\$33,632.00	\$7,691.25	\$30,765.00	\$10,000.00	\$40,000.00
13	Installation of Roof Exhaust Fans and Motor Starter	4	EA	\$4,202.00	\$16,808.00	\$8,516.00	\$34,064.00	\$8,200.00	\$32,800.00
14	Miscellaneous Electrical Items for Exhaust Fans	1	LS	\$66,800.00	\$66,800.00	\$6,324.00	\$6,324.00	\$21,700.00	\$21,700.00
15	Demolition of Existing Lighting and Exhaust Fans and Conduits	1	LS	\$9,600.00	\$9,600.00	\$6,324.00	\$6,324.00	\$3,000.00	\$3,000.00
16	Installation of New Lighting and Conduits	1	LS	\$30,600.00	\$30,600.00	\$19,652.00	\$19,652.00	\$12,500.00	\$12,500.00
17	Demolition and Replacement of Exterior Rollup Doors	2	EA	\$7,000.00	\$14,000.00	\$14,741.00	\$29,482.00	\$10,800.00	\$21,600.00
18	Install new Roofing and Patching to Existing	1,325	Sq. Ft.	\$13.00	\$17,225.00	\$37.93	\$50,257.25	\$18.00	\$23,850.00
WELL SITE NO. 12									
19	Installation of Protection At Existing Pumps	1	LS	\$3,300.00	\$3,300.00	\$1,859.00	\$1,859.00	\$1,800.00	\$1,800.00
20	Demolition of Existing Roofing, Plywood Sheathing, And Trusses	175	Sq. Ft.	\$25.00	\$4,375.00	\$37.11	\$6,494.25	\$18.00	\$3,150.00
21	Shoring	1	LS	\$8,100.00	\$8,100.00	\$633.00	\$633.00	\$7,500.00	\$7,500.00
22	Installation of New Roof	1	LS	\$50,000.00	\$50,000.00	\$17,930.00	\$17,930.00	\$25,400.00	\$25,400.00
23	Installation of Roof Access Hatch	1	LS	\$13,700.00	\$13,700.00	\$9,176.00	\$9,176.00	\$12,000.00	\$12,000.00
24	Remove and Replace Fascia Members	1	LS	\$6,200.00	\$6,200.00	\$1,877.00	\$1,877.00	\$4,900.00	\$4,900.00
25	Priming and Painting of All Exterior Members	1	LS	\$2,000.00	\$2,000.00	\$5,400.00	\$5,400.00	\$3,400.00	\$3,400.00
26	Lighting Replacement	1	LS	\$7,900.00	\$7,900.00	\$19,003.00	\$19,003.00	\$5,000.00	\$5,000.00
WELL SITE NO. 13									
27	Installation of Protection At Existing Pumps	1	LS	\$3,300.00	\$3,300.00	\$1,859.00	\$1,859.00	\$1,800.00	\$1,800.00
28	Demolition of Existing Roofing, Plywood Sheathing, And Trusses	175	Sq. Ft.	\$33.00	\$5,775.00	\$37.11	\$6,494.25	\$18.00	\$3,150.00
29	Shoring	1	LS	\$8,100.00	\$8,100.00	\$633.00	\$633.00	\$7,700.00	\$7,700.00
30	Installation of New Roof	1	LS	\$50,000.00	\$50,000.00	\$17,930.00	\$17,930.00	\$25,400.00	\$25,400.00
31	Installation of Roof Access Hatch	1	LS	\$13,700.00	\$13,700.00	\$9,176.00	\$9,176.00	\$12,000.00	\$12,000.00
32	Remove and Replace Fascia Members and T1-11 Siding	1	LS	\$7,900.00	\$7,900.00	\$3,893.00	\$3,893.00	\$7,100.00	\$7,100.00
33	Priming and Painting of All Exterior Members	1	LS	\$2,000.00	\$2,000.00	\$5,500.00	\$5,500.00	\$3,400.00	\$3,400.00
34	Lighting Replacement	1	LS	\$7,900.00	\$7,900.00	\$19,003.00	\$19,003.00	\$5,000.00	\$5,000.00
35	Startup Testing	1	LS	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
36	Operation & Maintenance Manuals	1	LS	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
37	Final Record Drawings	1	LS	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
Subtotal					\$528,032.00		\$504,428.59		\$508,536.00
Adjustment (+ or -)							(\$2,960.15)		\$0.00
TOTAL AMOUNT OF BID					\$528,032.00		\$501,468.44		\$508,536.00
						Manufacturers:		Manufacturers:	
						None		None	
						Subcontractors:		Subcontractors:	
						Brickey Environment: Lead Abatement		Simpson Sandblasting: Coating	
						Delta Enterprises: Scaffolding		AMS: HVAC	
						Commercial Roofing: Roofing		JL Ray: Demo	
						HydroTech Electric: Electrical		Casco: Rollup Doors	
						MC Painting: Painting		JL Ray: Roof	
						Commercial Door Co: Roll Up Door		Tamang Electric: Electrical	
						Remco Fabrication: Structural Steel			

May 23, 2016

Prepared by: K. Welch ^{vw} E. Akiyoshi

Submitted by: F. Sanchez/P. Weghorst ^{PAW}

Approved by: Paul Cook ^{PC}

ACTION CALENDAR

VERIFICATIONS OF SUFFICIENT WATER SUPPLY FOR THE WEST ALTON PARCEL AND EL TORO 100-ACRE PARCEL DEVELOPMENTS

SUMMARY:

In February 2016, staff received two requests from the County of Orange to complete Verifications of Sufficient Water Supply (WSV) for the West Alton Parcel and the El Toro 100-Acre Parcel developments located within the former Marine Corps Air Station (MCAS) El Toro Base. Staff has completed the WSVs for each of the projects and recommends Board approval of the documents.

BACKGROUND:

The County of Orange's proposed West Alton Parcel Development (West Alton) and the El Toro 100-Acre Parcel Development (El Toro) projects are both located within the City of Irvine's Planning Area 51 on the former MCAS El Toro Base just outside of the City's Orange County Great Park (Great Park) boundary. In February 2016, staff received requests to prepare WSVs for each of the projects. A location map of the West Alton and El Toro projects is attached as Exhibit "A".

On April 15, 2015, the Board approved separate Water Supply Assessments (WSA) for each of the proposed projects. The West Alton project WSA included 970 dwelling units which the County has reduced by 168 to 802 proposed dwelling units. The El Toro project includes 2,103 dwelling units and 2.1 million square feet of retail and office space and one hotel which is consistent with the approved WSA.

As required under SB 221, and as part of the tract map approval process for projects including 500 or more dwelling units, the County has requested a WSV be prepared for its West Alton and El Toro projects. Separate WSVs have been completed for the West Alton and El Toro proposed projects and are provided as Exhibit "B" and Exhibit "C" respectively. The WSVs for these projects are based upon the approved WSAs containing IRWD's determination that a sufficient water supply is available. SB 221 also requires several elements be included in the WSV that are not covered or required in the WSA. These elements are primarily covered in Sections 1(b)(ii), 1(b)(iii) and 1(b)(iv) of the "Detailed Verification" section in each of the attached WSVs. This information, together with the respective WSAs approved by IRWD in 2015, reflects IRWD's confirmation that the project water demands, together with demands from any other developments that have previously received WSVs or will-serves, or other projects that have come to IRWD's attention either through developers or through the respective land use agency approval process, are, in the aggregate, within the demands identified by that WSA. In

accordance with this procedure, the attached WSVs are based on the respective WSAs and information contained in the WSVs.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

This study is exempt from the California Environmental Quality Act as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15262 which provides exemption for planning studies.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on May 12, 2016.

RECOMMENDATION:

THAT THE BOARD APPROVE THE VERIFICATION OF SUFFICIENT WATER SUPPLY FOR THE WEST ALTON PARCEL DEVELOPMENT AND THE VERIFICATION OF SUFFICIENT WATER SUPPLY FOR THE EL TORO 100-ACRE PARCEL DEVELOPMENT.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Verification of Sufficient Water Supply for West Alton Parcel Development

Exhibit "C" – Verification of Sufficient Water Supply for the El Toro 100-Acre Parcel Development



el toro and west alton | local context



August 2014

EXHIBIT "B"

IRVINE RANCH WATER DISTRICT
VERIFICATION OF SUFFICIENT WATER SUPPLY
Government Code §66473.7

To: (Lead Agency)
County of Orange
333 W. Santa Ana Blvd., Third Floor
Santa Ana, CA 92701-4062

(Applicant)
County of Orange
333 W. Santa Ana Blvd., Third Floor
Santa Ana, CA 92701-4062

Project Information

Project Title: West Alton Parcel Development (see Exhibit A)
 Tentative Map Application No. _____ Verification requested prior to tentative map application

Number of residential units in Project: 803
Non-residential uses in Project (type, no. of employees, sq. ft. of floor space, acreage): (see Exhibit B)
Acreage to be devoted to landscape (excluding individual residence yards): (see Exhibit B)

- The projected water demand for the Project was included in IRWD's most recently adopted urban water management plan.
- A water supply assessment that included the Project was adopted by IRWD on April 15, 2015. A copy is attached hereto and incorporated herein by this reference (see Exhibit C).

Verification of Availability of Sufficient Water Supply

On _____, 2016 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within Verification and made the following determination regarding the above-described Project:

- A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- A sufficient water supply is not available for the Project.

The foregoing determination is based on the following Water Supply Verification Information and supporting information in the records of IRWD.

Signature _____ Date _____ Title _____

WATER SUPPLY VERIFICATION INFORMATION

Purpose of Verification

Irvine Ranch Water District (“IRWD”) is the public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this verification (the “Project”). As a public water system, IRWD is required by Section 66473.7 of the Government Code (the “Verification Law”) to provide the County with a verification of the availability of a sufficient water supply for non-exempt subdivisions of more than 500 residential units in conjunction with (or prior to) the County’s approval of a tentative map. The County has found the Project to include a subdivision that is subject to verification and not exempt under the Verification Law.

The Verification Law provides that a verification shall be supported by substantial evidence, which may include, but is not limited to, any of the following (i) IRWD’s most recently adopted urban water management plan; (ii) a water supply assessment previously adopted for the project under Water Code 10910, *et seq.*; or (iii) other analytical information substantially similar to the assessment of service reliability required by Water Code Section 10635 to be included in the urban water management plan. The Verification Law also specifies the elements to be contained in a verification with respect to (i) supplies relied upon that are not currently available; (ii) reasonably foreseeable impacts of the subdivision on the availability of water resources for agricultural and industrial uses within IRWD’s service area that are not currently receiving water; and (iii) rights to extract additional groundwater needed to supply the subdivision.

A verification does not entitle the Project to service or to any right, priority or allocation in any supply, capacity or facility, or affect IRWD’s obligation to provide service to its existing customers or any potential future customers. In order to receive service, the Project applicant is required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD’s forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirements as specified therein.

Methodology of Verification for Project With Prior Water Supply Assessment

As referenced on the cover page of this verification (the “Verification”), the Project was included within an assessment of water supply approved by IRWD. The Assessment contained IRWD’s determination that a sufficient water supply is available for the Project. As described in the Assessment, IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. However, upon approval of each assessment containing a determination of a sufficient supply, IRWD attributes the demands identified by that assessment to IRWD’s existing and committed demand. Thereafter, each verification approved by IRWD for a subdivision covered by that assessment is based on the assessment, and reflects IRWD’s confirmation that the water demands of the subdivision, together with any other subdivisions or developments that have previously received verifications, will-serves or other approval by IRWD under the same assessment, are, in the aggregate, within the demand identified by that assessment. In accordance with that procedure, this Verification is based on the Assessment. The Assessment’s determination of sufficiency extends through 2035. In addition, this Verification includes the elements required by the Verification Law that are not included within the required contents of assessments.

Supporting Documentation

As noted above, the principal supporting document for this Verification is the Assessment. Other documentation supports the Assessment and this Verification: IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update was adopted in June 2011 and the next update for 2015 is anticipated in July 2016. The project water demand for the Project will be included in IRWD's 2015 UWMP update.

In addition to the Assessment, the most recent WRMP and the 2010 UWMP mentioned above, other supporting documentation referenced herein is found in Section 5 of this Verification. This includes the Metropolitan Water District of Southern California's Regional Urban Water Management Plan detailing an evaluation by Metropolitan Water District of Southern California (MWD), the wholesaler of IRWD's imported water supplies, of the reliability of MWD's supplies. (MWD 2015 UWMP dated March 2016 (MWD UWMP)).

The Verification Law requires written proof of entitlement for "not currently available" (referred to herein as "under development") supplies. The Assessment includes such information for both currently available and under development supplies. Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2 of the Assessment. Copies of the summarized items have been provided to the County.

Sufficiency Calculation Methodology

The methodology for IRWD's comparison of its demands and supplies is set forth in the Assessment, in the section entitled "Assessment Methodology" and subsections thereof entitled "water use factors; dry-year increases;" "planning horizon;" "assessment of demands;" "assessment of supplies;" and "comparison of demand and supply."

Detailed Verification

1. Determination of sufficiency of water supply

(a) Supply and demand comparison

See the Assessment, Section 1, incorporated herein by reference.

(b) Factors considered in determining the sufficiency of the water supply:

(i) The availability of water supplies over a historical record of at least 20 years.

Quantities received in prior years from existing sources identified in (a)(1):

Source	1985	1990	1995	2000	2005	2010	2015
Potable - imported	43,320	44,401	28,397	36,777	19,306	15,227	12,790
Potable - groundwater	38	10,215	20,020	20,919	37,160	42,089	46,770
Nonpotable - recycled	12,399	11,589	10,518	14,630	15,296	20,847	22,866
Nonpotable - groundwater	36	816	1,834	2,890	2,285	3,761	4,063
Nonpotable - native	3,587	2,778	5,980	4,949	7,251	814	2,826
Total	71,639	94,699	69,082	96,508	86,602	82,738	89,315

See also the Assessment, Section 1, incorporated herein by reference.

(ii) The applicability of a water shortage contingency analysis prepared pursuant to Water Code Section 10632 that includes actions to be undertaken by IRWD in response to water supply shortages.

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect the implementation of water shortage emergency measures. In February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan, which is a supporting document for Section 15. The Water Shortage Contingency Plan was further revised on October 13, 2014, and is currently being updated as part of IRWD's UWMP 2015 update (expected to be adopted in June 2016). Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for any water savings that could be achieved by these measures.

(iii) Reduction by IRWD in water supply allocated to a specific water use sector, pursuant to a resolution, ordinance or contract uses.

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect any allocated reductions by IRWD. As noted under the preceding item (ii), IRWD's water shortage contingency plan and Rules and Regulations provide for voluntary and mandatory water conservation measures that could be invoked in declared water shortage emergencies. These include reductions to certain water uses. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for water savings that could be achieved by any allocated reductions.

With respect to items (ii) and (iii) above, it is noted that MWD has in effect a management plan for dealing with periodic surplus and shortage conditions, known as Metropolitan Report No. 1150, *Water Surplus and Drought Management Plan*, and as also described in the MWD UWMP. MWD's demand projections account for the effects of long-term conservation best management practices.

Recent Actions Related to Drought Conditions. In response to the historically dry conditions throughout the state of California, on April 1, 2015, Governor Brown issued an Executive Order directing the State Water Resources Control Board (SWRCB) to impose restrictions to achieve an aggregate statewide 25 percent reduction in potable water use through February 2016. The Governor's Order also includes mandatory actions aimed at reducing water demands, with a particular focus on outdoor water use. On May 5, 2015, the SWRCB adopted regulations which required that IRWD achieve a 16% reduction in potable water use from the 2013 levels. On November 13, 2015, Governor Brown issued an Executive Order directing the SWRCB to extend the 2015 Emergency Regulation through October 31, 2016 if drought conditions continued. On February 2, 2016, the SWRCB adopted an extended and modified Emergency Regulation. As a result of the modification, IRWD's mandated reduction was changed from 16% to 9% effective March 1, 2016. On April 14, 2015, MWD approved actions to implement the Water Supply Allocation Plan at a level 3 Regional Shortage Level and a 15% reduction in regional deliveries effective July 1, 2015, through June 30, 2016. IRWD has and will continue to implement actions to reduce potable water demands during the drought; however, this does not affect IRWD's long-term supply capability to meet the demands.

As discussed under Assessment "IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD", IRWD has effectively analyzed an imported water supply reduction as shown in Assessment Figures 1a, 2a, 3a. These Figures do not reflect a reduction in demands thus representing a more conservative view of IRWD's supply capability. In particular, the reduction in demand mandated by Senate Bill 7 in 2010, requiring urban retail water suppliers to establish water use targets to achieve a 20% reduction in daily per capita water use by 2020, has not been factored into the demands in this analysis. Similarly, notwithstanding the Governor's order, IRWD's conservative supply-sufficiency analysis in Assessment Figures 1a, 2a and 3a does not include the ordered reduction in potable demands.

(iv) The amount of water that IRWD can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state and local water initiatives such as CALFED and Colorado River tentative agreements, based on the inclusion of information with respect to such supplies in Section 2, below.

Local. IRWD directly relies (for a portion of its full build-out annual demand in single and multiple dry-year projections) on the following under development supplies (see 1(a), above): the Irvine Wells (see the Assessment, Section 2(b)(1)(vi) – “POTABLE SUPPLY – GROUNDWATER”). In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan (“LTFP”) which provides updated information and was received by the OCWD Board in July 2009 and updated in 2014. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft which provides sufficient storage space to accommodate increased supplies from one wet year while also provides enough water in storage to offset decreased supplies during a two- to three year drought. (Source: “Evaluation of Orange County Groundwater Basin Storage and Operational Strategy”, as referenced in *2014-2015 Engineer’s Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*).

With the implementation of OCWD’s preferred projects, the Basin yield in the year 2030 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage (“BPP”) that OCWD sets based on these factors.

IRWD’s own recycled water expansion program is also shown as an under development supply. IRWD also has a currently available recycled water supply from its own existing recycling program. The recycled water supplies are discussed in Section 2 below (see the Assessment, Section 1 – Figures 5, 6, 7 and 8 (supplies denominated “MWRP” and “LAWRP”), Section 2(a), and Section 2(b)(1) - “NONPOTABLE SUPPLY – RECLAIMED”), IRWD has completed construction of the Michelson Water Recycling Plant Phase 2 Capacity Expansion Project to tertiary capacity of 28 million gallons per day (MDG). With this expansion, IRWD increased its tertiary treatment capacity on the existing MWRP site to produce sufficient recycled water to meet the projected demand in the year 2035. Additional recycling capacity will augment local nonpotable supplies and improve reliability.

As noted in the Assessment, IRWD’s demand projections reflect the effect of IRWD’s water conservation pricing and other conservation practices; in particular, IRWD’s water use factors used to derive its demand projections are based on average water use and incorporate the effect of IRWD’s tiered-rate conservation pricing and its other long-term water conservation programs. System losses at a rate of approximately 5% are built into the water use factors. As discussed above, IRWD’s supply and demand projections do not take into account water savings that could be achieved by water shortage emergency measures.

Imported. MWD, the supplier of IRWD’s imported supplies, relies upon several of the listed projects and programs. MWD supports and provides financial incentives to water recycling, groundwater recovery, water conservation, ocean desalination and other local resource development programs. MWD calculates its demand forecast by first estimating total retail demand for the region and then factoring in impacts of conservation. Next, it derives

projections of local supplies using data on current and expected local supply programs and Integrated Resource Planning (IRP) Local Resource Program Target. The difference between the resulting local demands is the expected regional demand on MWD. These estimates of demands on MWD were developed for a single dry year, multiple dry years and average years. (MWD UWMP, see Tables pages 2-14 through 2-16). In the MWD UWMP, MWD states it has supply capability that would be sufficient to meet expected demands from 2020 to 2040 under single dry year, multiple dry year and normal year conditions.

Also, In January 2016, MWD adopted its 2015 IRP Update. In the 2015 IRP Update, MWD continued its adaptive management strategy and integrated future supply actions to improve the viability of potential contingency resources as needed, and to position the region to effectively implement these resources in a timely manner. The 2015 IRP finds additional action is needed in investments in conservation, local supplies, the California WaterFix, and stabilizing Colorado River supplies. Among the supply actions, MWD will continue to work collaboratively with state and federal agencies on the WaterFix, maximize its storage and transfer approach, and continue to develop and protect local supplies and conservation.

MWD also relies upon the implementation of the CALFED Bay-Delta Program, as an under development supply, to attain an increase in its existing Bay-Delta deliveries. Other under water development programs relied upon by MWD include: additional transfers and storage agreements such as IID/MWD Conservation Project, ICS Program, Agreements with CVWD, Additional Palo Verde Irrigation District Transfers, SNWA Interstate Agreement, Desert Water/CVWD Transfer, Kern County storage programs, AVEK Exchange Program, Mojave Storage Program, North of Delta/In-Delta Transfers, Yuba Accord Purchase, San Bernardino Valley Water Storage Program, Central Valley Transfer Programs, (MWD UWMP, Sections 3.1, 3.2, and 3.3) See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to MWD's current and under development supplies.

In addition, as noted in the Assessment, IRWD has developed water banking projects in Kern County, California which be called upon for delivery of supplemental banked water to IRWD, if needed, in response to shortage conditions or potential water supply interruptions.

2. Required information concerning *under-development* supplies

(a) Written contracts or other proof of valid rights to the identified supplies

See the Assessment, Section 2(b)(1), incorporated herein by reference. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to written contracts and other proof related to MWD's supplies.

(b) Adopted capital outlay program to finance delivery of the supplies

See the Assessment, Section 2(b)(2), incorporated herein by reference. With respect to future groundwater wells (PR Nos. 1100, 7140, 1402) and Baker Water Treatment Plant (PR No. 5027), IRWD adopted its fiscal year 2016-17 capital budget on April 25, 2016 (Resolution No. 2016-7), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) IRWD has approximately \$615.2 million (water) and \$784.8 million (wastewater) of unissued, voter-approved bond authorization. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's

supplies.

(c) Federal, state and local permits to construct of delivery infrastructure

See the Assessment, Section 2(b)(3), incorporated herein by reference. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(d) Regulatory approvals for conveyance or delivery of the supplies

See the Assessment, Section 2(b)(4), incorporated herein by reference. In addition, future recycling plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Foreseeable impacts of the Project on the availability of water for agricultural and industrial uses in IRWD's service area not currently receiving water

Based on city planning and other information known to IRWD, there are no agricultural or industrial uses in IRWD's service area that are not within either existing and committed demand or future demand, both of which are included within the supply and demand comparison and determination of sufficiency (see 1(a)).

4. Information concerning the right to extract additional groundwater included in the supply identified for the Project:

Where the water supply for the Project includes groundwater, the verification is required to include an evaluation of the extent to which IRWD or the landowner has the right to extract the additional groundwater needed to supply the Project. See the Assessment, Section 2(b)(1), "POTABLE SUPPLY – GROUNDWATER" and "NONPOTABLE SUPPLY – GROUNDWATER," and Section 4, incorporated herein by reference.

5. References

Water Resources Master Plan, Irvine Ranch Water District, Updated 2007

Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program, Irvine Ranch Water District, February 2009

Water Shortage Contingency Plan, Irvine Ranch Water District, February 2009

2010 Urban Water Management Plan, Irvine Ranch Water District, June, 2011

Southern California's Integrated Water Resources Plan, Metropolitan Water District of Southern California, March 1996

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October 7, 2007

Board Letter, Action plan for updating the Integrated Resources Plan, Metropolitan Water District of Southern California, December 11, 2007

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

2015 Integrated Resources Plan Update, Metropolitan Water District of Southern California, January 2016

2015 Urban Water Management Plan, Metropolitan Water District of Southern California, March 2016

Master Plan Report, Orange County Water District, April, 1999

Groundwater Management Plan, Orange County Water District, March, 2004

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

Long-Term Facilities Plan 2014 Update, Orange County Water District, November 2014

2014-2015 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District, February 2016

Progress on Incorporating Climate Change into Management of California's Water Resources, California Department of Water Resources, July 2006

Exhibit A
Depiction of Project Area

Exhibit 3.2, Conceptual Site Plan



MAXIMUM DEVELOPMENT INTENSITY

Residential: 803 Multi-Family Units

Exhibit B

Non-residential Uses Included in Project



County of Orange

County Executive Office

February 16, 2016

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA
92619-7000

RE: Request for Verification of Sufficient Water Supplies (Government Code
§66473.7(b)(1))

West Alton Parcel

The County of Orange hereby requests verification of the availability of a sufficient water supply for the below-described project. Under Government Code §66473.7(b)(1), written verification of the availability of a sufficient water supply is required in conjunction with or prior to the approval of any tentative map that includes a residential subdivision of more than 500 dwelling units, subject to certain exemptions.

The County has determined that the subject project (1) includes a subdivision meeting the criteria requiring verification of availability of sufficient water supply and (2) does not fall within one of the statutory exemptions for previously developed urban sites, sites surrounded by urban use, or low-income housing sites.

Proposed Project Information

Project Title: West Alton Parcel Development

Location of project: In the City of Irvine, north east of Irvine Blvd and north of Alton Parkway

Planning Area(s): PA51

(Enclose a project map and exhibits)

Was the project included as part of a previously completed Water Supply Assessment (Water Code §10910)? yes no

If yes, date and project title of Water Supply Assessment _____

If no, state reason: CEQA documentation not requiring a Water Supply Assessment was completed prior to January 1, 2002 other: _____

Was a Water Supply Verification previously completed for the project? yes no

If yes, indicate reason for reverification: tract map expiration new Water Supply Assessment required due to project revisions, changed circumstances or new information

Tentative Map Application No. *Not Applicable Tentative Tract No.* Not Applicable

Verification is being requested prior to tentative map application (Government Code §66473.7(1) (Indicate next project approval sought: CEQA Environmental Clearance

(*A copy of the tentative map application including the proposed subdivision was sent to IRWD on: _____, (Government Code §66455.3))

Type of development included in the project:

- Residential: No. of dwelling units: 803
- Shopping center or business: No. of employees _____ Sq. ft. of floor space _____
- Commercial office: No. of employees _____ Sq. ft. of floor space _____
- Hotel or motel: No. of rooms _____
- Industrial, manufacturing, processing or industrial park: No. of employees _____
No. of acres _____ Sq. ft. of floor space _____
- Mixed use (check and complete all above that apply)
- Other: _____

Total acreage of project: 32.3

Acreage devoted to landscape:

Greenbelt 1.5 golf course _____ parks 2.5

Agriculture _____ other landscaped areas 2.1 (Storm Water Basins)

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements:

Is the project included in the existing General Plan? No If no, describe the existing General Plan Designation Agricultural

The County acknowledges that IRWD's verification will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the verification, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project changes or the tentative map approval expires after the issuance of a Water Supply Verification, the County will request a new Water Supply Verification if required. In the event of changes in the project, circumstances or conditions of the availability of new information, it will be necessary for the County to request a new Water Supply Assessment prior to completion of the new Water Supply Verification.

The County acknowledges that the Water Supply Verification shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Verification shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

COUNTY OF ORANGE

By: 

REQUEST RECEIVED:

Date: February 17, 2016

By: Kellie Welch

Irvine Ranch Water District

REQUEST COMPLETE:

Date: February 22, 2016

By: Kellie Welch

Exhibit C
Water Supply Assessment

**IRVINE RANCH WATER DISTRICT
ASSESSMENT OF WATER SUPPLY
Water Code §10910 et seq.**

To: (Lead Agency)

~~City of Irvine~~ County of Orange _____
~~P.O. Box 19575~~ 333 W. Santa Ana Blvd., Third Fl.
~~Irvine, CA 92628-9575~~ Santa Ana, CA 92701-4062

(Applicant)
County of Orange _____
333 W. Santa Ana Blvd., Third Floor _____
Santa Ana, CA 92701-4062 _____

Project Information

Project Title: West Alton Development Plan (Exhibit A)

- Residential: No. of dwelling units: _____
- Shopping center or business: No. of employees _____ Sq. ft. of floor space _____
- Commercial office: No. of employees _____ Sq. ft. of floor space _____
- Hotel or motel: No. of rooms _____
- Industrial, manufacturing or processing: No. of employees _____ No. of acres _____
Sq. ft. of floor space _____
- Mixed use (check and complete all above that apply) (see Exhibit B) _____
- Other: _____

Assessment of Availability of Water Supply

On April 13, 2015 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

- The projected water demand for the Project was was not included in IRWD's most recently adopted urban water management plan.
- A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- A sufficient water supply is not available for the Project. [Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

Leslee Bonkowski 4/15/15 District Secretary
Signature Date Title

Water Supply Assessment Information

Purpose of Assessment

Irvine Ranch Water District ("IRWD") has been identified by the County as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the "Project"). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the County with an assessment of water supply availability ("assessment") for defined types of projects. The Project has been found by the County to be a project requiring an assessment. The County is required to include this assessment in the environmental document for the Project, and, based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 (the "Assessment Law") contains the requirements for the information to be set forth in the assessment.

Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. Because of IRWD's aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects' water demands will be included in the baseline. A newly assessed project's water demand will have been included in previous water supply assessments for other projects (as part of IRWD's "full build-out" demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project's water demand was included (as part of IRWD's "full build-out" demand) in previous water supply assessments performed by IRWD, based on land use planning information then available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the "with project" demand.

Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update of that document was adopted June 13, 2011.

In addition to the WRMP and the 2010 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

Assessment Methodology

Water use factors; dry-year increases. IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water conservation programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. System losses at a rate of approximately 5% are built into the water use factors. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased 7% in the assessment during both "single-dry" and "multiple-dry" years. This is consistent with IRWD's 2010 UWMP and historical regional demand variation as documented in the Metropolitan Water District of Southern California's ("MWD's") Integrated Resources Plan (1996) (Volume 1, page 2-10).

Planning horizon. For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2035, which is considered to represent build-out or "ultimate development".

Assessment of demands. Water demands are reviewed in this assessment for three development projections (to 2035):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.
- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.
- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

Assessment of supplies. For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; reclaimed wastewater, and supplemental imported water supplied by MWD through the Municipal Water District of Orange County (“MWDOC”). The supply-demand comparisons in this assessment are broken down among the various sources, and are further separated into potable and nonpotable water sources.

Comparison of demand and supply. The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year (AFY)).
- On a *peak-flow* (maximum day) basis (stated in cubic feet per second (cfs)).
- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system’s ability to meet the highest day’s demand of the fluctuating demands that will be experienced in a year’s time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

- Figure 1: Normal Year Supply and Demand – Potable Water
- Figure 2: Single Dry-Year Supply and Demand – Potable Water
- Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
- Figure 4: Maximum-Day Supply and Demand – Potable Water
- Figure 5: Normal Year Supply and Demand – Nonpotable Water
- Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
- Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
- Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD’s *supplies* remain essentially constant between normal, single-dry and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for all of IRWD’s potable supply, and reclaimed water, groundwater and imported water comprise most of IRWD’s nonpotable supply. Groundwater production typically remains constant or increases in cycles of dry years, even if

overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2010 Regional Urban Water Management Plan (RUWMP) shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods through 2035, including a repeat of the 1990-1992 multiple dry-year hydrology and the 1977 single dry-year hydrology. (See Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below, for a summary of information provided by MWD.) Reclaimed water production also remains constant, and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's nonpotable supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under the normal and both dry-year conditions through the year 2025. (Figures 1, 2 and 3.)
- Meeting both single- and multiple-dry-year annual demands for *full build-out* will require the completion of *under-development* supplies. (Figures 2 and 3.)
- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2035. (Figure 4.)
- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2035. (Figures 5, 6, 7 and 8). IRWD is proceeding with the implementation of *under-development* nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

Margins of safety. The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.
- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping,**" below.

- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies.

Recent Actions on Delta Pumping. The Sacramento/San Joaquin Delta (Delta) is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, most recently, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which will have an effect on State Water Project (SWP) operations and supplies in 2008 and subsequent years. On June 4, 2009, a federal biological opinion imposed rules that will further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. At present, several proceedings concerning Delta operations are ongoing to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan process are defining long-term solutions for the Delta (MWD 2010 IRP Update). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007 that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To comprehensively address the impacts of the SWP cut back on MWD's water supply development targets, MWD brought to its Board a strategy and work plan to update the long-term Integrated Resources Plan (IRP) in December 2007. As part of the IRP Update, MWD developed a region-wide collaborative process that included a broad-based stakeholder involvement. MWD held several stakeholder forums in 2008 and 2009 and the MWD Board adopted the 2010 IRP Update on October 12, 2010. In the 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below) as well as actions to protect endangered fisheries. Based on MWD's Findings and Conclusions as stated in the MWD 2010 IRP Update, MWD's reliability goal that full-service demands at the retail level will be satisfied for all foreseeable hydrologic conditions remains unchanged in the 2010 IRP Update, and MWD will accomplish this through its core resources strategies. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. MWD's Adaptive Resource Management Strategy includes three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions which together provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by implementing a supply buffer equal to 10 percent of the total retail demand. MWD will collaborate with the member agencies to implement this buffer through complying with Senate Bill 7 which calls for the state to reduce per capita water use 20 percent by the year 2020.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: MWD states it is sufficiently reliable to meet full-service demands at the retail level for all foreseeable hydrologic conditions. For purposes of ensuring a conservative analysis, IRWD has compiled information from the prior "MWD IRP Implementation Report" (October 2010) and MWD's RUWMP (November 2010), to provide information in this assessment relative to how reduced SWP supplies could potentially affect IRWD's supplies from MWD.

Based on IRWD's evaluation of MWD's SWP supplies, IRWD estimates that the 22% used by MWD's October 2007 IRP Implementation Report as a potential reduction of MWD's SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2015 through 2035.¹ For this purpose it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. As shown in MWD's RUWMP (Tables A.3-7), SWP deliveries on average over the 20-year period are 1,682,000 acre-feet and Colorado base average supplies are 656,000 acre-feet. A 22% reduction of SWP supplies equates to 370,000 acre-feet which is approximately 16% of MWD's total imported supplies. Based on this estimate, this assessment projects a 16% reduction in MWD supplies available to IRWD for the years 2010 through 2035, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7.

As an alternative means of analyzing the 22% stated reduction, Figures 1a, 2a, and 3a show IRWD estimated supplies in all of the 5-year increments (average and single and multiple dry years) under a short-term MWD allocation scenario whereby MWD declares Shortage Stage 2 and a 10% cutback is applied to IRWD's actual usage rather than its connected capacity. In February 2009, MWD adopted a Water Supply Allocation Plan based on its declared level of shortage. In response to potential water shortages and a request by MWD to have water service providers within its service area adopt a water conservation ordinance, in February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels.

¹ MWD's 2010 RUWMP cites to DWR's Water Allocation Analysis dated March 22, 2010, which incorporated the Delta smelt biological opinion's effect on SWP operations, export restrictions could reduce deliveries to MWD by 150 to 200 thousand acre-feet for 2010. DWR estimated that approximately 520,000 AF had been lost to the SWP for 2010 of which nearly 240,000 AF would have been available to MWD. This amount is equivalent to about 16% reduction in SWP supplies, a smaller percentage reduction than MWD's 2007 figure of 22% that was used by IRWD for purposes of this analysis.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.² In addition, IRWD has developed water banking projects in Kern County, California which may be called upon for delivery of supplemental banked water to IRWD under a short-term MWD allocation.³ In addition, if needed resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's Water Shortage Contingency Plan.

Listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2035 and shows the effect of current allocation scenarios in all of the five-year increments but MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

Climate Change. The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. DWR emphasizes that "the report represents an example of an impacts assessment based on four scenarios defining an expected range of potential climate change impacts." DWR's major goal is to extend the analysis for long-term water resource planning from "assessing impacts" to "assessing risk." The report presents directions for further work in incorporating climate change into the management of California's water resources. Emphasis is placed on associating probability estimates with potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts. DWR's report acknowledges "that all results presented in this report are preliminary, incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Therefore, these results are not sufficient by themselves to make policy decisions."

² In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District (OCWD) imported replenishment water may also be cutback. The OCWD's "2010-2011 Engineer's Report on the groundwater conditions, water supply and basin utilization" references a report (OCWD Report on Evaluation of Orange County Groundwater Basin Storage and Operational Strategy) which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states, "Although it is considered to be generally acceptable to allow the basin to decline to 500,000 AF overdraft for brief periods due to severe drought conditions and lack of supplemental water...an accumulated overdraft of 100,000 AF best represents an optimal basin management target. This optimal target level provides sufficient storage space to accommodate anticipated recharge from a single wet year while also providing water in storage for at least 2 or 3 consecutive years of drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

³ IRWD has developed water banking projects (Water Bank) in Kern County, California and has entered into a 30-year water banking partnership with Rosedale-Rio Bravo Water Storage District (RRB) to operate IRWD's Strand Ranch portion of the Water Bank. The Water Bank can improve IRWD's water supply reliability by capturing lower cost water available during wet hydrologic periods for use during dry periods. The Water Bank can enhance IRWD's ability to respond to drought conditions and potential water supply interruptions.

In MWD's 2010 IRP Update, MWD recognizes there is a significant uncertainty in the impact of climate change on water supply and changes in weather patterns could significantly affect water supply reliability. MWD plans to hedge against supply and environmental uncertainties by implementing a supply buffer equivalent to 10 percent of total retail demand. This buffer will be implemented through meeting the SB7 water use efficiency goals, implementing aggressive adaptive actions, development of local supplies and transfers.

Per MWD's RUWMP, MWD continues to incorporate current climate change science into its planning efforts. As stated in MWD's RUWMP, the 2010 IRP Update supports the MWD Board adopted principles on climate change by: 1) Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply, 2) Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and 3) Evaluating staff recommendations regarding climate change and water resources against the California Environmental Quality Act to avoid adverse effects on the environment. Potential climate change impacts on state, regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

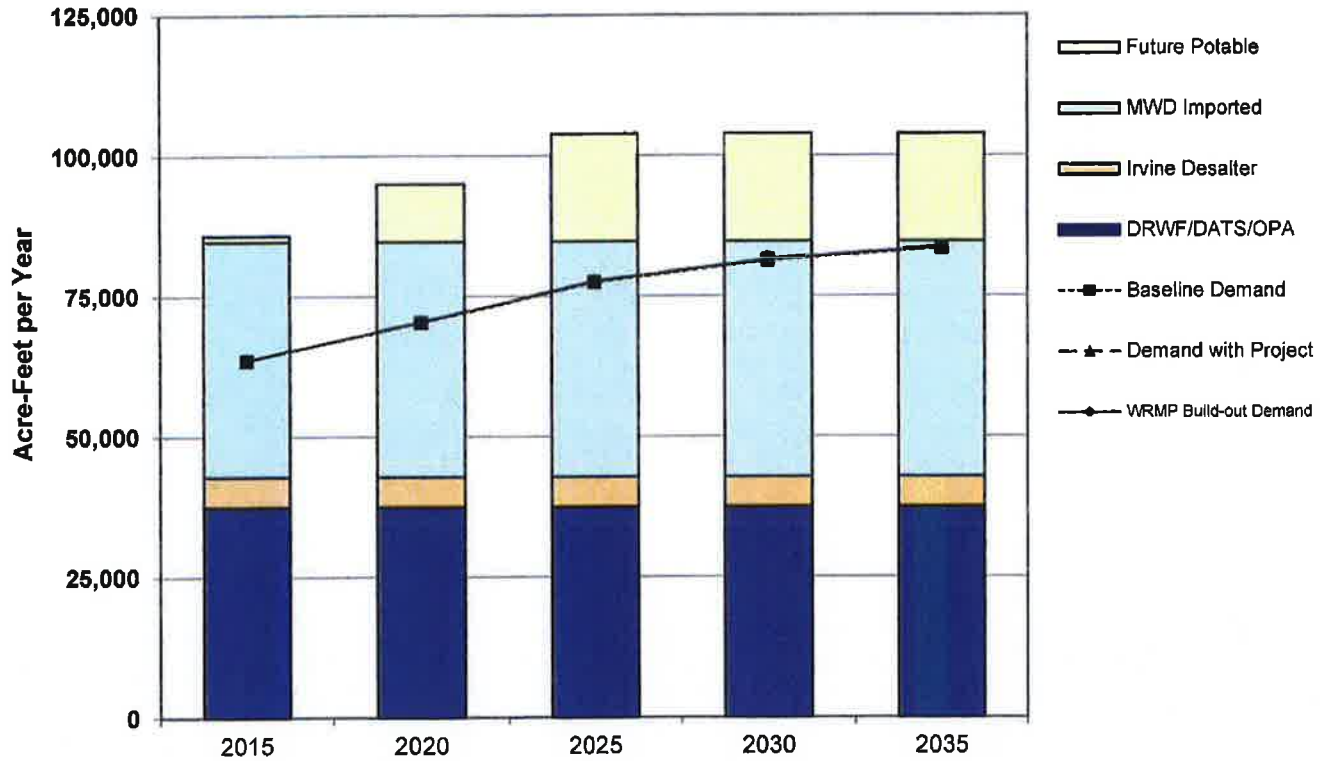
Catastrophic Supply Interruption Planning. MWD has developed Emergency Storage Requirements (2010 RUWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses the long term Delta plan in its 2010 RUWMP (pages 3-18 to 3-21). IRWD has also addressed supply interruption planning in its WRMP and UWMP.

Detailed Assessment

1. Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Recent Actions on Delta Pumping" above.

**Figure 1
IRWD Normal-Year Supply & Demand - Potable Water**

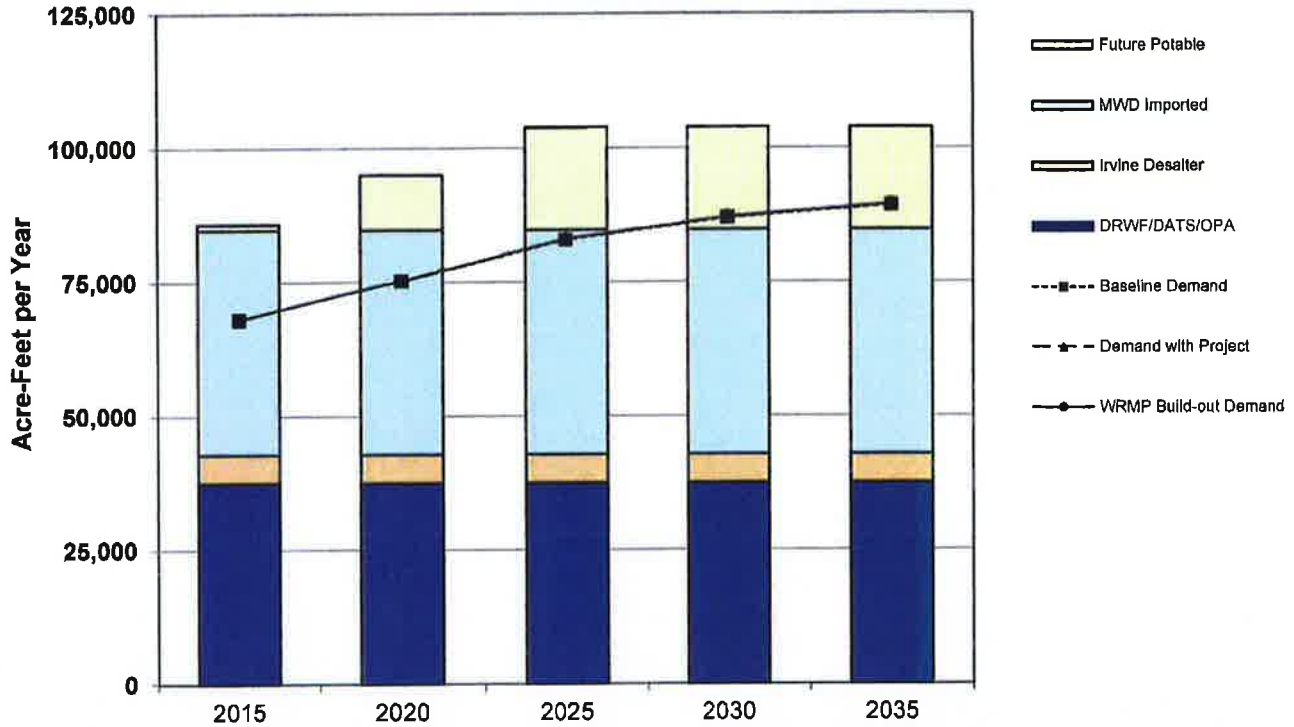


(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	10,328	19,211	19,211	19,211
Maximum Supply Capability	92,217	101,427	110,311	110,311	110,311
Baseline Demand	63,693	70,384	77,528	81,331	83,510
Demand with Project	63,693	70,446	77,683	81,486	83,665
WRMP Build-out Demand	63,693	70,446	77,683	81,486	83,665
Reserve Supply with Project	28,525	30,981	32,628	28,825	26,645

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water**

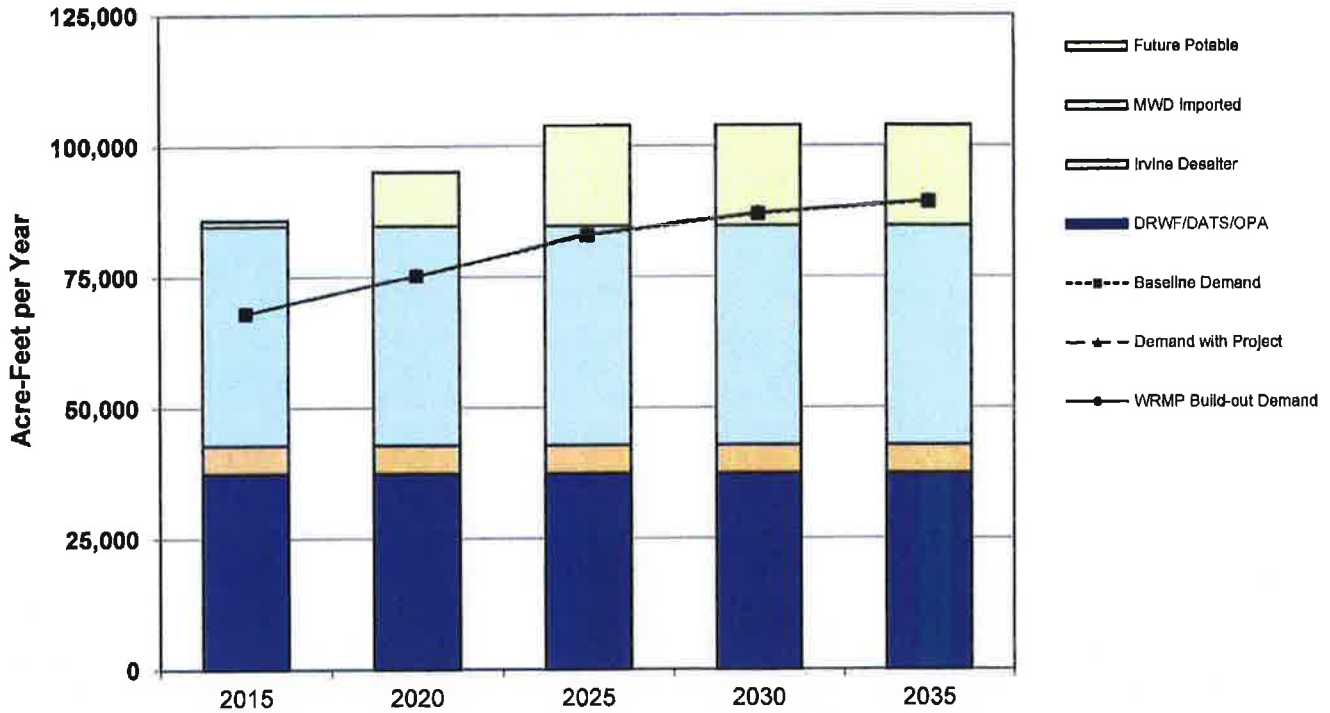


(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	10,328	19,211	19,211	19,211
Maximum Supply Capability	92,217	101,427	110,311	110,311	110,311
Baseline Demand	68,151	75,311	82,955	87,024	89,356
Demand with Project	68,151	75,378	83,121	87,190	89,522
WRMP Build-out Demand	68,151	75,378	83,121	87,190	89,522
Reserve Supply with Project	24,066	26,050	27,190	23,121	20,789

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water**

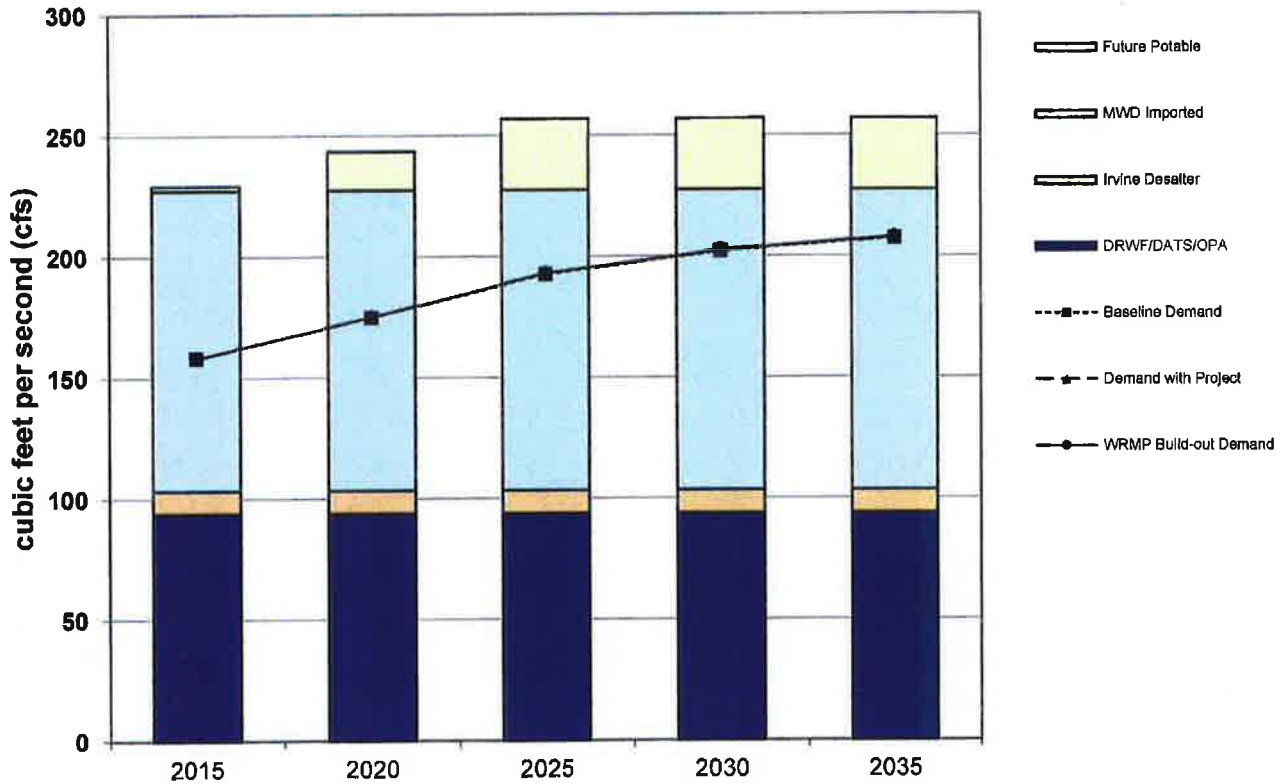


(in acre-feet per year)	2015	2020	2025	2030	2035
<u>Current Potable Supplies</u>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
<u>Supplies Under Development</u>					
Future Potable	1,118	10,328	19,211	19,211	19,211
Maximum Supply Capability	92,217	101,427	110,311	110,311	110,311
Baseline Demand	68,151	75,311	82,955	87,024	89,356
Demand with Project	68,151	75,378	83,121	87,190	89,522
WRMP Build-out Demand	68,151	75,378	83,121	87,190	89,522
Reserve Supply with Project	24,066	26,050	27,190	23,121	20,789

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

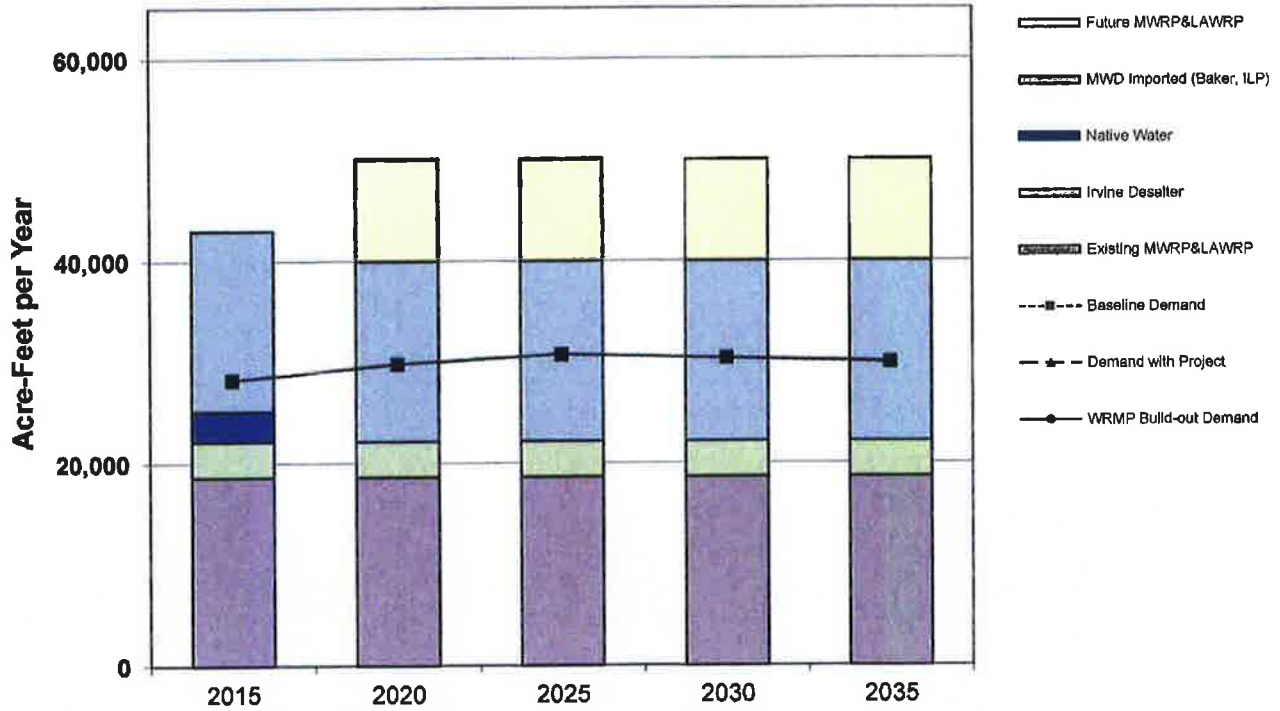
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water**



(in cfs)	2015	2020	2025	2030	2035
<u>Current Potable Supplies</u>					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS/OPA	93.9	93.9	93.9	93.9	93.9
Irvine Desalter	9.5	9.5	9.5	9.5	9.5
Wells 21 & 22	10.9	10.9	10.9	10.9	10.9
<u>Supplies Under Development</u>					
Future Potable	2.0	16.1	29.7	29.7	29.7
Maximum Supply Capability	240.4	254.5	268.1	268.1	268.1
Baseline Demand	158.4	175.0	192.7	202.2	207.6
Demand with Project	158.4	175.1	193.1	202.6	208.0
WRMP Build-out Demand	158.4	175.1	193.1	202.6	208.0
Reserve Supply with Project	82.0	79.4	75.0	65.5	60.1

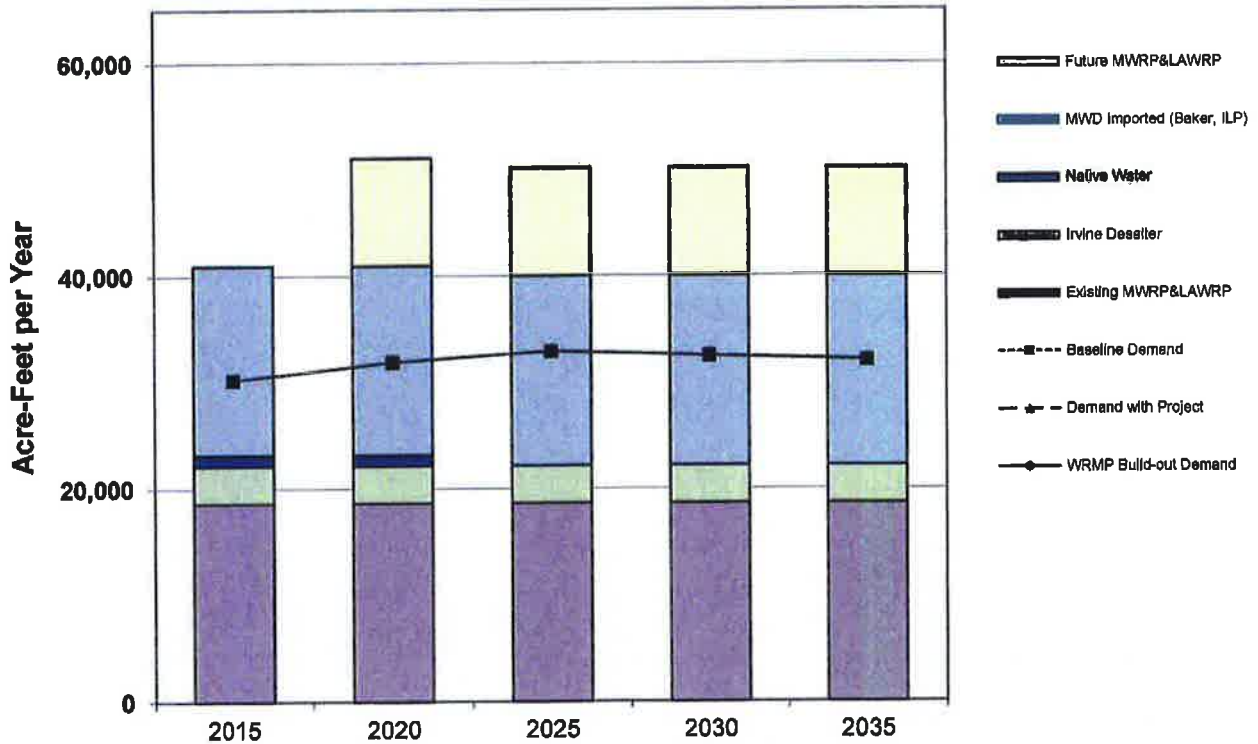
**Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water**



(in acre-feet per year)	2015	2020	2025	2030	2035
<u>Current Nonpotable Supplies</u>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	17,826	17,826	17,826	17,826	17,826
Irvine Desalter	3,514	3,514	3,514	3,514	3,514
Native Water	3,000	-	-	-	-
<u>Supplies Under Development</u>					
Future MWRP&LAWRP	-	10,100	10,100	10,100	10,100
Maximum Supply Capability	42,997	50,097	50,097	50,097	50,097
Baseline Demand	28,265	29,829	30,744	30,353	29,959
Demand with Project	28,265	29,842	30,778	30,387	29,993
WRMP Build-out Demand	28,265	29,842	30,778	30,353	29,993
Reserve Supply with Project	14,731	20,255	19,319	19,744	20,104

Note: Downward trend reflects reduction in agricultural use over time.
 Native water will be treated to potable through the Baker Water Treatment Plant after 2016.
 MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

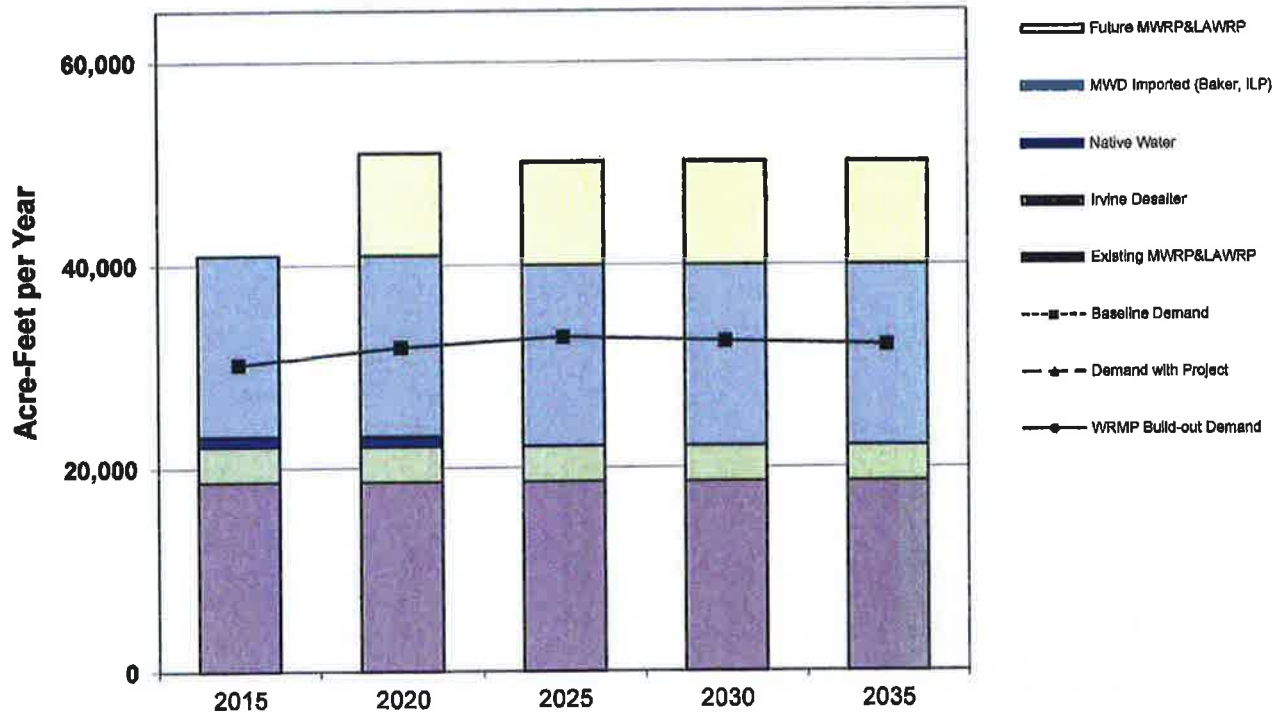
**Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water**



(in acre-feet per year)	2015	2020	2025	2030	2035
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	17,826	17,826	17,826	17,826	17,826
Irvine Desalter	3,514	3,514	3,514	3,514	3,514
Native Water	1,000	1,000	-	-	-
Supplies Under Development					
Future MWRP&LAWRP	-	10,100	10,100	10,100	10,100
Maximum Supply Capability	40,997	51,097	50,097	50,097	50,097
Baseline Demand	30,244	31,917	32,897	32,478	32,056
Demand with Project	30,244	31,931	32,933	32,514	32,092
WRMP Build-out Demand	30,244	31,931	32,933	32,478	32,092
Reserve Supply with Project	10,753	19,166	17,164	17,583	18,004

Note: Downward trend reflects reduction in agricultural use over time.
 Native water will be treated to potable through the Baker Water Treatment Plant after 2016.
 MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

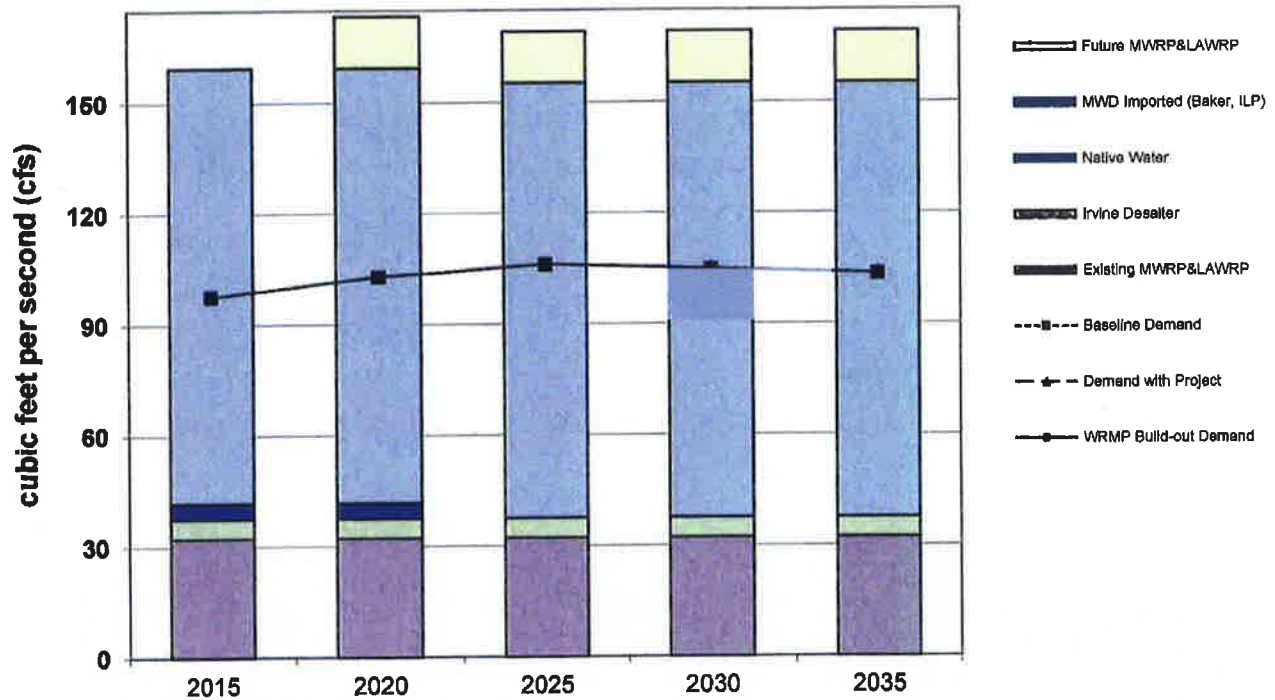
**Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water**



(in acre-feet per year)	2015	2020	2025	2030	2035
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	17,826	17,826	17,826	17,826	17,826
Irvine Desalter	3,514	3,514	3,514	3,514	3,514
Native Water	1,000	1,000	-	-	-
Supplies Under Development					
Future MWRP&LAWRP	-	10,100	10,100	10,100	10,100
Maximum Supply Capability	40,997	51,097	50,097	50,097	50,097
Baseline Demand	30,244	31,917	32,897	32,478	32,056
Demand with Project	30,244	31,931	32,933	32,514	32,092
WRMP Build-out Demand	30,244	31,931	32,933	32,478	32,092
Reserve Supply with Project	10,753	19,166	17,164	17,583	18,004

Note: Downward trend reflects reduction in agricultural use over time.
 Native water will be treated to potable through the Baker Water Treatment Plant after 2016.
 MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

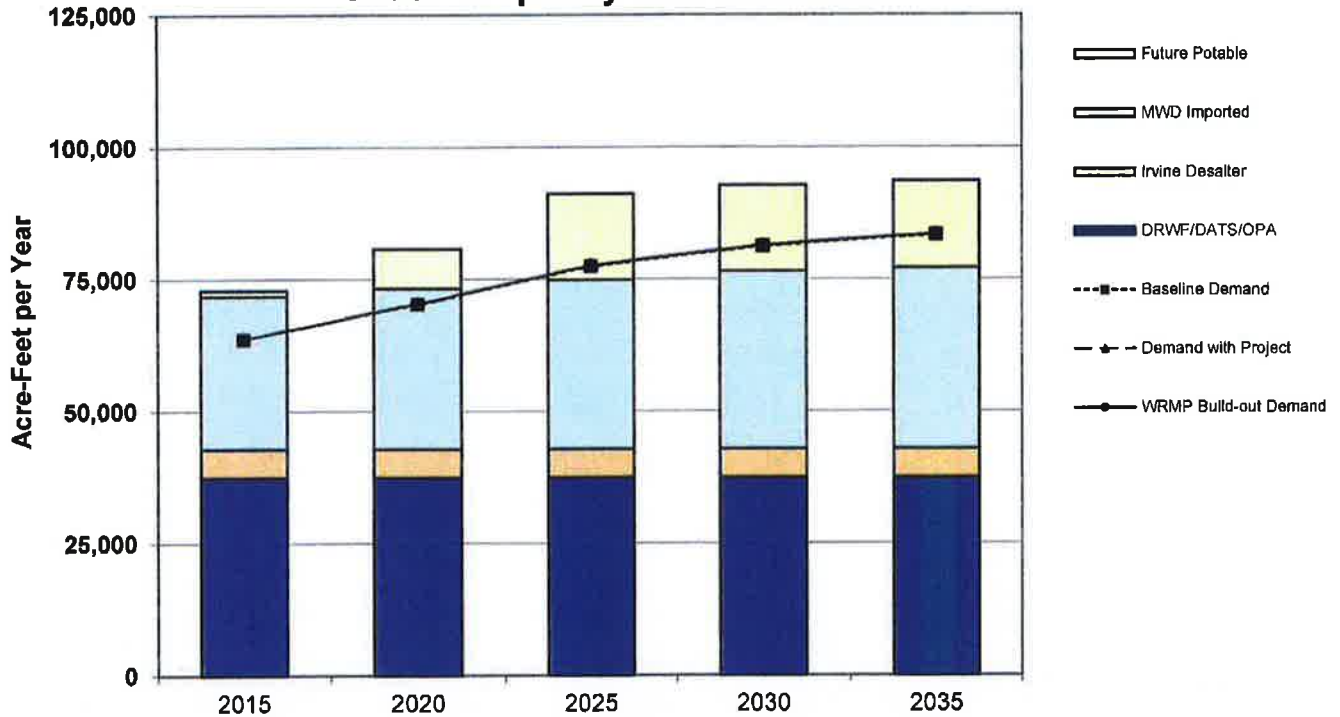
**Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water**



(in cfs)	2015	2020	2025	2030	2035
Current Nonpotable Supplies					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
Irvine Desalter	5.4	5.4	5.4	5.4	5.4
Native Water	4.2	4.2	-	-	-
Supplies Under Development					
Future MWRP&LAWRP	-	14.0	14.0	14.0	14.0
Maximum Supply Capability	159.5	173.4	169.2	169.2	169.2
Baseline Demand	97.6	103.0	106.2	104.8	103.4
Demand with Project	97.6	103.0	106.3	104.9	103.6
WRMP Build-out Demand	97.6	103.0	106.3	104.8	103.6
Reserve Supply with Project	61.9	70.4	63.0	64.4	65.7

Note: Downward trend reflects reduction in agricultural use over time.
Native water will be treated to potable through the Baker Water Treatment Plant after 2016.

**Figure 1a
IRWD Normal-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation***

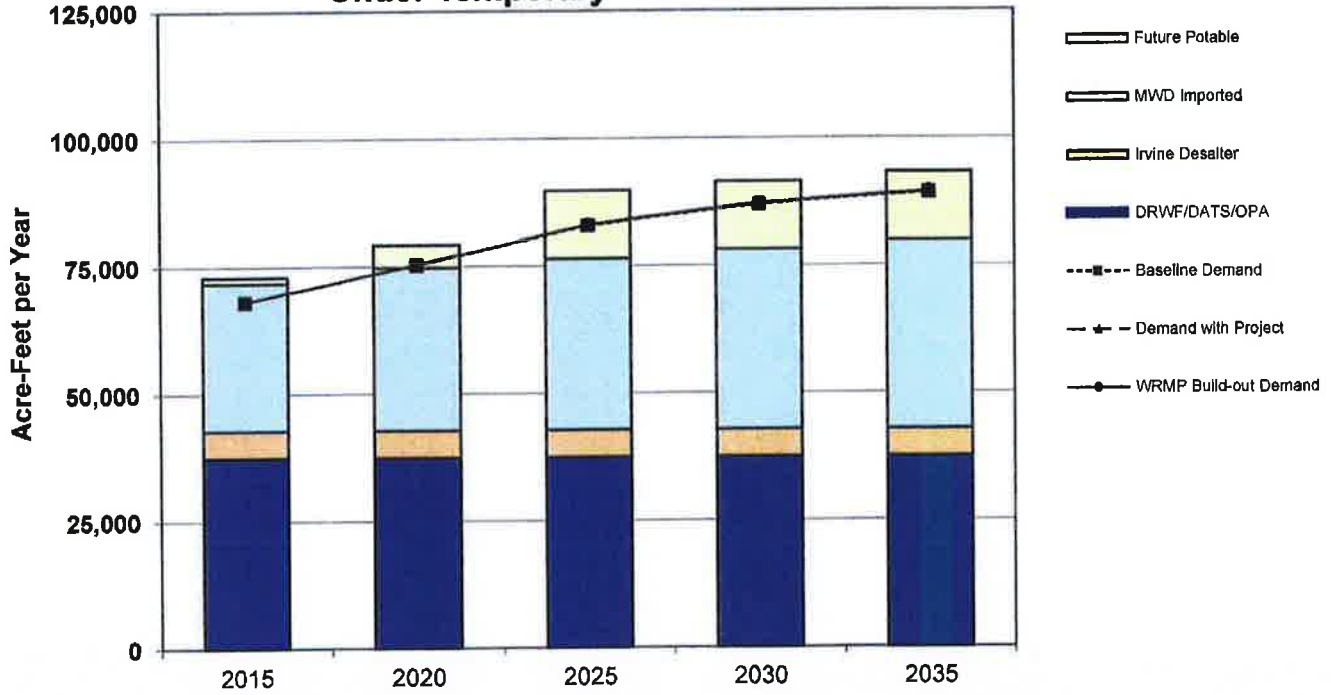


(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	29,000	30,479	32,034	33,668	34,345
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	7,469	16,352	16,352	16,352
Maximum Supply Capability	79,288	87,119	97,557	99,191	99,868
Baseline Demand	63,693	70,384	77,528	81,331	83,510
Demand with Project	63,693	70,446	77,683	81,486	83,665
WRMP Build-out Demand	63,693	70,446	77,683	81,486	83,665
Reserve Supply with Project	15,595	16,672	19,874	17,705	16,202

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP. Under a MWD allocation, the Baker WTP supplies (under "Future Potable") will be limited to available native water only.

**Figure 2a
IRWD Single Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation***

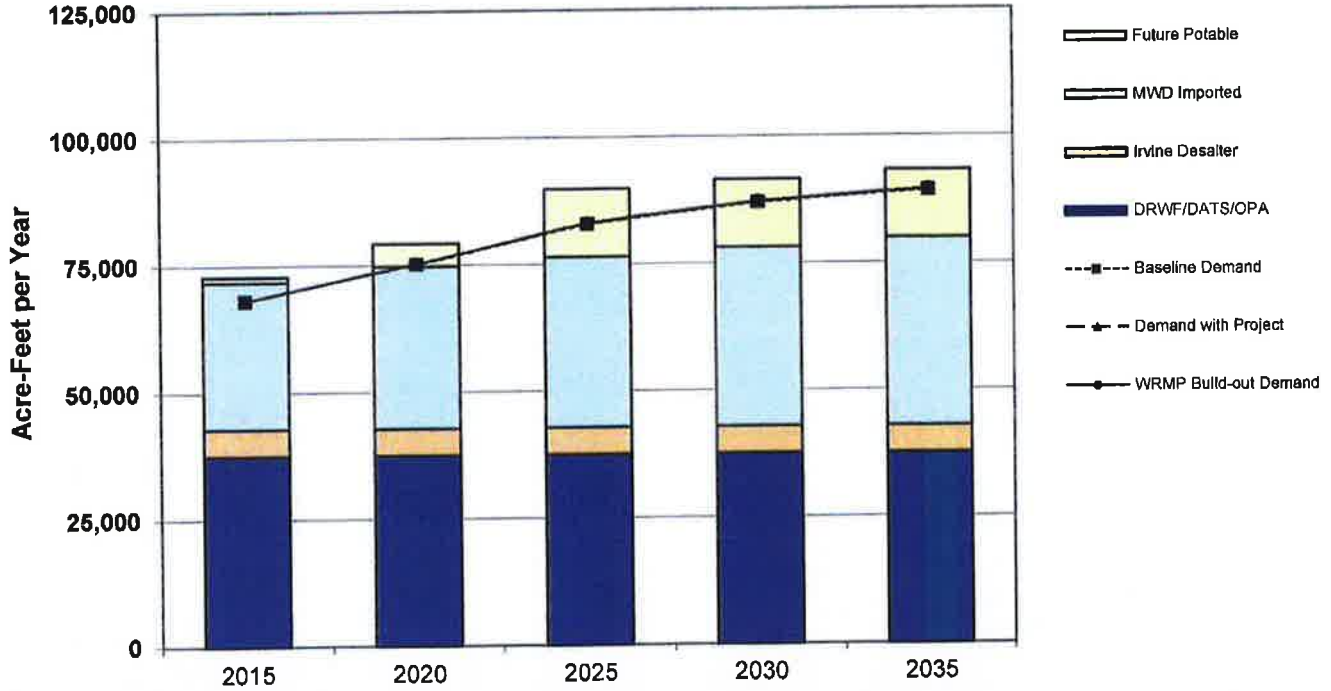


(in acre-feet per year)	2015	2020	2025	2030	2035
<u>Current Potable Supplies</u>					
MWD Imported (EOCF#2, AMP, OCF)	29,000	32,003	33,603	35,284	37,048
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
<u>Supplies Under Development</u>					
Future Potable	1,118	4,469	13,352	13,352	13,352
Maximum Supply Capability	79,288	85,643	96,126	97,806	99,571
Baseline Demand	68,151	75,311	82,955	87,024	89,356
Demand with Project	68,151	75,378	83,121	87,190	89,522
WRMP Build-out Demand	68,151	75,378	83,121	87,190	89,522
Reserve Supply with Project	11,137	10,265	13,006	10,616	10,049

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP. Under a MWD allocation, the Baker WTP supplies (under "Future Potable") will be limited to available native water only.

**Figure 3a
IRWD Multiple Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation***



(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	29,000	32,003	33,603	35,284	37,048
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	4,469	13,352	13,352	13,352
Maximum Supply Capability	79,288	85,643	96,126	97,806	99,571
Baseline Demand	68,151	75,311	82,955	87,024	89,356
Demand with Project	68,151	75,378	83,121	87,190	89,522
WRMP Build-out Demand	68,151	75,378	83,121	87,190	89,522
Reserve Supply with Project	11,137	10,265	13,006	10,616	10,049

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP. Under a MWD allocation, the Baker WTP supplies (under "Future Potable") will be limited to available native water only.

2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as updated in the following table:

	Max Day (cfs)	Avg. Annual (AFY)	Annual by Category (AFY)
Current Supplies			
Potable - Imported			
East Orange County Feeder No. 2	41.4	16,652	1
Allen-McColloch Pipeline*	64.7	26,024	1
Orange County Feeder	18.0	7,240	1
			49,916
Potable - Groundwater			
Dyer Road Wellfield	80.0	28,000	2
OPA Well	1.4	914	
Deep Aquifer Treatment System-DATS	12.5	8,618	2
Wells 21 & 22	10.9	6,329	2
Irvine Desalter	9.5	5,309	3
			49,170
Total Potable Current Supplies	238.4		99,086
Nonpotable - Reclaimed Water			
MWRP (18 mgd)	23.9	17,340	4
LAWRP (5.5 mgd)	8.3	5,975	4
			23,315
Nonpotable - Imported			
Baker Aqueduct	52.7	12,221	5
Irvine Lake Pipeline	65.0	9,000	6
			21,221
Nonpotable - Groundwater			
Irvine Desalter-Nonpotable	5.4	3,514	7
			3,514
Nonpotable Native			
Irvine Lake	4.2	3,048	8
			3,048
Total Nonpotable Current Supplies	159.5		51,098
Total Combined Current Supplies	397.9		150,185
Supplies Under Development			
Potable Supplies			
Well 106	2.0	1,118	
Well 53	5.6	3,658	
Future OPA Wells	8.0	5,225	
Baker Water Treatment Plant	10.5	6,858	
Wells 51 & 52	3.6	2,351	
Total Potable Under Development Supplies	29.7	19,211	19,211
Nonpotable Supplies: MWRP&LAWRP Reclaimed			
	20.0	14,450	9
Total Under Development	49.7		33,661
Total Supplies			
Potable Supplies	268.1		118,297
Nonpotable Supplies	179.4		65,548
Total Supplies (Current and Under Development)	447.5		183,846

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 4, page 22).

2 Contract amount - See Potable Supply-Groundwater(ii).

3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)

5 By 2020, Baker capacity will be allocated to Baker Water Treatment Plant (WTP) participants and IRWD will own 46.50 cfs in Baker Aqueduct after Baker WTP, of which 10.5 cfs will be for potable treatment. IRWD will have 35 cfs remaining capacity for non-potable uses. The nonpotable average use is based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 8, page 25).

6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

8 Based on 70+ years historical average of Santiago Creek Inflow into Irvine Lake. By 2020, native water will be treated through Baker WTP.

9 Future estimated MWRP & LAWRP reclaimed water production.

*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 23 (b)(1)(iii))

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.^{4 5}

• POTABLE SUPPLY - IMPORTED⁶

Potable imported water service connections (currently available).

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California ("MWD"): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD's entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County ("MWDOC"), a member agency of MWD.

Allen-McColloch Pipeline ("AMP") (currently available).

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) ("AMP Sale Agreement"). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the "Diemer Intertie") from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District ("LAWD"),⁷ identified as "Participants" therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD's and the other Participants' requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD

⁴ In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second ("cfs"). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

⁵ In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, except where otherwise noted, IRWD has no current plans to do so.

⁶ See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

⁷ IRWD has succeeded to LAWD's interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

agrees to operate the AMP as any other MWD pipeline. MWD has the right to operate the AMP on a "utility basis," meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD's capacity along the AMP, at MWD's expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

(iii) Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 ("AMP Allocation Agreement"). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD's capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD's first four AMP connections, 49.69 cfs at IRWD's next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD's remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant's peak flow exceeds its capacity, the Participant shall "purchase" additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD's obligation under the AMP Sale Agreement to meet all Participants' demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities, but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

(iv) Improvement Subleases (or "FAP" Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

East Orange County Feeder No. 2 ("EOCF#2") (currently available).

(v) Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962 and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 ("IRWD MWDOC Assignment Agreement"); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 ("IRWD Coastal Assignment Agreement"). East Orange County Feeder No. 2 ("EOCF#2"), a feeder linking Orange County

with MWD's feeder system, was constructed pursuant to a joint powers agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC, and is further subject to application and agreement of IRWD respecting turnouts.

Orange County Feeder (currently available)

(vi) Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

(vii) Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

Baker Water Treatment Plant (under development)

IRWD has begun construction of the Baker Water Treatment Plant project (the Baker WTP) in partnership with El Toro Water District, Moulton-Niguel Water District, Santa Margarita Water District and Trabuco Canyon Water District. The Baker WTP will be supplied with untreated imported water from MWD and native Irvine Lake water supply. IRWD will own 10.5 cfs of treatment capacity rights in

the Baker WTP.⁸

•POTABLE SUPPLY - GROUNDWATER

(i) Orange County Water District Act, Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand until 2020. This is described in detail in the OCWD Master Plan Report, dated April, 1999. OCWD's analysis has been expanded and updated through 2025 in its Final Draft Long-Term Facilities Plan (January, 2006).

(ii) *Irvine Ranch Water District v. Orange County Water District*, OCSC No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (Resolution No. 86-2-15, adopted on February 19, 1986 and reaffirmed on June 2, 1999), and anticipates doing so. However, this September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

Dyer Road Wellfield (DWRWF) / Deep Aquifer Treatment System (DATS) (currently available)

(iii) Agreement For Water Production and Transmission Facilities, dated March 18, 1981, as amended May 2, 1984, September 19, 1990 and November 3, 1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield ("DRWF"), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water

⁸ The Baker WTP shall be supplied nonpotable imported water through the existing Baker Pipeline. IRWD's existing Baker Pipeline capacity (see Section 2(b)(1) NONPOTABLE SUPPLY – IMPORTED) shall be apportioned to the Baker WTP participants based on Baker WTP capacity ownership, and IRWD shall retain 10.5 cfs of pipeline capacity through the Baker WTP for potable supply and shall retain 36 cfs in Reach 1U of the Baker Pipeline capacity for nonpotable supply.

portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS".) Under the DRWF Agreement, an "equivalent" basin production percentage (BPP) has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System (CATS), IRWD has increased the yield of DATS.

Irvine Subbasin / Irvine Desalter (currently available)

(iv) First Amended and Restated Agreement, dated March 11, 2002, as amended June 15, 2006, restating May 5, 1988 agreement ("Irvine Subbasin Agreement"). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated, and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC's commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

(v) Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the Basin, IRWD's entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

Orange Park Acres (currently available)

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including well [OPA Well]. The well is operated within the Orange County Groundwater Basin.

Wells 21 and 22 (currently available)

IRWD completed construction of treatment facilities, pipelines and wellhead facilities for Wells 21 and 22. Water supplied through this project became available in 2013. The wells are operated within the Orange County Groundwater Basin.

Irvine Wells (under development)

(vi) IRWD is pursuing the installation of production facilities in the west Irvine, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, a site for an additional well and treatment facility has been acquired by IRWD. The production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. Appropriate environmental review would be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECLAIMED

Water Reclamation Plants (currently available)

Water Code Section 1210. IRWD supplies its own reclaimed water from wastewater collected by IRWD and delivered to IRWD's Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Reclamation Plant (LAWRP). MWRP currently has a permitted capacity of 18 million gallons per day (MGD) and LAWRP currently has a permitted capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a wastewater treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge of reclaimed water; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands.

Water Reclamation Plant Expansion (current available)

IRWD is completing construction of the Michelson Water Reclamation Plant Phase 2 Capacity Expansion Project later in 2015. With this expansion, IRWD will increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2035. Additional

reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED⁹

Baker Pipeline (currently available)

Santiago Aqueduct Commission Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"). Service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD has 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

Irvine Lake (currently available)

(i) Permit For Diversion and Use of Water (Permit No. 19306) issued pursuant to Application No. 27503; License For Diversion and Use of Water (License 2347) resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water (License 2348) resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company (TIC) and Carpenter Irrigation District (CID)) and Serrano Water District (SWD), secure appropriative rights to the flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to

⁹ See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.¹⁰ The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (4,000 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

•NONPOTABLE SUPPLY - GROUNDWATER

Irvine Subbasin / Irvine Desalter (currently available)

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

•IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to

¹⁰ The 1956 Agreement provides for facilities to deliver MWD imported water into the Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply; MWD has provided information concerning the availability of the supplies to its entire service area. In its most recently adopted RUWMP, MWD has extended its planning timeframe out through 2035 to ensure that MWD's 2010 RUWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the RUWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The RUWMP summarizes MWD's planning initiatives over the past ten years, which includes the Integrated Resources Plan (IRP), the IRP Update, the Water Surplus and Drought Management Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's IRP Update (October 2010) showed that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2015 through 2035. The RUWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2035. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

It is anticipated that MWD will revise its regional supply availability analysis periodically to supplement its RUWMP in years when the RUWMP is not being updated.

IRWD is permitted by the statute to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD RUWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - Recent Actions on Delta Pumping, MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, MWRP expansion and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater wells (PR Nos. 11405, 11473), the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), and Baker WTP (PR No.

11218), IRWD adopted its fiscal year 2014-15 capital budget on June 9, 2014 (Resolution No. 2014-29), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately \$615.2 million (water) and \$784.8 million (wastewater) of unissued, voter-approved bond authorization. Certificates of participation do not require voter approval. Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3).

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Other users and contractholders (identified supply not previously used).

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water

service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

4. Information concerning groundwater included in the supply identified for the Project:

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2010 UWMP, sections 4-D through 4-J.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin ("Basin") is described at pages 3-1 through 3-14 of the OCWD Master Plan Report, dated April, 1999 ("MPR") and in the more recent Groundwater Management Plan ("GMP") at pages 2-1 through 6-33¹¹. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District (OCWD) for the benefit of municipal, agricultural and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 332,000 AFY.

The Department of Water Resources has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118 (2003). The efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin are described in the OCWD MPR, including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan ("LTFP") which provides updated information and was received by the OCWD Board in July 2009. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin.

Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of "long-term overdraft," overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD's Act defines annual groundwater overdraft to be the quantity by which production exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written, and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over \$250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively

¹¹ OCWD has also prepared a Long Term Facilities Plan which provides updated information which was received and filed by its Board in July 2009.

manage the Basin. Consequently, although the Basin is defined to be in an “overdraft” condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term “mining” overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (OCWD MPR and LTFF)

OCWD’s efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD’s management of overdraft to maximize its use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD MPR, section 3.2 and LTFF, section 6)

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source:

(In AFY)

Year (ending 6/30)	DRWF/DATS/ OPA/21-22	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD ¹²
2014	42,424	10,995	0	376
2013	38,617	8,629	0	282
2012	37,059	7,059	0	0
2011	34,275	7,055	0	0
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16
2007	37,864	5,407	0	6
2006	37,046	2,825	0	268

¹² The water produced from IRWD’s Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC's historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD's and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD's main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

Year (ending 6/30)	DRWF ¹³	Future GW ¹⁴	IDP (Potable)	IDP (Nonpotable)
2015	43,300	0	5,640	3,898
2020	43,300	3,469	5,640	3,898
2025	43,300	12,352	5,640	3,898
2035	43,300	12,352	5,640	3,898

(e) If not included in the UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

¹³ See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 1,000 AFY for the OPA well and 6,300 for Wells 21&22.

¹⁴ Under development.

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD's preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage ("BPP") that OCWD sets based on these factors.¹⁵ Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. OCWD has completed its replenishment supply project, the Groundwater Replenishment System project ("GWRS"). The OCWD MPR indicates that the GWRS will produce over 100,000 AFY of new replenishment supply from recycled water.

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

Sustainable Groundwater Management Act. Pursuant to the Sustainable Groundwater Management Act (SGMA), the DWR has designated the Orange County groundwater basin as a medium priority basin for purposes of groundwater management. By January 31, 2017, local groundwater producers must establish or designate an entity (referred to as a groundwater sustainability agency, or "GSA"), subject to DWR's approval, to manage each high and medium priority groundwater basin. The SGMA specifically calls for OCWD, which regulates the Orange County groundwater basin, to serve as the GSA for such basin.

¹⁵ OCWD has adopted a basin production percentage of 72% for 2014-15. In prior years OCWD has maintained a basin production percentage that is higher than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described, or are exempt from the basin production percentage.

5. This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Check all of the following that apply:

- Changes in the Project have substantially increased water demand.
- Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.
- Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

6. References

Water Resources Master Plan, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

2010 Urban Water Management Plan, Irvine Ranch Water District, June, 2011

Integrated Water Resources Plan Update, Metropolitan Water District of Southern California, July, 2004

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

Board Information Report, Metropolitan Water District of Southern California, October 9, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October, 2007

Master Plan Report, Orange County Water District, April, 1999

Groundwater Management Plan, Orange County Water District, March, 2004

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

2009-2010 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

2012-2013 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

Progress on Incorporating Climate Change into Management of California's Water Resources, California Department of Water Resources, July 2006

Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program, Irvine Ranch Water District, February 2009

Water Shortage Contingency Plan, Irvine Ranch Water District, February 2009

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

Regional Urban Water Management Plan, Metropolitan Water District of Southern California, November 2010

Exhibit A

Depiction of Project Area

Exhibit B

Uses Included in Project



County of Orange
California

James Campbell
Land Development Manager

January 22, 2015

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 et seq.) for West Alton Development Plan

The County of Orange hereby requests an assessment of water supply availability for the below-described project. The County has determined that the project is a "project" as defined in Water Code §10912, and has determined that [[an environmental impact report/negative declaration/mitigated negative declaration]] is required for the project.

Proposed Project Information

Project Title: West Alton Development Plan

Location of project: On the former USMC El Toro Air Station and northwest of the intersection of Alton Parkway and Irvine Boulevard. Site is located along the Irvine Boulevard and north of an existing industrial complex and an existing IRWD Facility; and in the City of Irvine Planning Area 51.

(For projects requiring a new assessment under Water Code §10910 (h).) Previous Water Supply Assessment including this project was prepared on: _____

_. This application requests a new Water Supply Assessment, due to the following (check all that apply):

- Changes in the project have substantially increased water demand
- Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project
- Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment (Enclose maps and exhibits of the project)

Type of Development:

- Residential: No. of dwelling units: 970
- Shopping center or business: No. of employees _____ Sq. ft. of floor space _____
- Commercial office: No. of employees _____ Sq. ft. of floor space _____
- Hotel or motel: No. of rooms _____
- Industrial, manufacturing, processing or industrial park: No. of employees _____
No. of acres _____ Sq. ft. of floor space _____
- Mixed use (check and complete all above that apply)
- Other: _____

Total acreage of project: 32.3

Acreage devoted to landscape:

Greenbelt None golf course None parks 2.5 acres (Passive use)
Agriculture None other landscaped areas 10.4 Acres
Number of schools None Number of public facilities None

County Executive Office
333 W. Santa Ana Blvd.
Third Floor
Santa Ana, California
92701-4062

Tel: (714) 227-1011
Web: www.ocgov.com

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts:

Low flow fixtures and a water efficient landscape irrigation system with drought tolerant landscape design

What is the current land use of the area subject to a land use change under the project?

Agricultural

Is the project included in the existing General Plan? No If no, describe the existing General Plan Designation Agriculture

The County acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The County will request a new Water Supply Assessment if it determines that one is required.

The County acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

COUNTY OF ORANGE

By: 

REQUEST RECEIVED:

Date: Jan. 24, 2015

By: Kellie Walker
Irvine Ranch Water District

REQUEST COMPLETE:

Date: Jan. 28, 2015

By: Kellie Walker
Irvine Ranch Water District

EXHIBIT "C"

IRVINE RANCH WATER DISTRICT
VERIFICATION OF SUFFICIENT WATER SUPPLY
Government Code §66473.7

To: (Lead Agency)
County of Orange
333 W. Santa Ana Blvd., Third Floor
Santa Ana, CA 92701-4062

(Applicant)
County of Orange
333 W. Santa Ana Blvd., Third Floor
Santa Ana, CA 92701-4062

Project Information

Project Title: El Toro 100 Acre Parcel Development (see Exhibit A)
 Tentative Map Application No. _____ Verification requested prior to tentative map application

Number of residential units in Project: 2,103
Non-residential uses in Project (type, no. of employees, sq. ft. of floor space, acreage): (see Exhibit B)
Acreage to be devoted to landscape (excluding individual residence yards): (see Exhibit B)

- The projected water demand for the Project was included in IRWD's most recently adopted urban water management plan.
- A water supply assessment that included the Project was adopted by IRWD on April 15, 2015. A copy is attached hereto and incorporated herein by this reference (see Exhibit C).

Verification of Availability of Sufficient Water Supply

On _____, 2016 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within Verification and made the following determination regarding the above-described Project:

- A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- A sufficient water supply is not available for the Project.

The foregoing determination is based on the following Water Supply Verification Information and supporting information in the records of IRWD.

Signature Date Title

WATER SUPPLY VERIFICATION INFORMATION

Purpose of Verification

Irvine Ranch Water District ("IRWD") is the public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this verification (the "Project"). As a public water system, IRWD is required by Section 66473.7 of the Government Code (the "Verification Law") to provide the County with a verification of the availability of a sufficient water supply for non-exempt subdivisions of more than 500 residential units in conjunction with (or prior to) the County's approval of a tentative map. The County has found the Project to include a subdivision that is subject to verification and not exempt under the Verification Law.

The Verification Law provides that a verification shall be supported by substantial evidence, which may include, but is not limited to, any of the following (i) IRWD's most recently adopted urban water management plan; (ii) a water supply assessment previously adopted for the project under Water Code 10910, *et seq.*; or (iii) other analytical information substantially similar to the assessment of service reliability required by Water Code Section 10635 to be included in the urban water management plan. The Verification Law also specifies the elements to be contained in a verification with respect to (i) supplies relied upon that are not currently available; (ii) reasonably foreseeable impacts of the subdivision on the availability of water resources for agricultural and industrial uses within IRWD's service area that are not currently receiving water; and (iii) rights to extract additional groundwater needed to supply the subdivision.

A verification does not entitle the Project to service or to any right, priority or allocation in any supply, capacity or facility, or affect IRWD's obligation to provide service to its existing customers or any potential future customers. In order to receive service, the Project applicant is required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirements as specified therein.

Methodology of Verification for Project With Prior Water Supply Assessment

As referenced on the cover page of this verification (the "Verification"), the Project was included within an assessment of water supply approved by IRWD. The Assessment contained IRWD's determination that a sufficient water supply is available for the Project. As described in the Assessment, IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. However, upon approval of each assessment containing a determination of a sufficient supply, IRWD attributes the demands identified by that assessment to IRWD's existing and committed demand. Thereafter, each verification approved by IRWD for a subdivision covered by that assessment is based on the assessment, and reflects IRWD's confirmation that the water demands of the subdivision, together with any other subdivisions or developments that have previously received verifications, will-serves or other approval by IRWD under the same assessment, are, in the aggregate, within the demand identified by that assessment. In accordance with that procedure, this Verification is based on the Assessment. The Assessment's determination of sufficiency extends through 2035. In addition, this Verification includes the elements required by the Verification Law that are not included within the required contents of assessments.

Supporting Documentation

As noted above, the principal supporting document for this Verification is the Assessment. Other documentation supports the Assessment and this Verification: IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update was adopted in June 2011 and the next update for 2015 is anticipated in July 2016. The project water demand for the Project will be included in IRWD's 2015 UWMP update.

In addition to the Assessment, the most recent WRMP and the 2010 UWMP mentioned above, other supporting documentation referenced herein is found in Section 5 of this Verification. This includes the Metropolitan Water District of Southern California's Regional Urban Water Management Plan detailing an evaluation by Metropolitan Water District of Southern California (MWD), the wholesaler of IRWD's imported water supplies, of the reliability of MWD's supplies. (MWD 2015 UWMP dated March 2016 (MWD UWMP)).

The Verification Law requires written proof of entitlement for "not currently available" (referred to herein as "under development") supplies. The Assessment includes such information for both currently available and under development supplies. Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2 of the Assessment. Copies of the summarized items have been provided to the County.

Sufficiency Calculation Methodology

The methodology for IRWD's comparison of its demands and supplies is set forth in the Assessment, in the section entitled "Assessment Methodology" and subsections thereof entitled "water use factors; dry-year increases;" "planning horizon;" "assessment of demands;" "assessment of supplies;" and "comparison of demand and supply."

Detailed Verification

1. Determination of sufficiency of water supply

(a) Supply and demand comparison

See the Assessment, Section 1, incorporated herein by reference.

(b) Factors considered in determining the sufficiency of the water supply:

(i) The availability of water supplies over a historical record of at least 20 years.

Quantities received in prior years from existing sources identified in (a)(1):

Source	1985	1990	1995	2000	2005	2010	2015
Potable - imported	43,320	44,401	28,397	36,777	19,306	15,227	12,790
Potable - groundwater	38	10,215	20,020	20,919	37,160	42,089	46,770
Nonpotable - recycled	12,399	11,589	10,518	14,630	15,296	20,847	22,866
Nonpotable - groundwater	36	816	1,834	2,890	2,285	3,761	4,063
Nonpotable - native	3,587	2,778	5,980	4,949	7,251	814	2,826
Total	71,639	94,699	69,082	96,508	86,602	82,738	89,315

See also the Assessment, Section 1, incorporated herein by reference.

(ii) The applicability of a water shortage contingency analysis prepared pursuant to Water Code Section 10632 that includes actions to be undertaken by IRWD in response to water supply shortages.

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect the implementation of water shortage emergency measures. In February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan, which is a supporting document for Section 15. The Water Shortage Contingency Plan was further revised on October 13, 2014, and is currently being updated as part of IRWD’s UWMP 2015 update (expected to be adopted in June 2016). Section 15 of the Rules and Regulations serves as IRWD’s “conservation ordinance”. As stated in IRWD’s Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for any water savings that could be achieved by these measures.

(iii) Reduction by IRWD in water supply allocated to a specific water use sector, pursuant to a resolution, ordinance or contract uses.

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect any allocated reductions by IRWD. As noted under the preceding item (ii), IRWD's water shortage contingency plan and Rules and Regulations provide for voluntary and mandatory water conservation measures that could be invoked in declared water shortage emergencies. These include reductions to certain water uses. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for water savings that could be achieved by any allocated reductions.

With respect to items (ii) and (iii) above, it is noted that MWD has in effect a management plan for dealing with periodic surplus and shortage conditions, known as Metropolitan Report No. 1150, *Water Surplus and Drought Management Plan*, and as also described in the MWD UWMP. MWD's demand projections account for the effects of long-term conservation best management practices.

Recent Actions Related to Drought Conditions. In response to the historically dry conditions throughout the state of California, on April 1, 2015, Governor Brown issued an Executive Order directing the State Water Resources Control Board (SWRCB) to impose restrictions to achieve an aggregate statewide 25 percent reduction in potable water use through February 2016. The Governor's Order also includes mandatory actions aimed at reducing water demands, with a particular focus on outdoor water use. On May 5, 2015, the SWRCB adopted regulations which required that IRWD achieve a 16% reduction in potable water use from the 2013 levels. On November 13, 2015, Governor Brown issued an Executive Order directing the SWRCB to extend the 2015 Emergency Regulation through October 31, 2016 if drought conditions continued. On February 2, 2016, the SWRCB adopted an extended and modified Emergency Regulation. As a result of the modification, IRWD's mandated reduction was changed from 16% to 9% effective March 1, 2016. On April 14, 2015, MWD approved actions to implement the Water Supply Allocation Plan at a level 3 Regional Shortage Level and a 15% reduction in regional deliveries effective July 1, 2015, through June 30, 2016. IRWD has and will continue to implement actions to reduce potable water demands during the drought; however, this does not affect IRWD's long-term supply capability to meet the demands.

As discussed under Assessment "IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD", IRWD has effectively analyzed an imported water supply reduction as shown in Assessment Figures 1a, 2a, 3a. These Figures do not reflect a reduction in demands thus representing a more conservative view of IRWD's supply capability. In particular, the reduction in demand mandated by Senate Bill 7 in 2010, requiring urban retail water suppliers to establish water use targets to achieve a 20% reduction in daily per capita water use by 2020, has not been factored into the demands in this analysis. Similarly, notwithstanding the Governor's order, IRWD's conservative supply-sufficiency analysis in Assessment Figures 1a, 2a and 3a does not include the ordered reduction in potable demands.

(iv) The amount of water that IRWD can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state and local water initiatives such as CALFED and Colorado River tentative agreements, based on the inclusion of information with respect to such supplies in Section 2, below.

Local. IRWD directly relies (for a portion of its full build-out annual demand in single and multiple dry-year projections) on the following under development supplies (see 1(a), above): the Irvine Wells (see the Assessment, Section 2(b)(1)(vi) – “POTABLE SUPPLY – GROUNDWATER”). In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan (“LTFP”) which provides updated information and was received by the OCWD Board in July 2009 and updated in 2014. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft which provides sufficient storage space to accommodate increased supplies from one wet year while also provides enough water in storage to offset decreased supplies during a two- to three year drought. (Source: “Evaluation of Orange County Groundwater Basin Storage and Operational Strategy”, as referenced in *2014-2015 Engineer’s Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*).

With the implementation of OCWD’s preferred projects, the Basin yield in the year 2030 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage (“BPP”) that OCWD sets based on these factors.

IRWD’s own recycled water expansion program is also shown as an under development supply. IRWD also has a currently available recycled water supply from its own existing recycling program. The recycled water supplies are discussed in Section 2 below (see the Assessment, Section 1 – Figures 5, 6, 7 and 8 (supplies denominated “MWRP” and “LAWRP”), Section 2(a), and Section 2(b)(1) - “NONPOTABLE SUPPLY – RECLAIMED”), IRWD has completed construction of the Michelson Water Recycling Plant Phase 2 Capacity Expansion Project to tertiary capacity of 28 million gallons per day (MDG). With this expansion, IRWD increased its tertiary treatment capacity on the existing MWRP site to produce sufficient recycled water to meet the projected demand in the year 2035. Additional recycling capacity will augment local nonpotable supplies and improve reliability.

As noted in the Assessment, IRWD’s demand projections reflect the effect of IRWD’s water conservation pricing and other conservation practices; in particular, IRWD’s water use factors used to derive its demand projections are based on average water use and incorporate the effect of IRWD’s tiered-rate conservation pricing and its other long-term water conservation programs. System losses at a rate of approximately 5% are built into the water use factors. As discussed above, IRWD’s supply and demand projections do not take into account water savings that could be achieved by water shortage emergency measures.

Imported. MWD, the supplier of IRWD’s imported supplies, relies upon several of the listed projects and programs. MWD supports and provides financial incentives to water recycling, groundwater recovery, water conservation, ocean desalination and other local resource development programs. MWD calculates its demand forecast by first estimating total retail demand for the region and then factoring in impacts of conservation. Next, it derives

projections of local supplies using data on current and expected local supply programs and Integrated Resource Planning (IRP) Local Resource Program Target. The difference between the resulting local demands is the expected regional demand on MWD. These estimates of demands on MWD were developed for a single dry year, multiple dry years and average years. (MWD UWMP, see Tables pages 2-14 through 2-16). In the MWD UWMP, MWD states it has supply capability that would be sufficient to meet expected demands from 2020 to 2040 under single dry year, multiple dry year and normal year conditions.

Also, In January 2016, MWD adopted its 2015 IRP Update. In the 2015 IRP Update, MWD continued its adaptive management strategy and integrated future supply actions to improve the viability of potential contingency resources as needed, and to position the region to effectively implement these resources in a timely manner. The 2015 IRP finds additional action is needed in investments in conservation, local supplies, the California WaterFix, and stabilizing Colorado River supplies. Among the supply actions, MWD will continue to work collaboratively with state and federal agencies on the WaterFix, maximize its storage and transfer approach, and continue to develop and protect local supplies and conservation.

MWD also relies upon the implementation of the CALFED Bay-Delta Program, as an under development supply, to attain an increase in its existing Bay-Delta deliveries. Other under water development programs relied upon by MWD include: additional transfers and storage agreements such as IID/MWD Conservation Project, ICS Program, Agreements with CVWD, Additional Palo Verde Irrigation District Transfers, SNWA Interstate Agreement, Desert Water/CVWD Transfer, Kern County storage programs, AVEK Exchange Program, Mojave Storage Program, North of Delta/In-Delta Transfers, Yuba Accord Purchase, San Bernardino Valley Water Storage Program, Central Valley Transfer Programs, (MWD UWMP, Sections 3.1, 3.2, and 3.3) See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to MWD's current and under development supplies.

In addition, as noted in the Assessment, IRWD has developed water banking projects in Kern County, California which be called upon for delivery of supplemental banked water to IRWD, if needed, in response to shortage conditions or potential water supply interruptions.

2. Required information concerning *under-development* supplies

(a) Written contracts or other proof of valid rights to the identified supplies

See the Assessment, Section 2(b)(1), incorporated herein by reference. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to written contracts and other proof related to MWD's supplies.

(b) Adopted capital outlay program to finance delivery of the supplies

See the Assessment, Section 2(b)(2), incorporated herein by reference. With respect to future groundwater wells (PR Nos. 1100, 7140, 1402) and Baker Water Treatment Plant (PR No. 5027), IRWD adopted its fiscal year 2016-17 capital budget on April 25, 2016 (Resolution No. 2016-7), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) IRWD has approximately \$615.2 million (water) and \$784.8 million (wastewater) of unissued, voter-approved bond authorization. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's

supplies.

(c) Federal, state and local permits to construct of delivery infrastructure

See the Assessment, Section 2(b)(3), incorporated herein by reference. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(d) Regulatory approvals for conveyance or delivery of the supplies

See the Assessment, Section 2(b)(4), incorporated herein by reference. In addition, future recycling plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board. See also MWD UWMP, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Foreseeable impacts of the Project on the availability of water for agricultural and industrial uses in IRWD's service area not currently receiving water

Based on city planning and other information known to IRWD, there are no agricultural or industrial uses in IRWD's service area that are not within either existing and committed demand or future demand, both of which are included within the supply and demand comparison and determination of sufficiency (see 1(a)).

4. Information concerning the right to extract additional groundwater included in the supply identified for the Project:

Where the water supply for the Project includes groundwater, the verification is required to include an evaluation of the extent to which IRWD or the landowner has the right to extract the additional groundwater needed to supply the Project. See the Assessment, Section 2(b)(1), "POTABLE SUPPLY – GROUNDWATER" and "NONPOTABLE SUPPLY – GROUNDWATER," and Section 4, incorporated herein by reference.

5. References

Water Resources Master Plan, Irvine Ranch Water District, Updated 2007

Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program, Irvine Ranch Water District, February 2009

Water Shortage Contingency Plan, Irvine Ranch Water District, February 2009

2010 Urban Water Management Plan, Irvine Ranch Water District, June, 2011

Southern California's Integrated Water Resources Plan, Metropolitan Water District of Southern California, March 1996

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October 7, 2007

Board Letter, Action plan for updating the Integrated Resources Plan, Metropolitan Water District of Southern California, December 11, 2007

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

2015 Integrated Resources Plan Update, Metropolitan Water District of Southern California, January 2016

2015 Urban Water Management Plan, Metropolitan Water District of Southern California, March 2016

Master Plan Report, Orange County Water District, April, 1999

Groundwater Management Plan, Orange County Water District, March, 2004

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

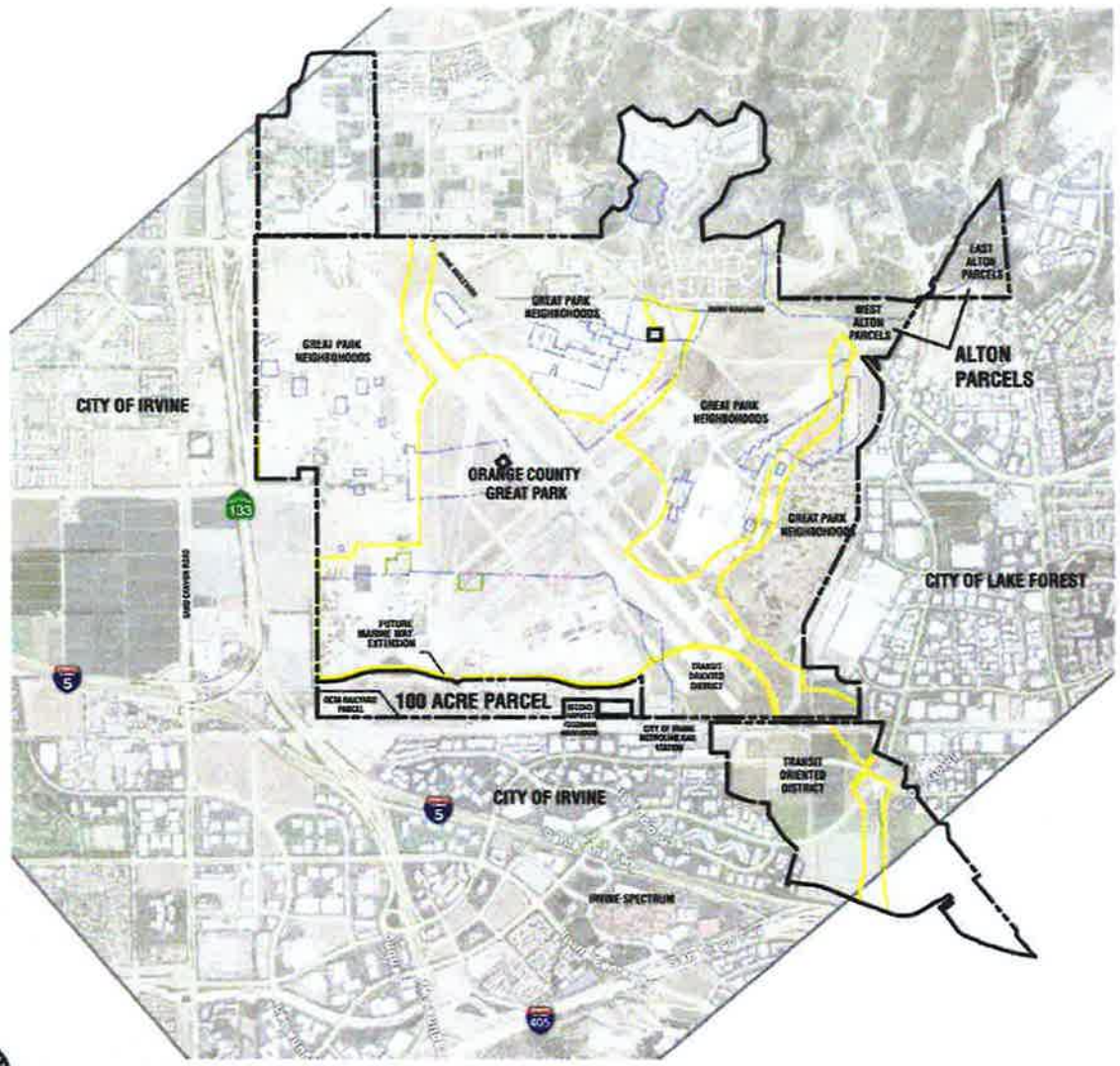
Long-Term Facilities Plan 2014 Update, Orange County Water District, November 2014

2014-2015 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District, February 2016

Progress on Incorporating Climate Change into Management of California's Water Resources, California Department of Water Resources, July 2006

Exhibit A
Depiction of Project Area

C-11



- Orange County Great Park Boundary
- Former USMC El Toro Base
- Existing Dept. of Navy Lease in Furtherance of Conveyance (LIFOC) Areas

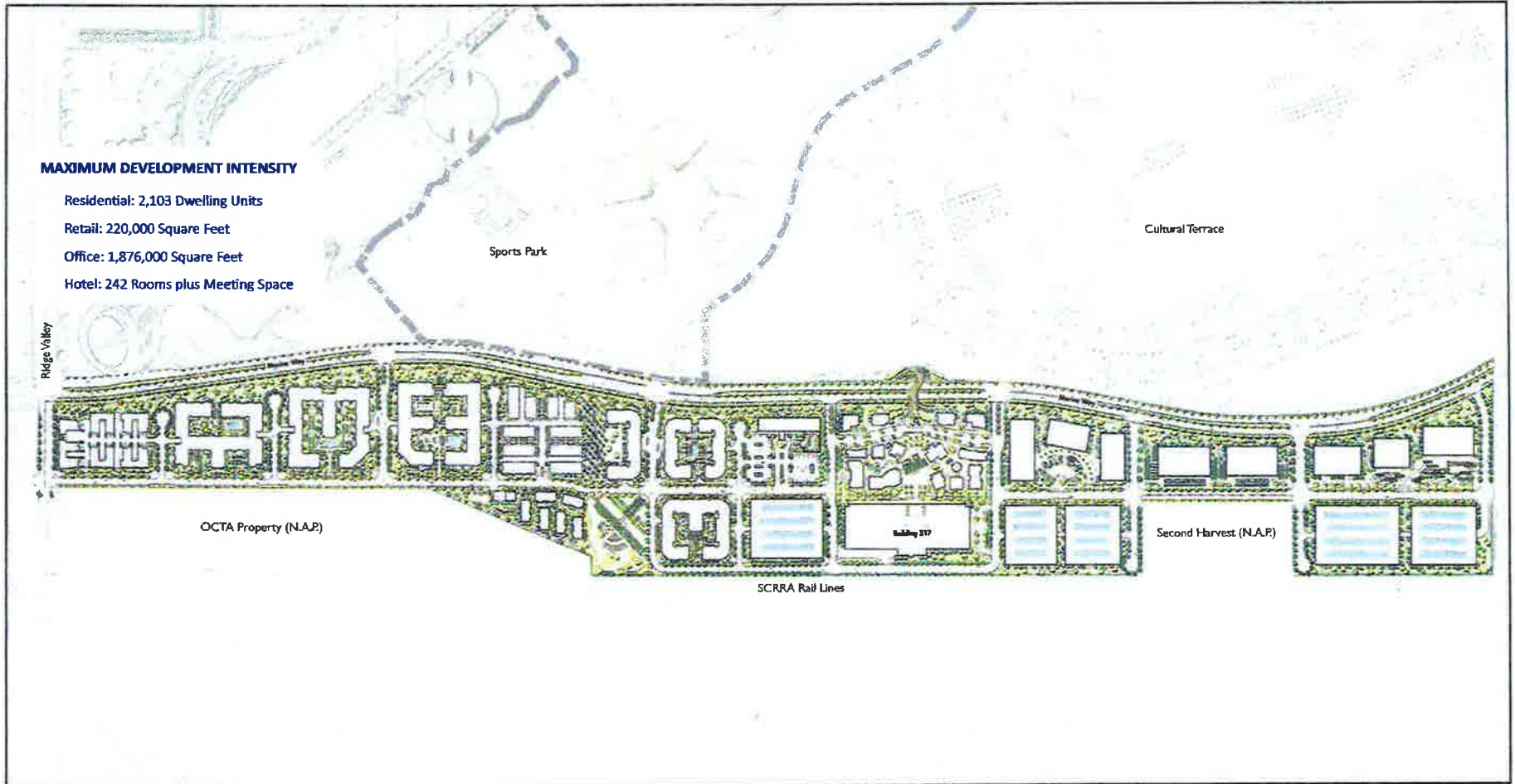


ORANGE COUNTY
PLANNING
AND
COMPLIANCE
TAIT
CONSULTANTS

VICINITY MAP

ORANGE COUNTY PUBLIC WORKS | USMC EL TORO PARCELS

JANUARY 21, 2011 | FIGURE 1



C-12

⊗ N.T.S.

Source: EPT DESIGN, KTG, IRWD

Exhibit B

Non-residential Uses Included in Project



County of Orange

County Executive Office

February 16, 2016

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Verification of Sufficient Water Supplies (Government Code
§66473.7(b)(1))
El Toro 100 Acre Parcel

The County of Orange hereby requests verification of the availability of a sufficient water supply for the below-described project. Under Government Code §66473.7(b)(1), written verification of the availability of a sufficient water supply is required in conjunction with or prior to the approval of any tentative map that includes a residential subdivision of more than 500 dwelling units, subject to certain exemptions.

The County has determined that the subject project (1) includes a subdivision meeting the criteria requiring verification of availability of sufficient water supply and (2) does not fall within one of the statutory exemptions for previously developed urban sites, sites surrounded by urban use, or low-income housing sites.

Proposed Project Information

Project Title: El Toro 100-Acre Parcel Development

Location of project: within the City of Irvine southwest of future Marine Way roadway extension on the former El Toro Marine Corps Air Station

Planning Area(s): City of Irvine Planning Area 51

(Enclose a project map and exhibits)

Was the project included as part of a previously completed Water Supply Assessment (Water Code §10910)? yes no

If yes, date and project title of Water Supply Assessment El Toro Development Plan April 15, 2015

If no, state reason: CEQA documentation not requiring a Water Supply Assessment was completed prior to January 1, 2002 other: _____

Was a Water Supply Verification previously completed for the project? yes no

If yes, indicate reason for reverification: tract map expiration new Water Supply Assessment required due to project revisions, changed circumstances or new information

Tentative Map Application No. *Not Applicable Tentative Tract No.* Not Applicable

Verification is being requested prior to tentative map application (Government Code §66473.7(1) (Indicate next project approval sought: CEQA Environmental Clearance

(*A copy of the tentative map application including the proposed subdivision was sent to IRWD on: _____, (Government Code §66455.3))

Type of development included in the project:

Residential: No. of dwelling units: 2103

Shopping center or business: No. of employees _____ Sq. ft. of floor space 222,000

Commercial office: No. of employees _____ Sq. ft. of floor space 1,876,000

Hotel or motel: No. of rooms 222

Industrial, manufacturing, processing or industrial park: No. of employees _____
No. of acres _____ Sq. ft. of floor space _____

Mixed use (check and complete all above that apply)

Other: Private Roadways at 19.2 acres

Total acreage of project: 106.7 Acres

Acreage devoted to landscape:

Greenbelt 7.26 acres golf course _____ parks 3.66 Acres

Agriculture _____ other landscaped areas _____

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements:

Is the project included in the existing General Plan? No If no, describe the existing General Plan Designation Institutional

The County acknowledges that IRWD's verification will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional

information to be submitted to enable IRWD to complete the verification, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project changes or the tentative map approval expires after the issuance of a Water Supply Verification, the County will request a new Water Supply Verification if required. In the event of changes in the project, circumstances or conditions of the availability of new information, it will be necessary for the County to request a new Water Supply Assessment prior to completion of the new Water Supply Verification.

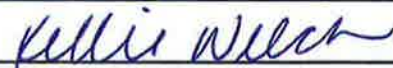
The County acknowledges that the Water Supply Verification shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Verification shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

COUNTY OF ORANGE

By: 

REQUEST RECEIVED:

Date: February 17, 2016

By: 

Irvine Ranch Water District

REQUEST COMPLETE:

Date: February 22, 2016

By: 

Irvine Ranch Water District

Exhibit C
Water Supply Assessment

**IRVINE RANCH WATER DISTRICT
ASSESSMENT OF WATER SUPPLY
Water Code §10910 et seq.**

To: *(Lead Agency)*

~~City of Irvine~~ County of Orange
~~P.O. Box 19575~~ 333 W. Santa Ana Blvd., Third Fl.
~~Irvine, CA 92623-9575~~ Santa Ana, CA 92701-4062

(Applicant)
County of Orange
333 W. Santa Ana Blvd., Third Floor
Santa Ana, CA 92701-4062

Project Information

Project Title: El Toro Development Plan (Exhibit A)

- Residential: No. of dwelling units: _____
 Shopping center or business: No. of employees _____ Sq. ft. of floor space _____
 Commercial office: No. of employees _____ Sq. ft. of floor space _____
 Hotel or motel: No. of rooms _____
 Industrial, manufacturing or processing: No. of employees _____ No. of acres _____
Sq. ft. of floor space _____
 Mixed use (check and complete all above that apply) (see Exhibit B) _____
 Other: _____

Assessment of Availability of Water Supply

On April 13, 2015 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

- The projected water demand for the Project was was not included in IRWD's most recently adopted urban water management plan.
- A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- A sufficient water supply is not available for the Project. *[Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]*

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

Leslie Bonkowski 4/15/15 District Secretary
Signature Date Title

Water Supply Assessment Information

Purpose of Assessment

Irvine Ranch Water District ("IRWD") has been identified by the County as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the "Project"). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the County with an assessment of water supply availability ("assessment") for defined types of projects. The Project has been found by the County to be a project requiring an assessment. The County is required to include this assessment in the environmental document for the Project, and, based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 (the "Assessment Law") contains the requirements for the information to be set forth in the assessment.

Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. Because of IRWD's aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects' water demands will be included in the baseline. A newly assessed project's water demand will have been included in previous water supply assessments for other projects (as part of IRWD's "full build-out" demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project's water demand was included (as part of IRWD's "full build-out" demand) in previous water supply assessments performed by IRWD, based on land use planning information then available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the "with project" demand.

Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update of that document was adopted June 13, 2011.

In addition to the WRMP and the 2010 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

Assessment Methodology

Water use factors; dry-year increases. IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water conservation programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. System losses at a rate of approximately 5% are built into the water use factors. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased 7% in the assessment during both "single-dry" and "multiple-dry" years. This is consistent with IRWD's 2010 UWMP and historical regional demand variation as documented in the Metropolitan Water District of Southern California's ("MWD's") Integrated Resources Plan (1996) (Volume 1, page 2-10).

Planning horizon. For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2035, which is considered to represent build-out or "ultimate development".

Assessment of demands. Water demands are reviewed in this assessment for three development projections (to 2035):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.
- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.
- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

Assessment of supplies. For comparison with demands, water supplies are classified as *currently available* or *under development*.

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; reclaimed wastewater, and supplemental imported water supplied by MWD through the Municipal Water District of Orange County ("MWDOC"). The supply-demand comparisons in this assessment are broken down among the various sources, and are further separated into potable and nonpotable water sources.

Comparison of demand and supply. The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year (AFY)).
- On a *peak-flow* (maximum day) basis (stated in cubic feet per second (cfs)).
- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system's ability to meet the highest day's demand of the fluctuating demands that will be experienced in a year's time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

- Figure 1: Normal Year Supply and Demand – Potable Water
- Figure 2: Single Dry-Year Supply and Demand – Potable Water
- Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
- Figure 4: Maximum-Day Supply and Demand – Potable Water
- Figure 5: Normal Year Supply and Demand – Nonpotable Water
- Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
- Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
- Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD's *supplies* remain essentially constant between normal, single-dry and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for all of IRWD's potable supply, and reclaimed water, groundwater and imported water comprise most of IRWD's nonpotable supply. Groundwater production typically remains constant or increases in cycles of dry years, even if

overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2010 Regional Urban Water Management Plan (RUWMP) shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods through 2035, including a repeat of the 1990-1992 multiple dry-year hydrology and the 1977 single dry-year hydrology. (See Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below, for a summary of information provided by MWD.) Reclaimed water production also remains constant, and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's nonpotable supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under the normal and both dry-year conditions through the year 2025. (Figures 1, 2 and 3.)
- Meeting both single- and multiple-dry-year annual demands for *full build-out* will require the completion of *under-development* supplies. (Figures 2 and 3.)
- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2035. (Figure 4.)
- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2035. (Figures 5, 6, 7 and 8). IRWD is proceeding with the implementation of *under-development* nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

Margins of safety. The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.
- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.
- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies.

Recent Actions on Delta Pumping. The Sacramento/San Joaquin Delta (Delta) is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, most recently, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which will have an effect on State Water Project (SWP) operations and supplies in 2008 and subsequent years. On June 4, 2009, a federal biological opinion imposed rules that will further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. At present, several proceedings concerning Delta operations are ongoing to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan process are defining long-term solutions for the Delta (MWD 2010 IRP Update). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007 that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To comprehensively address the impacts of the SWP cut back on MWD's water supply development targets, MWD brought to its Board a strategy and work plan to update the long-term Integrated Resources Plan (IRP) in December 2007. As part of the IRP Update, MWD developed a region-wide collaborative process that included a broad-based stakeholder involvement. MWD held several stakeholder forums in 2008 and 2009 and the MWD Board adopted the 2010 IRP Update on October 12, 2010. In the 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below) as well as actions to protect endangered fisheries. Based on MWD's Findings and Conclusions as stated in the MWD 2010 IRP Update, MWD's reliability goal that full-service demands at the retail level will be satisfied for all foreseeable hydrologic conditions remains unchanged in the 2010 IRP Update, and MWD will accomplish this through its core resources strategies. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. MWD's Adaptive Resource Management Strategy includes three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions which together provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by implementing a supply buffer equal to 10 percent of the total retail demand. MWD will collaborate with the member agencies to implement this buffer through complying with Senate Bill 7 which calls for the state to reduce per capita water use 20 percent by the year 2020.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: MWD states it is sufficiently reliable to meet full-service demands at the retail level for all foreseeable hydrologic conditions. For purposes of ensuring a conservative analysis, IRWD has compiled information from the prior "MWD IRP Implementation Report" (October 2010) and MWD's RUWMP (November 2010), to provide information in this assessment relative to how reduced SWP supplies could potentially affect IRWD's supplies from MWD.

Based on IRWD's evaluation of MWD's SWP supplies, IRWD estimates that the 22% used by MWD's October 2007 IRP Implementation Report as a potential reduction of MWD's SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2015 through 2035.¹ For this purpose it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. As shown in MWD's RUWMP (Tables A.3-7), SWP deliveries on average over the 20-year period are 1,682,000 acre-feet and Colorado base average supplies are 656,000 acre-feet. A 22% reduction of SWP supplies equates to 370,000 acre-feet which is approximately 16% of MWD's total imported supplies. Based on this estimate, this assessment projects a 16% reduction in MWD supplies available to IRWD for the years 2010 through 2035, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7.

As an alternative means of analyzing the 22% stated reduction, Figures 1a, 2a, and 3a show IRWD estimated supplies in all of the 5-year increments (average and single and multiple dry years) under a short-term MWD allocation scenario whereby MWD declares Shortage Stage 2 and a 10% cutback is applied to IRWD's actual usage rather than its connected capacity. In February 2009, MWD adopted a Water Supply Allocation Plan based on its declared level of shortage. In response to potential water shortages and a request by MWD to have water service providers within its service area adopt a water conservation ordinance, in February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels.

¹ MWD's 2010 RUWMP cites to DWR's Water Allocation Analysis dated March 22, 2010, which incorporated the Delta smelt biological opinion's effect on SWP operations, export restrictions could reduce deliveries to MWD by 150 to 200 thousand acre-feet for 2010. DWR estimated that approximately 520,000 AF had been lost to the SWP for 2010 of which nearly 240,000 AF would have been available to MWD. This amount is equivalent to about 16% reduction in SWP supplies, a smaller percentage reduction than MWD's 2007 figure of 22% that was used by IRWD for purposes of this analysis.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.² In addition, IRWD has developed water banking projects in Kern County, California which may be called upon for delivery of supplemental banked water to IRWD under a short-term MWD allocation.³ In addition, if needed resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's Water Shortage Contingency Plan.

Listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2035 and shows the effect of current allocation scenarios in all of the five-year increments but MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

Climate Change. The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. DWR emphasizes that "the report represents an example of an impacts assessment based on four scenarios defining an expected range of potential climate change impacts." DWR's major goal is to extend the analysis for long-term water resource planning from "assessing impacts" to "assessing risk." The report presents directions for further work in incorporating climate change into the management of California's water resources. Emphasis is placed on associating probability estimates with potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts. DWR's report acknowledges "that all results presented in this report are preliminary, incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Therefore, these results are not sufficient by themselves to make policy decisions."

² In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District (OCWD) imported replenishment water may also be cutback. The OCWD's "2010-2011 Engineer's Report on the groundwater conditions, water supply and basin utilization" references a report (OCWD Report on Evaluation of Orange County Groundwater Basin Storage and Operational Strategy) which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states, "Although it is considered to be generally acceptable to allow the basin to decline to 500,000 AF overdraft for brief periods due to severe drought conditions and lack of supplemental water...an accumulated overdraft of 100,000 AF best represents an optimal basin management target. This optimal target level provides sufficient storage space to accommodate anticipated recharge from a single wet year while also providing water in storage for at least 2 or 3 consecutive years of drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

³ IRWD has developed water banking projects (Water Bank) in Kern County, California and has entered into a 30-year water banking partnership with Rosedale-Rio Bravo Water Storage District (RRB) to operate IRWD's Strand Ranch portion of the Water Bank. The Water Bank can improve IRWD's water supply reliability by capturing lower cost water available during wet hydrologic periods for use during dry periods. The Water Bank can enhance IRWD's ability to respond to drought conditions and potential water supply interruptions.

In MWD's 2010 IRP Update, MWD recognizes there is a significant uncertainty in the impact of climate change on water supply and changes in weather patterns could significantly affect water supply reliability. MWD plans to hedge against supply and environmental uncertainties by implementing a supply buffer equivalent to 10 percent of total retail demand. This buffer will be implemented through meeting the SB7 water use efficiency goals, implementing aggressive adaptive actions, development of local supplies and transfers.

Per MWD's RUWMP, MWD continues to incorporate current climate change science into its planning efforts. As stated in MWD's RUWMP, the 2010 IRP Update supports the MWD Board adopted principles on climate change by: 1) Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply, 2) Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and 3) Evaluating staff recommendations regarding climate change and water resources against the California Environmental Quality Act to avoid adverse effects on the environment. Potential climate change impacts on state, regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

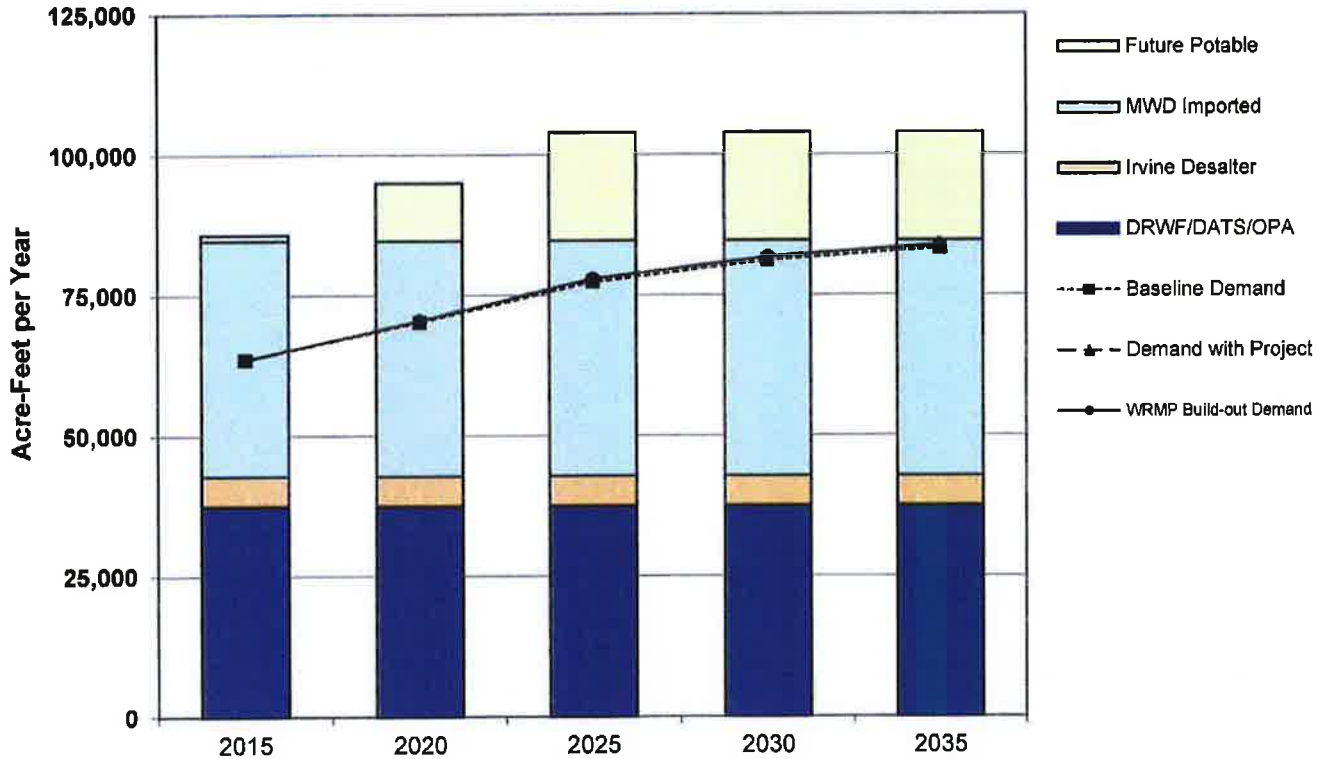
Catastrophic Supply Interruption Planning. MWD has developed Emergency Storage Requirements (2010 RUWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses the long term Delta plan in its 2010 RUWMP (pages 3-18 to 3-21). IRWD has also addressed supply interruption planning in its WRMP and UWMP.

Detailed Assessment

1. Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Recent Actions on Delta Pumping" above.

**Figure 1
IRWD Normal-Year Supply & Demand - Potable Water**

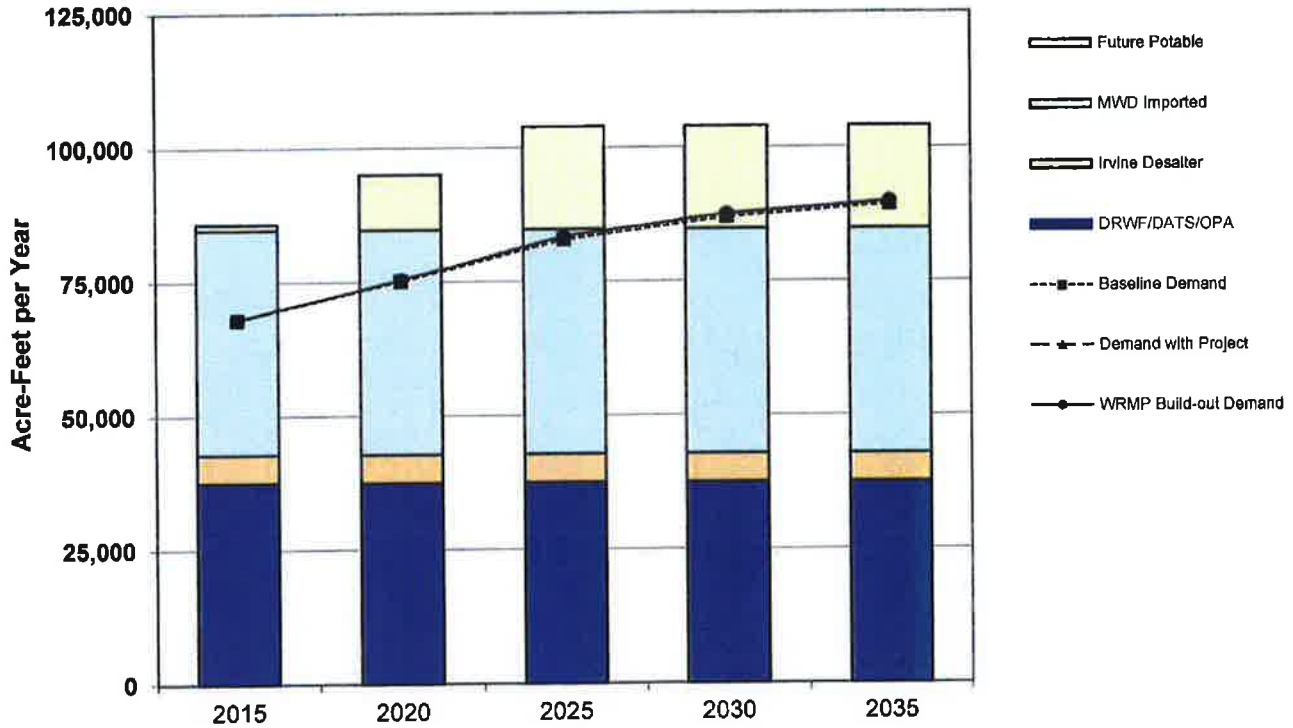


(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	10,328	19,211	19,211	19,211
Maximum Supply Capability	92,217	101,427	110,311	110,311	110,311
Baseline Demand	63,671	70,307	77,451	81,254	83,433
Demand with Project	63,671	70,527	78,001	81,804	83,983
WRMP Build-out Demand	63,671	70,527	78,001	81,804	83,983
Reserve Supply with Project	28,547	30,900	32,310	28,506	26,327

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water**

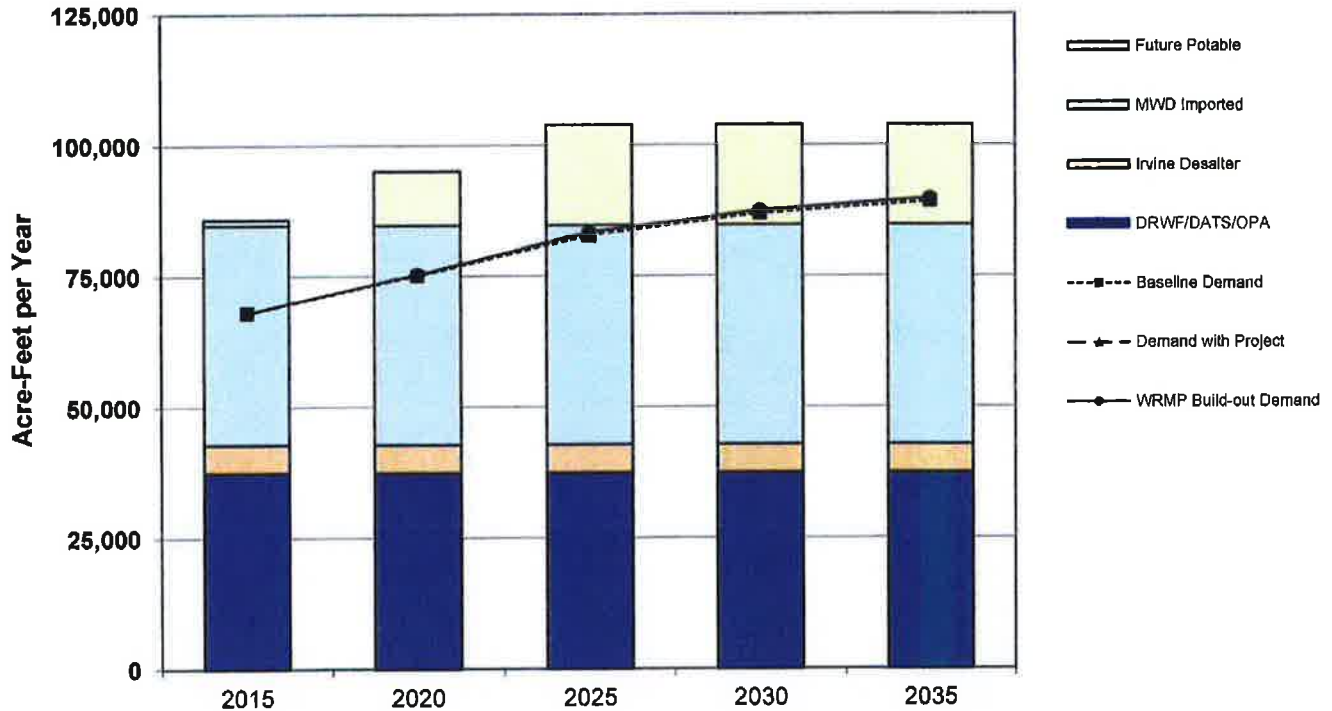


(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	10,328	19,211	19,211	19,211
Maximum Supply Capability	92,217	101,427	110,311	110,311	110,311
Baseline Demand	68,128	75,229	82,872	86,942	89,274
Demand with Project	68,128	75,464	83,461	87,530	89,862
WRMP Build-out Demand	68,128	75,464	83,461	87,530	89,862
Reserve Supply with Project	24,090	25,963	26,850	22,780	20,448

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water**

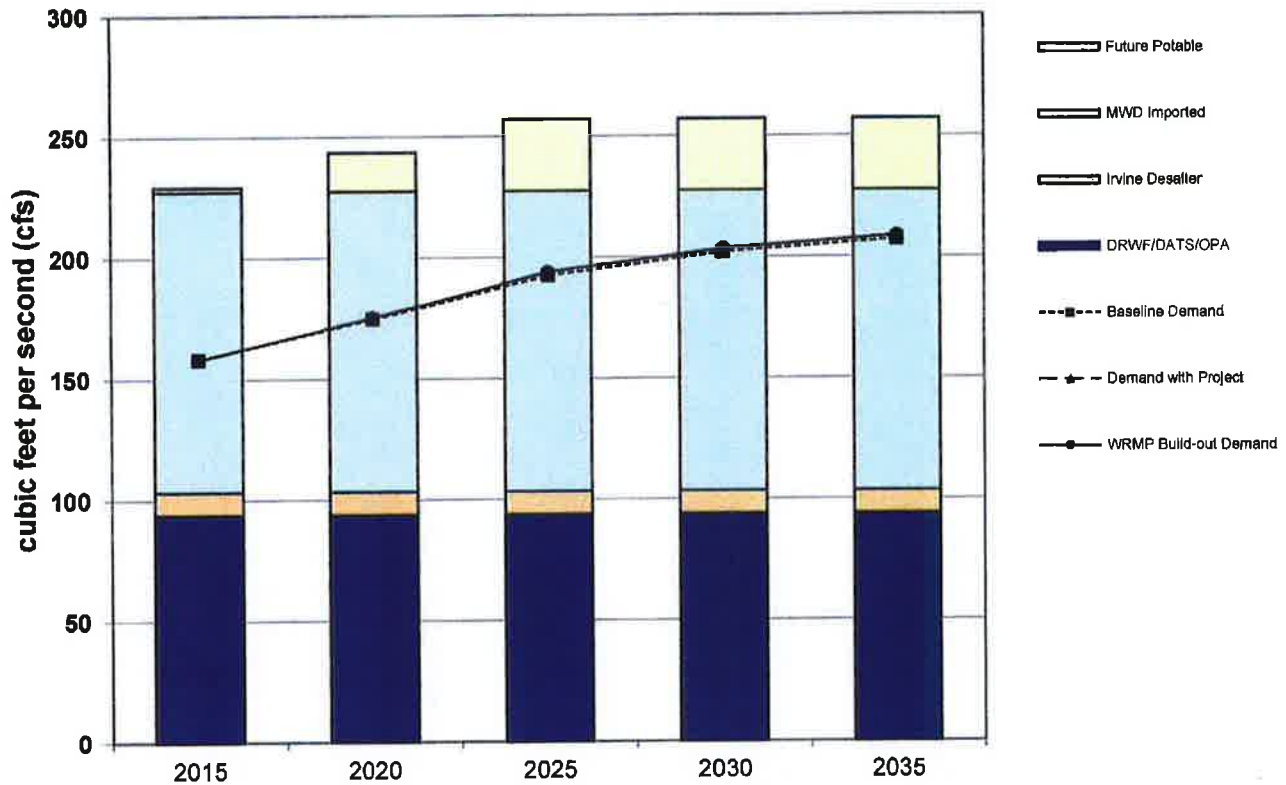


(in acre-feet per year)	2015	2020	2025	2030	2035
<u>Current Potable Supplies</u>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
<u>Supplies Under Development</u>					
Future Potable	1,118	10,328	19,211	19,211	19,211
Maximum Supply Capability	92,217	101,427	110,311	110,311	110,311
Baseline Demand	68,128	75,229	82,872	86,942	89,274
Demand with Project	68,128	75,464	83,461	87,530	89,862
WRMP Build-out Demand	68,128	75,464	83,461	87,530	89,862
Reserve Supply with Project	24,090	25,963	26,850	22,780	20,448

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

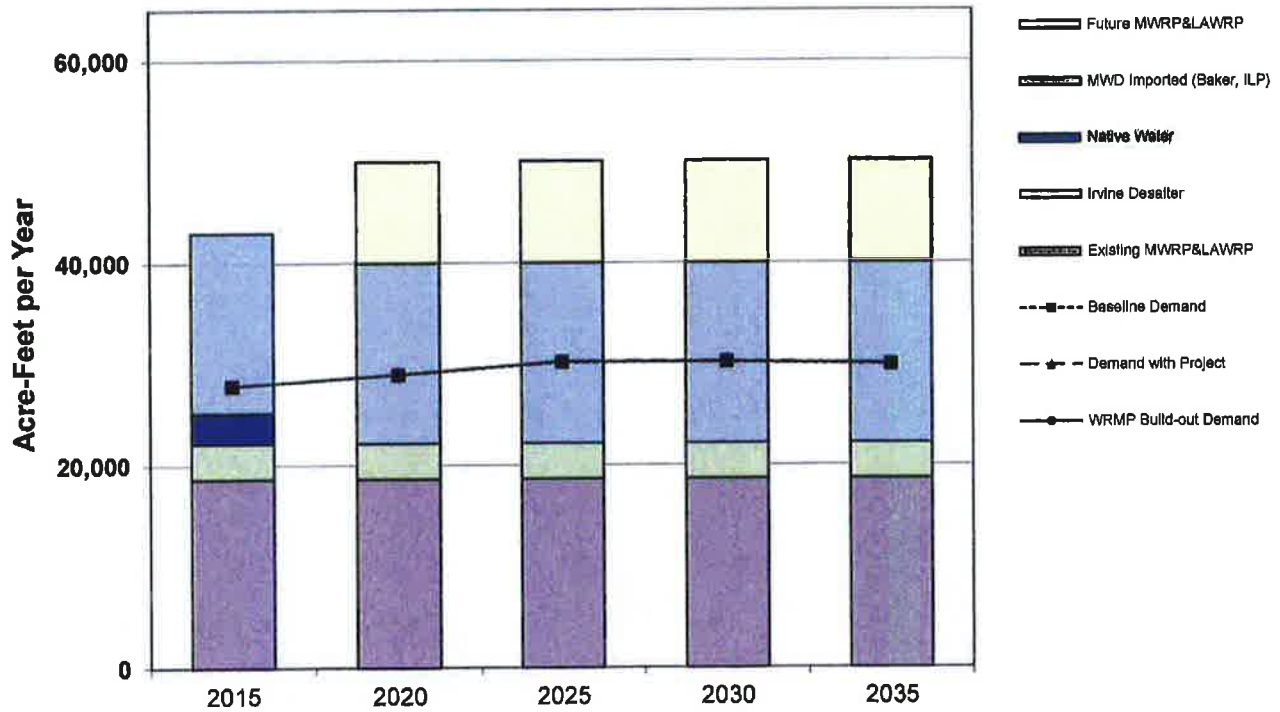
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water**



(in cfs)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS/OPA	93.9	93.9	93.9	93.9	93.9
Irvine Desalter	9.5	9.5	9.5	9.5	9.5
Wells 21 & 22	10.9	10.9	10.9	10.9	10.9
Supplies Under Development					
Future Potable	2.0	16.1	29.7	29.7	29.7
Maximum Supply Capability	240.4	254.5	268.1	268.1	268.1
Baseline Demand	158.3	174.8	192.6	202.0	207.4
Demand with Project	158.3	175.3	193.9	203.4	208.8
WRMP Build-out Demand	158.3	175.3	193.9	203.4	208.8
Reserve Supply with Project	82.1	79.2	74.2	64.7	59.3

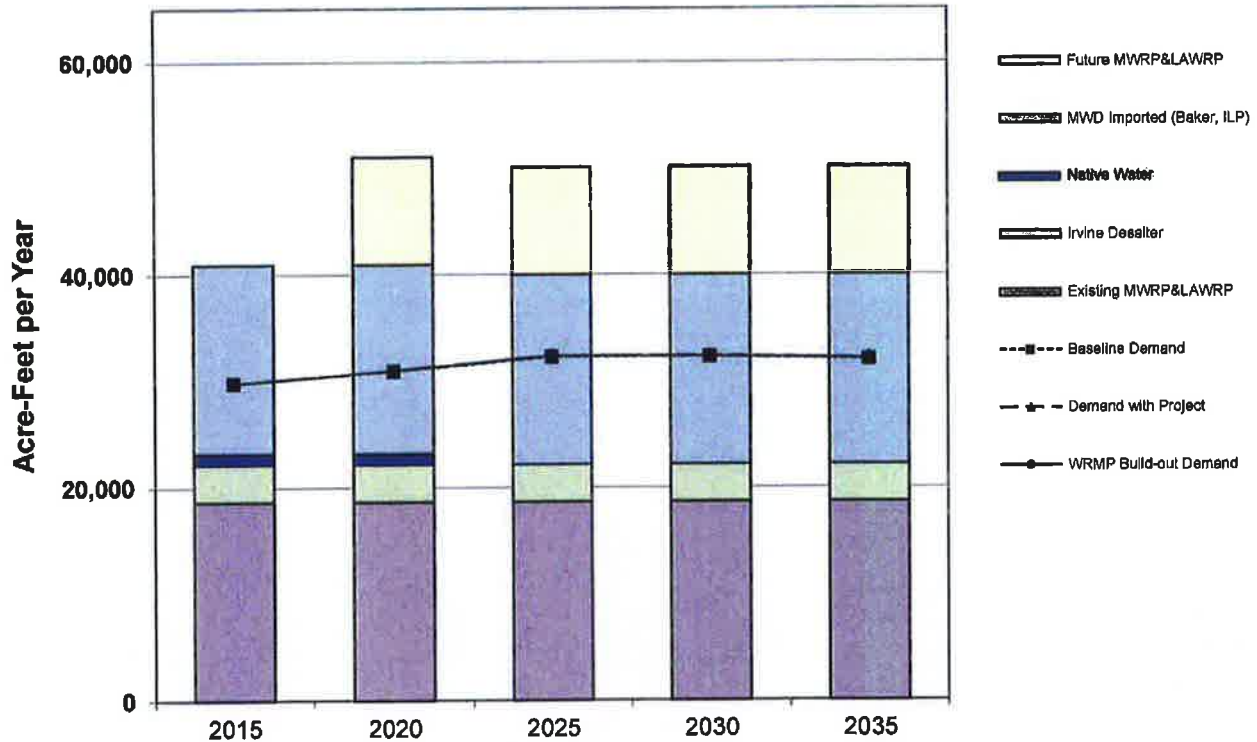
**Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water**



(in acre-feet per year)	2015	2020	2025	2030	2035
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	17,826	17,826	17,826	17,826	17,826
Irvine Desalter	3,514	3,514	3,514	3,514	3,514
Native Water	3,000	-	-	-	-
Supplies Under Development					
Future MWRP&LAWRP	-	10,100	10,100	10,100	10,100
Maximum Supply Capability	42,997	50,097	50,097	50,097	50,097
Baseline Demand	27,859	28,958	30,152	30,189	29,928
Demand with Project	27,859	28,989	30,229	30,267	30,005
WRMP Build-out Demand	27,859	28,989	30,229	30,189	30,005
Reserve Supply with Project	15,138	21,108	19,868	19,907	20,092

Note: Downward trend reflects reduction in agricultural use over time.
 Native water will be treated to potable through the Baker Water Treatment Plant after 2016.
 MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

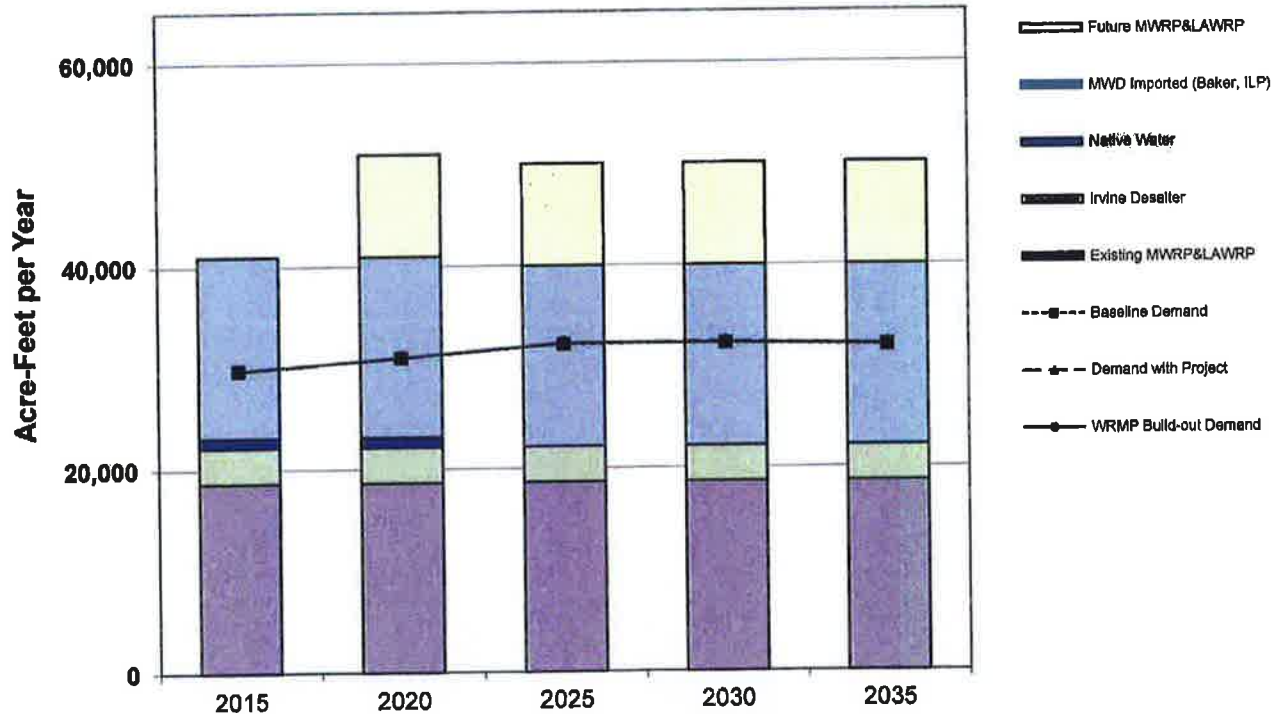
**Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water**



(in acre-feet per year)	2015	2020	2025	2030	2035
<u>Current Nonpotable Supplies</u>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	17,826	17,826	17,826	17,826	17,826
Irvine Desalter	3,514	3,514	3,514	3,514	3,514
Native Water	1,000	1,000	-	-	-
<u>Supplies Under Development</u>					
Future MWRP&LAWRP	-	10,100	10,100	10,100	10,100
Maximum Supply Capability	40,997	51,097	50,097	50,097	50,097
<u>Demand</u>					
Baseline Demand	29,809	30,985	32,262	32,303	32,023
Demand with Project	29,809	31,018	32,345	32,386	32,106
WRMP Build-out Demand	29,809	31,018	32,345	32,303	32,106
Reserve Supply with Project	11,187	20,079	17,752	17,711	17,991

Note: Downward trend reflects reduction in agricultural use over time.
 Native water will be treated to potable through the Baker Water Treatment Plant after 2016.
 MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

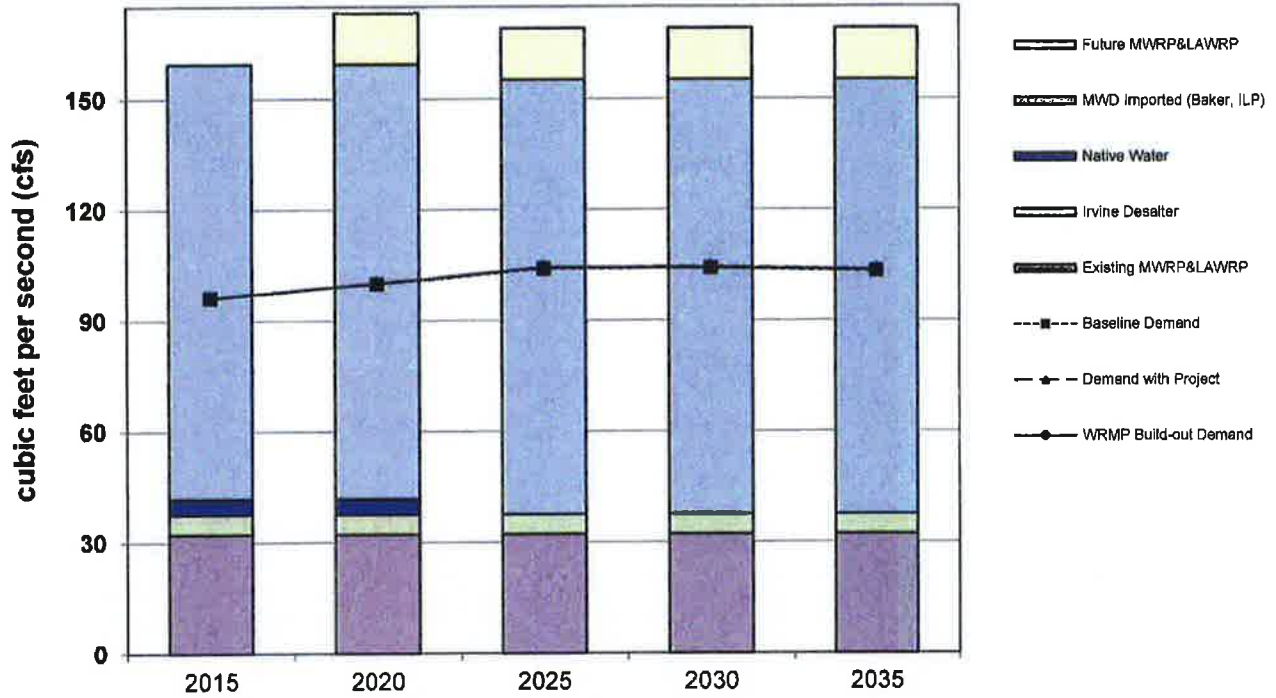
**Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water**



(in acre-feet per year)	2015	2020	2025	2030	2035
<u>Current Nonpotable Supplies</u>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	17,826	17,826	17,826	17,826	17,826
Irvine Desalter	3,514	3,514	3,514	3,514	3,514
Native Water	1,000	1,000	-	-	-
<u>Supplies Under Development</u>					
Future MWRP&LAWRP	-	10,100	10,100	10,100	10,100
Maximum Supply Capability	40,997	51,097	50,097	50,097	50,097
Baseline Demand	29,809	30,985	32,262	32,303	32,023
Demand with Project	29,809	31,018	32,345	32,386	32,106
WRMP Build-out Demand	29,809	31,018	32,345	32,303	32,106
Reserve Supply with Project	11,187	20,079	17,752	17,711	17,991

Note: Downward trend reflects reduction in agricultural use over time.
Native water will be treated to potable through the Baker Water Treatment Plant after 2016.
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

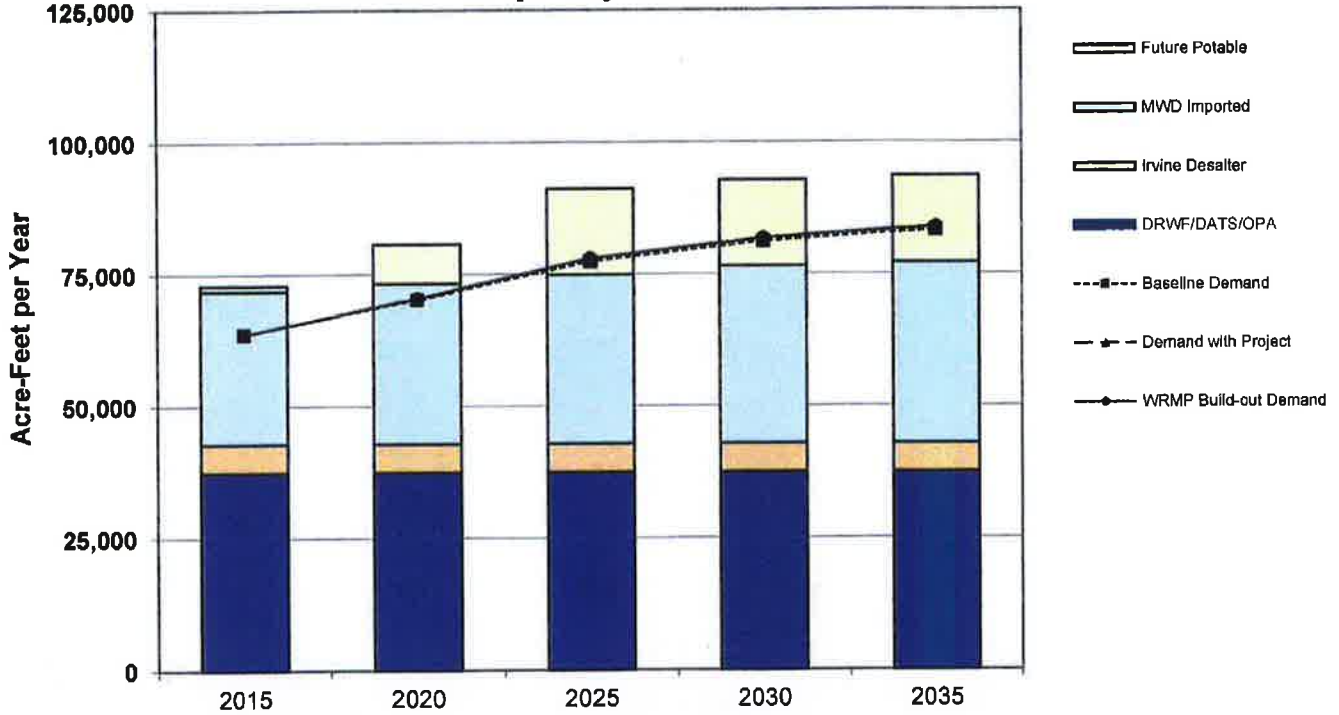
**Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water**



(in cfs)	2015	2020	2025	2030	2035
Current Nonpotable Supplies					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
Irvine Desalter	5.4	5.4	5.4	5.4	5.4
Native Water	4.2	4.2	-	-	-
Supplies Under Development					
Future MWRP&LAWRP	-	14.0	14.0	14.0	14.0
Maximum Supply Capability	159.5	173.4	169.2	169.2	169.2
Baseline Demand	96.2	100.0	104.1	104.2	103.3
Demand with Project	96.2	100.1	104.4	104.5	103.6
WRMP Build-out Demand	96.2	100.1	104.4	104.2	103.6
Reserve Supply with Project	63.3	73.3	64.8	65.0	65.6

Note: Downward trend reflects reduction in agricultural use over time.
Native water will be treated to potable through the Baker Water Treatment Plant after 2016.

**Figure 1a
IRWD Normal-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation***

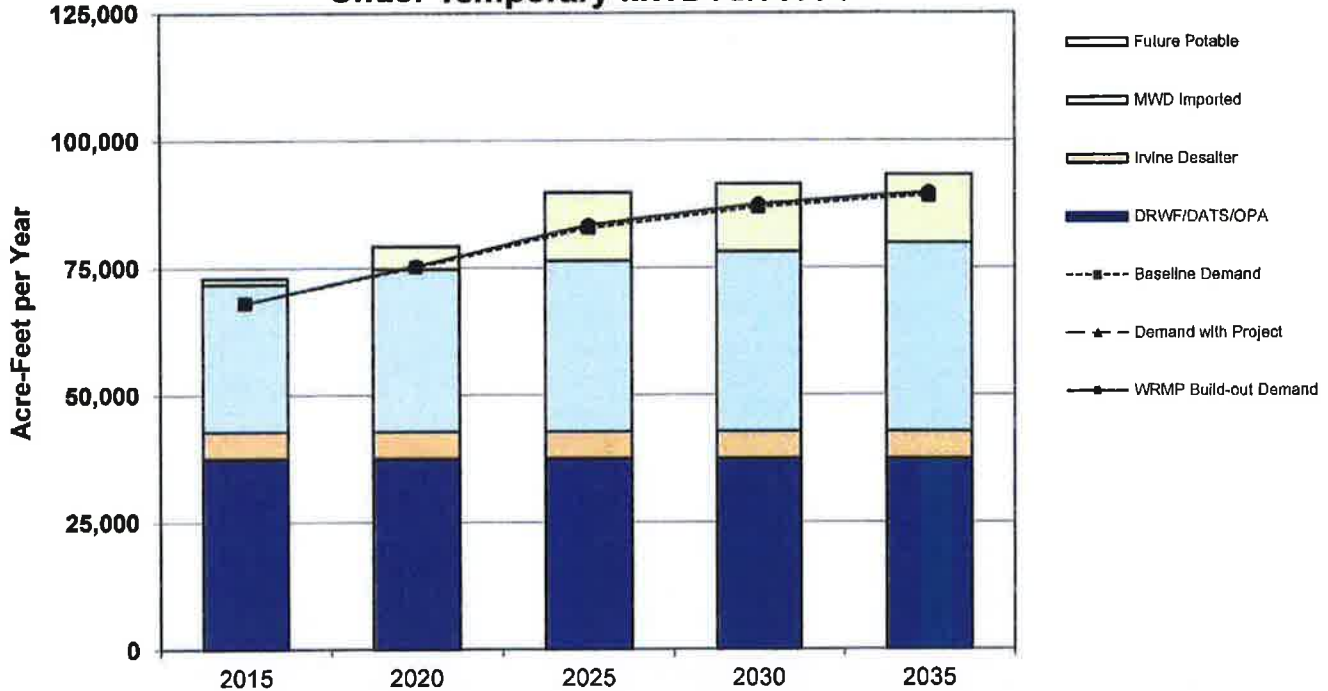


(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	29,000	30,479	32,034	33,668	34,345
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	7,469	16,352	16,352	16,352
Maximum Supply Capability	79,288	87,119	97,557	99,191	99,868
Baseline Demand	63,671	70,307	77,451	81,254	83,433
Demand with Project	63,671	70,527	78,001	81,804	83,983
WRMP Build-out Demand	63,671	70,527	78,001	81,804	83,983
Reserve Supply with Project	15,617	16,592	19,556	17,387	15,884

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP. Under a MWD allocation, the Baker WTP supplies (under "Future Potable") will be limited to available native water only.

**Figure 2a
IRWD Single Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation***

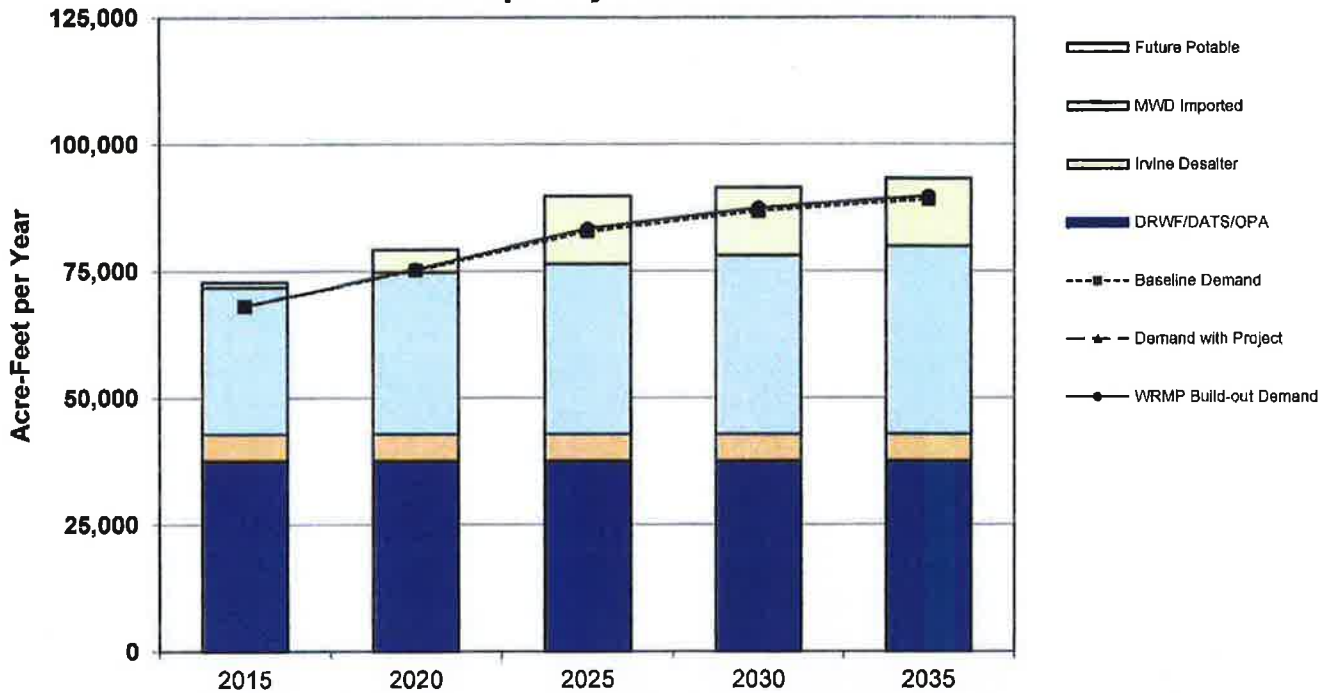


(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	29,000	32,003	33,603	35,284	37,048
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	4,469	13,352	13,352	13,352
Maximum Supply Capability	79,288	85,643	96,126	97,806	99,571
Baseline Demand	68,128	75,229	82,872	86,942	89,274
Demand with Project	68,128	75,464	83,461	87,530	89,862
WRMP Build-out Demand	68,128	75,464	83,461	87,530	89,862
Reserve Supply with Project	11,161	10,179	12,665	10,276	9,708

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP. Under a MWD allocation, the Baker WTP supplies (under "Future Potable") will be limited to available native water only.

**Figure 3a
IRWD Multiple Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation***



(in acre-feet per year)	2015	2020	2025	2030	2035
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	29,000	32,003	33,603	35,284	37,048
DRWF/DATS/OPA	37,533	37,533	37,533	37,533	37,533
Irvine Desalter	5,309	5,309	5,309	5,309	5,309
Wells 21 & 22	6,329	6,329	6,329	6,329	6,329
Supplies Under Development					
Future Potable	1,118	4,469	13,352	13,352	13,352
Maximum Supply Capability	79,288	85,643	96,126	97,806	99,571
Baseline Demand	68,128	75,229	82,872	86,942	89,274
Demand with Project	68,128	75,464	83,461	87,530	89,862
WRMP Build-out Demand	68,128	75,464	83,461	87,530	89,862
Reserve Supply with Project	11,161	10,179	12,665	10,276	9,708

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis or transfer water from IRWD's water bank. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP. Under a MWD allocation, the Baker WTP supplies (under "Future Potable") will be limited to available native water only.

2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as updated in the following table:

	Max Day (cfs)	Avg. Annual (AFY)	Annual by Category (AFY)
Current Supplies			
Potable - Imported			
East Orange County Feeder No. 2	41.4	16,652	1
Allen-McColloch Pipeline*	64.7	26,024	1
Orange County Feeder	18.0	7,240	1
			49,916
Potable - Groundwater			
Dyer Road Wellfield	80.0	28,000	2
OPA Well	1.4	914	
Deep Aquifer Treatment System-DATS	12.5	8,618	2
Wells 21 & 22	10.9	6,329	2
Irvine Desalter	9.5	5,309	3
			49,170
Total Potable Current Supplies	238.4		99,086
Nonpotable - Reclaimed Water			
MWRP (18 mgd)	23.9	17,340	4
LAWRP (5.5 mgd)	8.3	5,975	4
			23,315
Nonpotable - Imported			
Baker Aqueduct	52.7	12,221	5
Irvine Lake Pipeline	65.0	9,000	6
			21,221
Nonpotable - Groundwater			
Irvine Desalter-Nonpotable	5.4	3,514	7
			3,514
Nonpotable Native			
Irvine Lake	4.2	3,048	8
			3,048
Total Nonpotable Current Supplies	159.5		51,098
Total Combined Current Supplies	397.9		150,185
Supplies Under Development			
Potable Supplies			
Well 106	2.0	1,118	
Well 53	5.6	3,658	
Future OPA Wells	8.0	5,225	
Baker Water Treatment Plant	10.5	6,858	
Wells 51 & 52	3.6	2,351	
Total Potable Under Development Supplies	29.7	19,211	19,211
Nonpotable Supplies: MWRP&LAWRP Reclaimed	20.0	14,450	9
Total Under Development	49.7		33,661
Total Supplies			
Potable Supplies	268.1		118,297
Nonpotable Supplies	179.4		65,548
Total Supplies (Current and Under Development)	447.5		183,846

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 4, page 22).

2 Contract amount - See Potable Supply-Groundwater(ii).

3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)

5 By 2020, Baker capacity will be allocated to Baker Water Treatment Plant (WTP) participants and IRWD will own 46.50 cfs in Baker Aqueduct after Baker WTP, of which 10.5 cfs will be for potable treatment. IRWD will have 35 cfs remaining capacity for non-potable uses. The nonpotable average use is based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 8, page 25).

6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional Imported water from MWD through the Santiago Lateral.

7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

8 Based on 70+ years historical average of Santiago Creek Inflow into Irvine Lake. By 2020, native water will be treated through Baker WTP.

9 Future estimated MWRP & LAWRP reclaimed water production.

*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 23 (b)(1)(iii))

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.^{4 5}

• POTABLE SUPPLY - IMPORTED⁶

Potable imported water service connections (currently available).

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California ("MWD"): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD's entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County ("MWDOC"), a member agency of MWD.

Allen-McColloch Pipeline ("AMP") (currently available).

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) ("AMP Sale Agreement"). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the "Diemer Intertie") from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District ("LAWD"),⁷ identified as "Participants" therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD's and the other Participants' requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD

⁴ In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second ("cfs"). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

⁵ In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, except where otherwise noted, IRWD has no current plans to do so.

⁶ See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

⁷ IRWD has succeeded to LAWD's interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

agrees to operate the AMP as any other MWD pipeline. MWD has the right to operate the AMP on a "utility basis," meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD's capacity along the AMP, at MWD's expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

(iii) Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 ("AMP Allocation Agreement"). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD's capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD's first four AMP connections, 49.69 cfs at IRWD's next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD's remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant's peak flow exceeds its capacity, the Participant shall "purchase" additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD's obligation under the AMP Sale Agreement to meet all Participants' demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities, but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

(iv) Improvement Subleases (or "FAP" Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

East Orange County Feeder No. 2 ("EOCF#2") (currently available).

(v) Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962 and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 ("IRWD MWDOC Assignment Agreement"); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 ("IRWD Coastal Assignment Agreement"). East Orange County Feeder No. 2 ("EOCF#2"), a feeder linking Orange County

with MWD's feeder system, was constructed pursuant to a joint powers agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC, and is further subject to application and agreement of IRWD respecting turnouts.

Orange County Feeder (currently available)

(vi) Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

(vii) Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

Baker Water Treatment Plant (under development)

IRWD has begun construction of the Baker Water Treatment Plant project (the Baker WTP) in partnership with El Toro Water District, Moulton-Niguel Water District, Santa Margarita Water District and Trabuco Canyon Water District. The Baker WTP will be supplied with untreated imported water from MWD and native Irvine Lake water supply. IRWD will own 10.5 cfs of treatment capacity rights in

the Baker WTP.⁸

• **POTABLE SUPPLY - GROUNDWATER**

(i) Orange County Water District Act, Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand until 2020. This is described in detail in the OCWD Master Plan Report, dated April, 1999. OCWD's analysis has been expanded and updated through 2025 in its Final Draft Long-Term Facilities Plan (January, 2006).

(ii) *Irvine Ranch Water District v. Orange County Water District*, OCSC No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (Resolution No. 86-2-15, adopted on February 19, 1986 and reaffirmed on June 2, 1999), and anticipates doing so. However, this September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

Dyer Road Wellfield (DWRWF) / Deep Aquifer Treatment System (DATS)
(currently available)

(iii) Agreement For Water Production and Transmission Facilities, dated March 18, 1981, as amended May 2, 1984, September 19, 1990 and November 3, 1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield ("DRWF"), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water

⁸ The Baker WTP shall be supplied nonpotable imported water through the existing Baker Pipeline. IRWD's existing Baker Pipeline capacity (see Section 2(b)(1) NONPOTABLE SUPPLY – IMPORTED) shall be apportioned to the Baker WTP participants based on Baker WTP capacity ownership, and IRWD shall retain 10.5 cfs of pipeline capacity through the Baker WTP for potable supply and shall retain 36 cfs in Reach 1U of the Baker Pipeline capacity for nonpotable supply.

portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS".) Under the DRWF Agreement, an "equivalent" basin production percentage (BPP) has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System (CATS), IRWD has increased the yield of DATS.

Irvine Subbasin / Irvine Desalter (currently available)

(iv) First Amended and Restated Agreement, dated March 11, 2002, as amended June 15, 2006, restating May 5, 1988 agreement ("Irvine Subbasin Agreement"). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated, and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC's commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

(v) Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the Basin, IRWD's entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

Orange Park Acres (currently available)

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including well [OPA Well]. The well is operated within the Orange County Groundwater Basin.

Wells 21 and 22 (currently available)

IRWD completed construction of treatment facilities, pipelines and wellhead facilities for Wells 21 and 22. Water supplied through this project became available in 2013. The wells are operated within the Orange County Groundwater Basin.

Irvine Wells (under development)

(vi) IRWD is pursuing the installation of production facilities in the west Irvine, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, a site for an additional well and treatment facility has been acquired by IRWD. The production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. Appropriate environmental review would be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECLAIMED

Water Reclamation Plants (currently available)

Water Code Section 1210. IRWD supplies its own reclaimed water from wastewater collected by IRWD and delivered to IRWD's Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Reclamation Plant (LAWRP). MWRP currently has a permitted capacity of 18 million gallons per day (MGD) and LAWRP currently has a permitted capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a wastewater treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge of reclaimed water; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands.

Water Reclamation Plant Expansion (current available)

IRWD is completing construction of the Michelson Water Reclamation Plant Phase 2 Capacity Expansion Project later in 2015. With this expansion, IRWD will increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2035. Additional

reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED⁹

Baker Pipeline (currently available)

Santiago Aqueduct Commission Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"). Service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD has 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

Irvine Lake (currently available)

(I) Permit For Diversion and Use of Water (Permit No. 19306) issued pursuant to Application No. 27503; License For Diversion and Use of Water (License 2347) resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water (License 2348) resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company (TIC) and Carpenter Irrigation District (CID)) and Serrano Water District (SWD), secure appropriative rights to the flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to

⁹ See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.¹⁰ The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (4,000 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

•NONPOTABLE SUPPLY - GROUNDWATER

Irvine Subbasin / Irvine Desalter (currently available)

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

¹⁰ The 1956 Agreement provides for facilities to deliver MWD imported water into the Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

•IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply; MWD has provided information concerning the availability of the supplies to its entire service area. In its most recently adopted RUWMP, MWD has extended its planning timeframe out through 2035 to ensure that MWD's 2010 RUWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the RUWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The RUWMP summarizes MWD's planning initiatives over the past ten years, which includes the Integrated Resources Plan (IRP), the IRP Update, the Water Surplus and Drought Management Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's IRP Update (October 2010) showed that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2015 through 2035. The RUWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2035. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

It is anticipated that MWD will revise its regional supply availability analysis periodically to supplement its RUWMP in years when the RUWMP is not being updated.

IRWD is permitted by the statute to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD RUWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - Recent Actions on Delta Pumping, MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, MWRP expansion and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater wells (PR Nos. 11405, 11473), the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), and Baker WTP (PR No. 11218), IRWD adopted its fiscal year 2014-15 capital budget on June 9, 2014 (Resolution No. 2014-29), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately \$615.2 million (water) and \$784.8 million (wastewater) of unissued, voter-approved bond authorization. Certificates of participation do not require voter approval. Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3).

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Other users and contractholders (identified supply not previously used).

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

4. Information concerning groundwater included in the supply identified for the Project:

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2010 UWMP, sections 4-D through 4-J.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin ("Basin") is described at pages 3-1 through 3-14 of the OCWD Master Plan Report, dated April, 1999 ("MPR") and in the more recent Groundwater Management Plan ("GMP") at pages 2-1 through 6-33¹¹. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District (OCWD) for the benefit of municipal, agricultural and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 332,000 AFY.

The Department of Water Resources has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118 (2003). The efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin are described in the OCWD MPR, including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan ("LTFP") which provides updated information and was received by the OCWD Board in July 2009. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin.

Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of "long-term overdraft," overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD's Act defines annual groundwater overdraft to be the quantity by which production exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written, and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

¹¹ OCWD has also prepared a Long Term Facilities Plan which provides updated information which was received and filed by its Board in July 2009.

OCWD has invested over \$250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an “overdraft” condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term “mining” overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (OCWD MPR and LTFF)

OCWD’s efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD’s management of overdraft to maximize its use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD MPR, section 3.2 and LTFF, section 6)

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source:

(In AFY)

Year (ending 6/30)	DRWF/DATS/ OPA/21-22	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD ¹²
2014	42,424	10,995	0	376
2013	38,617	8,629	0	282
2012	37,059	7,059	0	0
2011	34,275	7,055	0	0
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16

¹² The water produced from IRWD’s Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

2007	37,864	5,407	0	6
2006	37,046	2,825	0	268
2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC's historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD's and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD's main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

Year (ending 6/30)	DRWF ¹³	Future GW ¹⁴	IDP (Potable)	IDP (Nonpotable)
2015	43,300	0	5,640	3,898
2020	43,300	3,469	5,640	3,898
2025	43,300	12,352	5,640	3,898
2035	43,300	12,352	5,640	3,898

(e) If not included in the UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet to meet the projected water demand of the Project:

¹³ See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 1,000 AFY for the OPA well and 6,300 for Wells 21&22.

¹⁴ Under development.

See responses to 4(b) and 4(d).

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD's preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage ("BPP") that OCWD sets based on these factors.¹⁵ Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. OCWD has completed its replenishment supply project, the Groundwater Replenishment System project ("GWRS"). The OCWD MPR indicates that the GWRS will produce over 100,000 AFY of new replenishment supply from recycled water.

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

Sustainable Groundwater Management Act. Pursuant to the Sustainable Groundwater Management Act (SGMA), the DWR has designated the Orange County groundwater basin as a medium priority basin for purposes of groundwater management. By January 31, 2017, local groundwater producers must establish or designate an entity (referred to as a groundwater sustainability agency, or "GSA"), subject to DWR's approval, to manage each high and medium priority groundwater basin. The SGMA specifically calls for OCWD, which regulates the Orange County groundwater basin, to serve as the GSA for such basin.

¹⁵ OCWD has adopted a basin production percentage of 72% for 2014-15. In prior years OCWD has maintained a basin production percentage that is higher than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described, or are exempt from the basin production percentage.

5. This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Check all of the following that apply:

- Changes in the Project have substantially increased water demand.
- Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.
- Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

6. References

Water Resources Master Plan, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

2010 Urban Water Management Plan, Irvine Ranch Water District, June, 2011

Integrated Water Resources Plan Update, Metropolitan Water District of Southern California, July, 2004

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

Board Information Report, Metropolitan Water District of Southern California, October 9, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October, 2007

Master Plan Report, Orange County Water District, April, 1999

Groundwater Management Plan, Orange County Water District, March, 2004

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

2009-2010 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

2012-2013 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

Progress on Incorporating Climate Change into Management of California's Water Resources, California Department of Water Resources, July 2006

Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program, Irvine Ranch Water District, February 2009

Water Shortage Contingency Plan, Irvine Ranch Water District, February 2009

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

Regional Urban Water Management Plan, Metropolitan Water District of Southern California, November 2010

Exhibit A
Depiction of Project Area

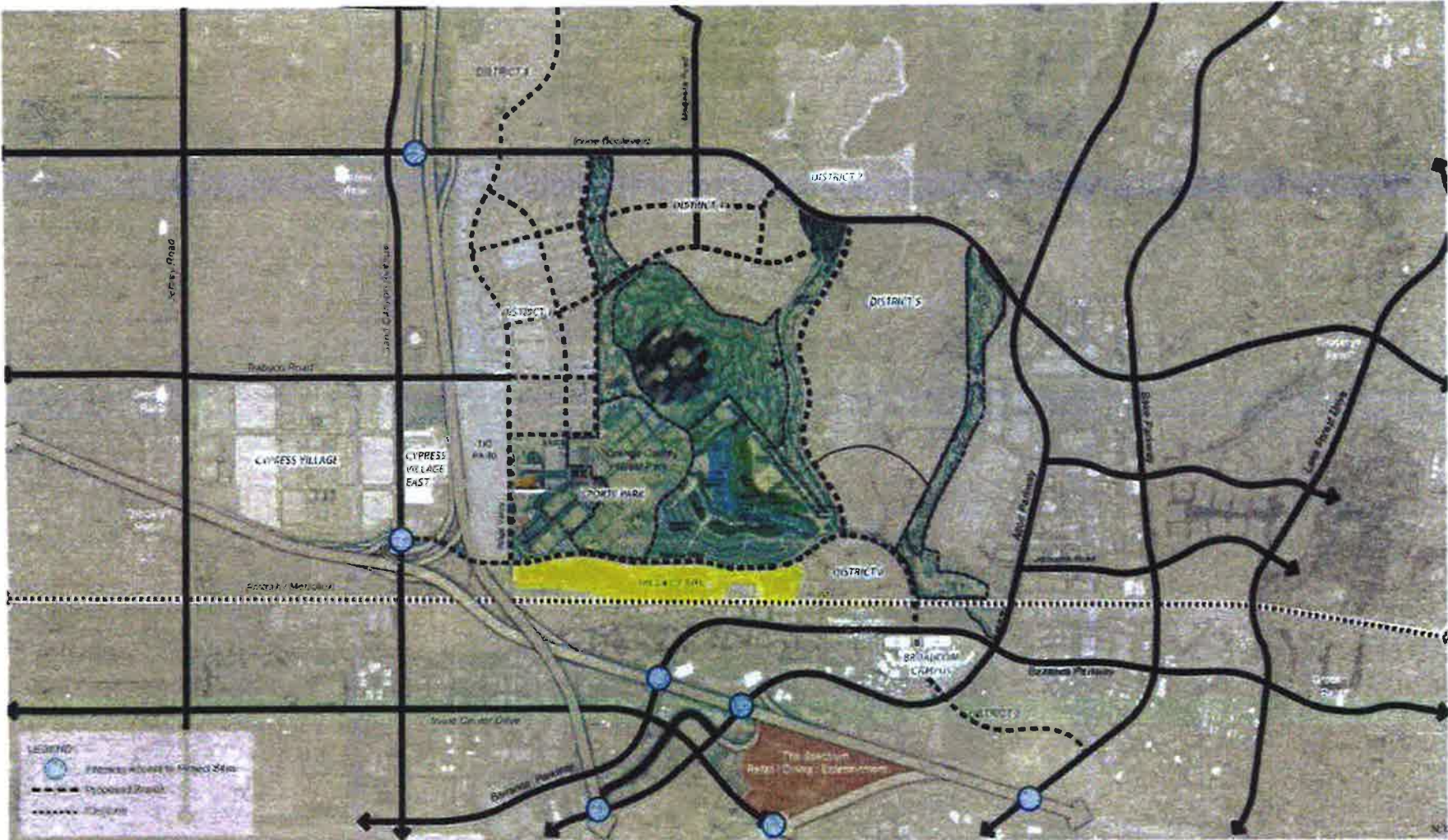


Exhibit B

Uses Included in Project



County of Orange
California

James Campbell
Land Development Manager

January 22, 2015

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 et seq.)

The County of Orange hereby requests an assessment of water supply availability for the below-described project. The County has determined that the project is a "project" as defined in Water Code §10912, and has determined that an environmental impact report is required for the project.

Proposed Project Information

Project Title: El Toro Development Plan

Location of project: On the former USMC El Toro Marine Base located southeast of the intersection of Marine Way and future Ridge Valley Drive, northeast of the SCRRA railroad right of way and southwest of the future extension of Marine Way and in the City of Irvine General Plan Planning Area 51.

- (For projects requiring a new assessment under Water Code §10910 (h).) Previous Water Supply Assessment including this project was prepared on: _____ This application requests a new Water Supply Assessment, due to the following (check all that apply):
- Changes in the project have substantially increased water demand
 - Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project
 - Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment (Enclose maps and exhibits of the project)

Type of Development:

- Residential: No. of dwelling units: 2103
- Shopping center or business: No. of employees TBD Sq. ft. of floor space 220,000
- Commercial office: No. of employees TBD Sq. ft. of floor space 1,876,000
- Hotel or motel: No. of rooms 242
- Industrial, manufacturing, processing or industrial park: No. of employees _____ No. of acres _____ Sq. ft. of floor space _____
- Mixed use (check and complete all above that apply)
- Other: _____

Total acreage of project: 107.2 Acres

Acreage devoted to landscape:

Greenbelt 7.0 acres golf course None parks 4.0 Acres
Agriculture None other landscaped areas 26.0 Acres

Number of schools None Number of public facilities None

County Executive Office
333 W. Santa Ana Blvd.
Third Floor
Santa Ana, California
92701-4062

Tel: (714) 227-1011
Web: www.oagov.com

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts:

Low flow fixtures and a water efficient landscape irrigation system with drought tolerant landscape design

What is the current land use of the area subject to a land use change under the project?

Institutional

Is the project included in the existing General Plan? No If no, describe the existing General Plan Designation Institutional

The County acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The County will request a new Water Supply Assessment if it determines that one is required.

The County acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

COUNTY OF ORANGE

By:

REQUEST RECEIVED:

Date: Jan. 24, 2015

By: Kellie Wilson
Irvine Ranch Water District

REQUEST COMPLETE:

Date: Jan. 28, 2015

By: Kellie Wilson
Irvine Ranch Water District

May 23, 2016

Prepared by: S. Malloy

Submitted by: K. Burton *KLB*

Approved by: Paul Cook *P. Cook*

ACTION CALENDAR

MICHELSON WATER RECYCLING PLANT
BIOSOLIDS AND ENERGY RECOVERY FACILITIES
CONTRACT CHANGE ORDERS AND
AMENDMENT NO. 1 TO AGREEMENT WITH ORANGE COUNTY SANITATION
DISTRICT FOR INTERIM SOLIDS HANDLING

SUMMARY:

Filanc/Balfour-Beatty (FBB) is constructing the Michelson Water Recycling Plant (MWRP) Biosolids and Energy Recovery Facilities (Biosolids Project). Contract Change Order (CCO) No. 41 includes installation of secondary circuit breakers; modifications to the fire sprinkler systems, fiber optic systems, heating water boiler control, and SCADA control; and several structural, electrical, and instrumentation upgrades. CCO No. 42 includes credits for changes in lightning protection installation for the egg-shaped digesters; value engineering of chemical pump systems; backcharge of engineering services for seismic restraints of centrifuges; overtime construction inspection; and deletion of electrical and instrumentation items. Staff negotiated a two-year time extension of the Orange County Sanitation District (OCSD) lease for Transfer of Wastewater Solids Residuals due to the Biosolids construction extending beyond December 2016.

Staff recommends that the Board:

- Approve CCO No. 41 in the amount of \$1,103,650.56 with FBB for the Biosolids Project;
- Approve CCO No. 42 in the credit amount of <\$199,771.09> with FBB for the Biosolids Project; and
- Authorize the General Manager to execute Amendment No. 1 to the Agreement for Transfer of Wastewater Solids Residuals with OCSD.

BACKGROUND:

Construction of the Biosolids Project was awarded to FBB in March 2013 in the amount of \$163,513,307. The Biosolids Project will provide biosolids digestion, dewatering, energy production, and on-site sludge drying. The project includes excavation for subsurface structures; installation of 3,009 foundation piles; three egg-shaped digesters; a state-of-the-art odor control system; a biogas conditioning system and power generation using micro-turbines; a fats, oil and grease (FOG) receiving station; and new utility services. These facilities are being constructed on the land north of IRWD's existing Operations Center, maintenance shops, water quality laboratory, and warehouse.

CCO No. 41:

Staff negotiated with FBB and agreed to the labor and material costs contained in CCO No. 41. The change order contains the following items:

Secondary Circuit Breakers for Transformers T-15, T-16, and T-17: The Contract Documents require that FBB complete an arc flash hazard calculation based on all of the final electrical equipment provided during construction. The arc flash hazard calculation provided by FBB indicated a dangerous level of electrical energy could be released during a faulted condition when the switchgear main breaker doors are open. Based on the arc flash calculation, secondary circuit breakers were recommended. Staff determined that the addition of 480-volt secondary circuit breakers at Transformer T-15, T-16, and T-17 would enhance safety for staff when accessing the downstream 480-volt switchgear. This change request is for the labor and equipment to install the three secondary breakers. The cost also includes increasing the size of the concrete pads on which the secondary breakers are set. The cost of this item is \$254,941.66.

Fire Sprinkler System Modifications: The Orange County Fire Authority reviewed the Contract Documents after bids were received and required that certain modifications be made to the fire sprinkler systems in the Digester Control Building, the Methane Digester Tunnels, and the Dewatering Feed Pump Station. These modifications included mechanical and electrical items. This change request is for the labor and materials to install the associated mechanical equipment, including the piping, valves, and electrical equipment for the fire sprinkler system modifications. The cost of this item is \$168,322.14.

Fiber Optic System Modifications: During construction, staff decided to upgrade the as bid fiber optic system to a dual-redundant fiber loop to enhance system speed and reliability. The modifications included upgrades of conduit and fiber optic sizes and an increase in the number of Ethernet switches. A part of the work was to provide fiber optic capabilities from the truck scale monitor to the computer in the server room in the Solids Handling Building. This change request also includes credits for deleted fiber optic hardware components and additional costs for the System Integrator to perform the programming. The cost of this item is \$178,879.46.

Heating Water Boiler Control Modifications: For better control and reliability, several modifications were made to the control system of the heating water boiler system. These modifications included upgrades to the Modicon M340 control system, change to the Hirschmann Ethernet switch, addition of oxygen trim (including in-situ zirconium oxide probe and electronics), upgrade to metering combustion controls, and upgrade to Allen Bradley PowerFlex 525 variable frequency drive in a NEMA 4 enclosure. The cost of this item is \$71,379.00.

Concrete Surface Treatment: Noticeable concrete surface imperfections were observed in several areas of Biosolids structures. These structures include the Solids Handling Building, FOG Receiving Station, Digester Control Building, Sludge Holding Tanks, Acid Phase Digesters, and Centrate Facility. After several meetings with the Contractor where concrete finishing specifications and workmanship issues were discussed, it was resolved that concrete

surface treatment will be performed only in areas that have high visibility and that the cost to treat the concrete surfaces will be equally split between FBB and IRWD. The cost of this item is \$68,714.34.

Additional Cameras at the Unloading/Loading Area of the Solids Handling Facility: To better monitor the activities at the unloading/loading area of the Solids Handling Facility, staff requested that additional cameras be installed. Six additional cameras will be installed in the unloading/loading area. This change request is for the labor and materials to purchase and install the equipment. The cost of this item is \$61,731.96.

Additional SCE and SCG Modification: Modifications were required to the Southern California Edison (SCE) ductbank alignment due to review comments from SCE and Southern California Gas (SCG) and different site conditions. After reviewing the final SCE equipment vaults/pads design requirements provided by SCE, the sizing and clearance for the SCE vaults/pads resulted in a much larger footprint. The length of a retaining wall was increased to accommodate the SCE and SCG equipment. The SCE conduits, SCG pipeline, and recycled water line were realigned at several locations. Also, an additional SCG gas meter was added and will be dedicated to the microturbines requiring a separate three-inch gas line running to the microturbines pad. The Contractor is to provide conduits and conductors for communication with the SCG meters. A three-inch perforated PVC drain pipe was added above the retaining wall footing for drainage. The cost of this item is \$51,238.69.

Additional Potholing Due to SCE and SCG Realignment: Additional potholing was necessary due to the realignment of the SCE ductbank and SCG pipeline. The potholing was performed to locate existing utilities to avoid delays during installation of the new lines. This change request is for the labor and equipment to perform the additional potholing. The cost of this item is \$36,706.57.

SCADA Control Modifications for the Acid Phase Digesters, Methane Digesters, and Sludge Holding Tank: The Systems Integrator was requested to make modifications to the mixer controls of the Acid Phase Digesters and the Methane Digesters. The work includes software design, programming, and testing by the System Integrator to support added controls to allow an operator to remotely operate the mixers in both forward and reverse. This additional logic will enhance preventive maintenance for the digesters by providing the flexibility to change the rotation of the mixers in order to prevent blockages and potentially prevent equipment damage. Additionally, an overflow alarm was added to the Sludge Holding Tanks so the operators will be notified of a sludge overflow. The cost of this item is \$50,540.23.

Miscellaneous SCADA, Instrumentation, and Electrical Modifications: Modifications to the SCADA programming, instrumentation, and electrical lines affecting various processes were necessary. These processes include chemical sump pumps near the Solids Handling Building; disconnect switches were required for several flow valves located in the Solids Handling Building; ambient air gas analyzers located in the Methane Digester sump pump area; sludge receiving control panels; the cake loadout conveyor; and engine generator. The cost of these items is \$130,593.37.

Centrifuge Pedestal Modifications: Structural changes in the Solids Handling Building required that the seven centrifuge pedestals be modified based upon information provided by the centrifuge manufacturer during the submittal review process. The cost of this item total \$30,603.14.

Staff recommends that the Board approve CCO No. 41 in the amount of \$1,103,650.56, which is attached as Exhibit "A". CCO No. 41 may extend some or all of the milestone completion dates. This analysis and negotiation is being performed separately.

CCO No. 42:

CCO No. 42 includes several items that result in credits to IRWD. CCO No. 42 includes the following:

Change in Lightning Protection Installation for the Egg-Shaped Digesters: The lightning protection for the egg-shaped methane digesters was included in CCO No. 25, which was approved by the Board on March 23, 2015. The engineer of record worked with the electrical subcontractor to re-design the lightning protection system, resulting in much less material and labor. This item is a credit for the cost differential between the two systems. This item is for the credit amount of <\$97,141.74>.

Value Engineering of Chemical Pump Systems: FBB presented IRWD with a value engineering proposal involving the chemical pumps specified in the bid documents. There are a total of 15 pumps that are included in this proposal. Three ferric chloride pumps, four sodium hypochlorite, four sodium hydroxide, and four sulfuric acid pumps were changed. The change in pumps resulted in eliminating a custom control panel and replacing the panel with a standard controller that performed a vast majority of the design criteria. The new system is simpler and has been implemented in other IRWD facilities. The change will standardize the chemical systems for IRWD. The cost savings were evenly split between the Contractor and IRWD. This item is for the credit amount of <\$48,549.90>.

Centrifuge Seismic Restraint Design Costs: The manufacturer of the centrifuge requested that the engineer of record perform the seismic restraint design for the centrifuges. The Contract Documents require that the centrifuge manufacturer perform the design. The engineer of record designed the restraints and billed IRWD. This change request is to reimburse IRWD for the design performed by the engineer of record. This item is for the credit amount of <\$24,064.00>.

Credit for Overtime Inspection Hours from 6/1/2015 through 12/31/2015: FBB requested to do work outside of the contract hours of 7:00 AM and 3:30 PM in an attempt to regain project schedule. This item is for the credit amount of <\$17,710.00>.

Deletion of Electrical and Instrumentation: During submittal review, staff decided that several electrical-related and instrumentation items could be deleted. These items include the deletion of seal water stations and seal water piping and deletion of the low pressure switches for centrate pumps. These items are in the credit amount of <\$12,305.45>.

Action Calendar: Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities Contract Change Orders and Amendment No. 1 to Agreement with Orange County Sanitation District for Interim Solids Handling
May 23, 2016
Page 5

Staff recommends that the Board approve CCO No. 42 in the credit amount of <\$199,771.09>, which is attached as Exhibit "B". CCO No. 42 does not change any of the milestone completion dates. The Construction Change Order Summary is attached as Exhibit "C".

Amendment No. 1 to Agreement with OCSD for Interim Solids Handling:

IRWD has an agreement for the Transfer of Wastewater Solids Residuals to OCSD whereby IRWD leases solids processing capacity from OCSD. The original agreement signed on April 28, 2010, extends until December 31, 2016. Due to the Biosolids construction potentially extending beyond the original term of the agreement, staff negotiated Amendment No. 1 with OCSD for a two-year extension. No other terms in the original agreement were changed. The draft agreement has been reviewed by IRWD legal counsel and is currently being reviewed by OCSD. Staff recommends that the Board authorize the General Manager to execute Amendment No. 1 with OCSD, subject to non-substantive changes. Amendment No. 1 is attached as Exhibit "D".

FISCAL IMPACTS:

The MWRP Biosolids and Energy Recovery Facilities Project No. 4286 is included in the FY 2015-16 Capital Budget. The existing budget is sufficient to fund CCO No. 41 and No. 42.

ENVIRONMENTAL COMPLIANCE:

The MWRP Biosolids and Energy Recovery Facilities is subject to the California Environmental Quality Act (CEQA) and in conformance with the California Code of Regulations Title 14, Chapter 3, Article 7, a Supplemental Environmental Impact Report (SEIR), SCH # 2011031091, was certified by IRWD at its October 22, 2012 meeting. The City of Irvine Planning Commission approved a conditional use permit for the IRWD Biosolids Project at its December 6, 2012 meeting.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 17, 2016.

RECOMMENDATION:

THAT THE BOARD APPROVE CONTRACT CHANGE ORDER NO. 41 IN THE AMOUNT OF \$1,103,650.56 WITH FILANC/BALFOUR-BEATTY FOR THE MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES, PROJECT NO. 4286; APPROVE CONTRACT CHANGE ORDER NO. 42 IN THE CREDIT AMOUNT OF <\$199,771.09> WITH FILANC/BALFOUR-BEATTY FOR THE MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES, PROJECT NO. 4286; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 1 TO THE AGREEMENT FOR TRANSFER OF WASTEWATER SOLIDS RESIDUALS WITH ORANGE COUNTY SANITATION DISTRICT, SUBJECT TO NON-SUBSTANTIVE CHANGES.

Action Calendar: Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities
Contract Change Orders and Amendment No. 1 to Agreement with Orange County Sanitation
District for Interim Solids Handling
May 23, 2016
Page 6

LIST OF EXHIBITS:

- Exhibit "A" – Contract Change Order No. 41 with FBB
- Exhibit "B" – Contract Change Order No. 42 with FBB
- Exhibit "C" – Construction Change Order Summary
- Exhibit "D" – Amendment No. 1 to the Agreement for Transfer of Wastewater Solids Residuals

EXHIBIT "A"

CONTRACT CHANGE ORDER

IRVINE RANCH WATER DISTRICT
 15600 Sand Canyon Avenue
 Irvine, California 92618
 (949) 453-5300
 MWRP Biosolids and Energy Recovery Facilities



C.O. No. 41
 Final

Project No. 4286

Date: May 5, 2016

Project Title

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Additional SCE and SCG Modifications (CR-146A) PR 4286 Task 3510	\$51,238.69	\$0.00	0
2. Additional Potholing Due to SCE and SCG Realignment (CR-146B) PR 4286 Task 3510.	\$36,706.57	\$0.00	0
3. Additional Cameras at the Unloading/Loading Area of the Solids Handling Facility (CR-164) PR 4286 Task 3505	\$61,731.96	\$0.00	0
4. Fire Sprinkler System Modifications – Mechanical (CR-174) PR 4286 Task 3520	\$154,592.08	\$0.00	0
5. Fire Sprinkler System Modifications – Electrical (CR-166) PR 4286 Task 3510	\$13,730.06	\$0.00	0
6. Fiber Optic System Modifications (CR-172/CR-306/CR-314) PR 4286 Task 3510	\$178,879.46	\$0.00	0
7. T-15, T-16, and T-17 Secondary Breakers (CR-185A, CR-185B, and CR-185C) PR 4286 Task 3510	\$254,941.66	\$0.00	0
8. Cable and Conduit Changes at the Sludge Receiving Area of the Solids Handling Building (CR-203) PR 4286 Task 3510	\$14,338.94	\$0.00	0
9. Concrete Surface Treatment (CR-222) PR 4286 Task 3505	\$68,714.34	\$0.00	0
10. Heating Water Boiler Control Modifications (CR-246) PR 4286 Task 3510	\$71,379.00	\$0.00	0
11. SCADA Control Modifications for the Acid Phase Digesters, Methane Digesters, and Sludge Holding Tank (CR-252) PR 4286 Task 3510	\$50,540.23	\$0.00	0
12. Ambient Gas Analyzer Wiring Modification (CR-264) PR 4286 Task 3510	\$19,734.51	\$0.00	0
13. Disconnect Switches for Flow Valves in the Solids Handling Building (CR-272) PR 4286 Task 3510	\$25,550.26	\$0.00	0
14. Centrifuge Pedestal Modifications (CR-301) PR 4286 Task 3505	\$30,603.14	\$0.00	0
15. SCADA, Instrumentation, and Electrical Modifications (CR-287, CR-294, and CR-322) PR 4286 Task 3510	\$70,969.66	\$0.00	0
Notes: 1. The project completion date of October 28, 2016 is unchanged by this Change Order.			
TOTAL	\$1,103,650.56	\$0.00	0

			DAYS ±
1. NET AMOUNT THIS CHANGE ORDER	=	\$1,103,650.56	0
2. ORIGINAL CONTRACT AMOUNT	=	\$163,465,940.00	1,278
3. TOTAL PREVIOUS CHANGE ORDERS	=	\$4,207,926.65	0
4. TOTAL BEFORE THIS CHANGE ORDER (2+3)	=	\$167,673,866.65	1,278
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$168,777,517.21	1,278

NOTE: The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

CHANGES: All workmanship and materials called for by this Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

We hereby agree to make the above change subject to the terms of this change order for the sum of: _____

-----One Million One Hundred Three Thousand Six Hundred Fifty and 56/100-----Dollars

Filanc/Balfour Beatty, JV

Date _____ Contractor _____		By: <u>Harry Cosmos, President</u>
SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
IRWD Engineer or Consulting Engineer <i>Steve Malloy</i>	<u>5/9/16</u> Date	Department Director Approval Required <input type="checkbox"/>
Principal Engineer - MWR Construction <i>Larry J. Dente</i>	<u>5-9-16</u> Date	Executive Department Director Approval Required <input type="checkbox"/>
Executive Director of Engineering and Water Quality	<u>5/10/16</u> Date	General Manager Approval Required <input type="checkbox"/>
General Manager	_____ Date	Board Approval Required <input checked="" type="checkbox"/>
		By _____ Date _____
		Purchase Order No. _____

NOTE: The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

CHANGES: All workmanship and materials called for by this Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

EXHIBIT "B"

CONTRACT CHANGE ORDER

IRVINE RANCH WATER DISTRICT
 15600 Sand Canyon Avenue
 Irvine, California 92618
 (949) 453-5300
 MWRP Biosolids and Energy Recovery Facilities



C.O. No. 42
 Final

Project No. 4286

Date: April 5, 2016

Project Title

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Value Engineering of Chemical Pump Systems (CR-054) PR 4286 Task 3520	\$0.00	\$48,549.90	0
2. Change in Lightning Protection Installation for Egg-Shaped Digesters (CR-121A) PR 4286 Task 3510	\$0.00	\$97,141.74	0
3. Deletion of Seal Water Stations and Seal Water Piping (CR-214) PR 4286 Task 3520	\$0.00	\$10,557.28	0
4. Deletion of Low Pressure Switches for Centrate Pumps (CR-257) PR 4286 Task 3510	\$0.00	\$1,748.17	0
5. Centrifuge Seismic Restraint Design Costs (CR-345) PR 4286 Task 1065	\$0.00	\$24,064.00	0
6. Credit for Overtime Inspection Hours From 6/1/2015 to Through 12/31/2015 (CR-089B) PR 4286 Task 1065	\$0.00	\$17,710.00	0
Notes: 1. The project completion date of October 28, 2016 is unchanged by this Change Order.			
TOTAL	\$0.00	\$199,771.09	0

			DAYS ±
1. NET AMOUNT THIS CHANGE ORDER	=	(\$199,771.09)	0
2. ORIGINAL CONTRACT AMOUNT	=	\$163,465,940.00	1,278
3. TOTAL PREVIOUS CHANGE ORDERS	=	\$5,311,577.21	0
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	\$168,777,517.21	1,278
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$168,577,746.12	1,278

We hereby agree to make the above change subject to the terms of this change order for the sum of: _____

-----A credit of One Hundred Ninety-Nine Thousand Seven Hundred Seventy-One and 09/100-----Dollars

	<u>Filanc/Balfour Beatty, JV</u>	
Date	Contractor	By: <u>Harry Cosmos, President</u>
SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
	<u>5/9/16</u>	Department Director Approval Required <input type="checkbox"/>
IRWD Engineer or Consulting Engineer	Date	Executive Department Director Approval Required <input type="checkbox"/>
	<u>5/10/16</u>	General Manager Approval Required <input type="checkbox"/>
Principal Engineer - MWRP Construction	Date	Board Approval Required <input checked="" type="checkbox"/>
	<u>5/10/16</u>	
Executive Director of Engineering and Water Quality	Date	By _____ Date _____
General Manager	Date	Purchase Order No. _____

NOTE: The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

CHANGES: All workmanship and materials called for by this Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

EXHIBIT "C"

MW

Construction Change Order Summary

Contractor: Filanc/Balfour-Beatty
Design Engine Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
1	Approved by Exe. Director of Engineering and Water Quality Approved on October 24, 2013	A	IRWD		\$20,202.42	\$0.00	\$20,202.42	0.01%	\$163,486,142.42	0	0	0	1,278	10/28/2016
1.1	Modifications to Road to Development Area - Delete AC to Triangle, add AB to Michelson (CR-004)	A	IRWD	\$	20,202.42					0				
2	Approved by Exe. Director of Engineering and Water Quality Approved on November 13, 2013	B	IRWD		\$12,475.08	\$20,202.42	\$32,677.50	0.02%	\$163,498,617.50	0	0	0	1,278	10/28/2016
2.1	Street Light Conduit Modifications (CR-007)	B	IRWD	\$	12,475.08					0				
3	Approved by Board of Directors Approved on March 10, 2014	B	FBB		\$745,503.00	\$32,677.50	\$778,180.50	0.48%	\$164,244,120.50	0	0	0	1,278	10/28/2016
3.1	Bid Quantity Adjustment of Bid Item 8.6 Pre-Drill	B	FBB	\$	745,503.00					0				
4	Approved by Exe Dir of Eng & Water Quality Approved on March 14, 2014	A	IRWD		\$23,029.22	\$778,180.50	\$801,209.72	0.49%	\$164,267,149.72	0	0	0	1,278	10/28/2016
4.1	Installation of Five Additional Groundwater Wells and Monitoring - (CR-006) PR 21146 (4286) Task 3505	A	IRWD		\$11,047.81					0				
4.2	Brace Bay Modifications at the FOG Station - (CR-015) PR 21146 (4286) Task 3505	C	FBB		\$2,977.81					0				
4.3	Grounding Extension at Nitrogen and Mineral Oil System (CR-025) PR 21146 (4286) Task 3510	C	IRWD		\$9,003.60					0				
5	Approved by Exe Dir of Eng & Water Quality Approved on March 14, 2014	B	IRWD		\$24,851.73	\$801,209.72	\$826,061.45	0.51%	\$164,292,001.45	0	0	0	1,278	10/28/2016
5.1	Unidentified Utility - Meter Shop Discharge (CR-008) PR 21146 (4286) Task 3505	B	IRWD		\$15,225.75					0				
5.2	Connection Beam Modifications at Solids Handling Facility (CR-014) PR 21146 (4286) Task 3235	C	FBB		\$8,270.86					0				
5.3	Increased Grating Thickness at Solids Handling Facility (CR-041) PR 21146 (4286) Task 3505	C	FBB		\$1,355.12					0				
6	Approved by General Manager Approved on March 20, 2014	B	FBB		\$31,815.00	\$826,061.45	\$857,876.45	0.52%	\$164,323,816.45	0	0	0	1,278	10/28/2016
6.1	Additional Costs to Install Piles to the Design Tip (CR-033) PR 21146 (4286) Task 3505	B	FBB		\$31,815.00					0				
7	Approved by Exe Dir of Eng & Water Quality Approved on April 21, 2014	B	IRWD		\$24,725.00	\$857,876.45	\$882,601.45	0.54%	\$164,348,541.45	0	0	0	1,278	10/28/2016
7.1	Meter Shop Discharge Pipe Leak Investigation and Repair (CR-013) PR 21146 (4286) Task 3505	B	IRWD		\$2,542.00					0				
7.2	Additional Reinforcement and Lifting Eyes for Removable Slabs at Solids Handling Building (CR-021) PR 21146 (4286) Task 3505	C	FBB		\$14,059.00					0				
7.3	Increased Grating Thickness at Solids Handling Facility (CR-041) PR 21146 (4286) Task 3505 Additional Conductance Probe Materials for Relay Level Switches for Various Sumps Located at the Microturbine Area PR 21146 (4286) Task 3510	C	FBB		\$8,124.00					0				

**MWRP Biosolids and Energy Recovery Facilities
PR 21146 (4286)
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty
Design Engine Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
8	Approved by General Manager Approved on April 21, 2014				(\$49,990.00)	\$882,601.45	\$832,611.45	0.51%	\$164,298,551.45	0	0	0	1,278	10/28/2016
8.1	Cost Sharing for Project Partnering	A	IRWD	(\$14,611.00)						0				
	Credit for Primavera 7.0 Project Portfolio Management Software (CR-002)	A	IRWD	(\$2,700.00)						0				
8.2	PR 21146 (4286) Task 3235													
8.3	Deletion of Concrete Pad near Development Area (CR-004A) PR 21146 (4286) Task 3235	A	IRWD	(\$3,865.00)						0				
8.4	Deletion of Ground Test Device (CR-034) PR 21146 (4286) Task 3210	A	IRWD	(\$15,579.00)						0				
8.5	Deletion of Existing T-4 Switchgear Level Indicating Switch (CR-035) PR 21146 (4286) Task 3210	A	IRWD	(\$9,167.00)						0				
8.6	Change to NEMA 4X Panels and Modification to NEMA 4X Bar Graph Display (CR-046) PR 21146 (4286) Task 3210	A	IRWD	(\$4,068.00)						0				
9	Approved by Exe. Director of Eng. & Water Quality Approved on May 31, 2014				\$24,840.17	\$832,611.45	\$857,451.62	0.52%	\$164,323,391.62	0	0	0	1,278	10/28/2016
9.1	Additional Circuits for Gas Monitors and Re-route of Conduits in Solids Handling Facility (CR-028) PR 21146 (4286) Task 3510	C	FBB	\$1,187.49						0				
9.2	Cantilevered Beam Support Modifications in the Solids Handling Facility (CR-049) PR 21146 (4286) Task 3505	C	FBB	\$4,605.30						0				
9.3	Additional Ethernet Switches (CR-062) PR 21146 (4286) Task 3510	C	IRWD	\$19,047.38						0				
10	Approved by Exe. Director of Eng. & Water Quality Approved on May 31, 2014				\$21,398.99	\$857,451.62	\$878,850.61	0.54%	\$164,344,790.61	0	0	0	1,278	10/28/2016
10.1	Additional Grace Ports for Various PLCs (CR-030) PR 21146 (4286) Task 3510	C	IRWD	\$8,580.62						0				
10.2	Provide H-20 Rated Hatches at WAS Pump Station and Valve Vault (CR-061) PR 21146 (4286) Task 3505	C	IRWD	\$12,818.37						0				
11	Approved by Exe. Director of Eng. & Water Quality Approved on June 4, 2014				\$24,739.76	\$878,850.61	\$903,590.37	0.55%	\$164,369,530.37	#REF!	0	#REF!	#REF!	10/28/2016
11.1	Waste Activated Sludge (WAS) Pump Station Structural Modifications (CR-023) PR 21146 (4286) Task 3505	C	IRWD	\$12,905.49						0				
11.2	Removable Slab Modifications on the Second Floor of Solids Handling Building (CR-064) PR 21146 (4286) Task 3505	C	IRWD	\$11,834.27						0				

**MWRP Biosolids and Energy Recovery Facilities
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Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
12	Approved by Board of Directors Approved on July 21, 2014				\$156,580.22	\$903,590.37	\$1,060,170.59	0.65%	\$164,526,110.59	0	0	0	1,278	10/28/2016
12.1	Final Bid Quantity Adjustment for Bid Item No. 5.2 – Undocumented Fill (suitable) – Remedial Grading – Remove and Re-compact a net increase of 8,104.7 CY from 51,700 CY to 59,804.7 CY at \$5/CY. PR 21146 (4286) Task 3505	B	N/A	\$40,523.37						0				
12.2	Final Bid Quantity Adjustment for Bid Item No. 5.5 - Undocumented Fill (not suitable) - Remedial Grading - Remove and Export Offsite, a net increase of 60 CY, from 1,800 CY to 1,860 CY at \$25 /CY. PR 21146 (4286) Task 3505	B	N/A	\$1,500.00						0				
12.3	Final Bid Quantity Adjustment for Bid Item No. 5.6 - Geotextile Fabric - Remedial Grading, a net decrease of 5,414 SF, from 181,500 SF to 176,086 SF at \$0.40/SF. PR 21146 (4286) Task 3505	B	N/A	(\$2,165.60)						0				
12.4	Final Bid Quantity Adjustment for Bid Item No. 5.6 - Geotextile Fabric - Remedial Grading, a net decrease of 5,414 SF, from 181,500 SF to 176,086 SF at \$0.40/SF. PR 21146 (4286) Task 3505	B	N/A	(\$6,523.33)						0				
12.5	Final Bid Quantity Adjustment for Bid Item No. 5.8 - Undocumented Fill - Deep Foundations – Removal, a net increase of 966 CY, from 21,650 CY to 22,616 CY at \$5.50/CY. PR 21146 (4286) Task 3505	B	N/A	\$5,313.00						0				
12.6	Final Bid Quantity Adjustment for Bid Item No. 5.9 - Alluvium - Remedial Grading - Removal and Export Offsite, a net increase of 2,076 CY, from 28,154 CY to 30,230 CY at \$35/CY. PR 21146 (4286) Task 3505	B	N/A	\$72,665.98						0				
12.7	Final Bid Quantity Adjustment for Bid Item No. 5.10 - Undocumented Fill Deep Foundations - Compaction of stockpiled materials, a net increase of 3,117 CY, from 11,400 CY to 14,517 CY at \$15/CY. PR 21146 (4286) Task 3505	B	N/A	\$46,755.00						0				
12.8	Final Bid Quantity Adjustment for Bid Item No. 5.11 - Undocumented Fill - Deep Foundations - Export excess offsite a net decrease of 2,151 CY, from 10,250 CY to 8,099 CY PR 21146 (4286) Task 3505	B	N/A	(\$30,114.00)						0				
12.9	Final Bid Quantity Adjustment for Bid Item No. 5.12 - Geotextile Fabric - Deep Foundations, a net increase of 9,218 SF, from 51,500 SF to 60,718 SF at \$0.60/SF. PR 21146 (4286) Task 3505	B	N/A	\$5,530.80						0				
12.10	Final Bid Quantity Adjustment for Bid Item No. 5.13 - Aggregate Base - Deep Foundations, a net increase of 513.2 CY, from 2,860 CY to 3,373.2CY at \$45/CY. PR 21146 (4286) Task 3505	B	N/A	\$23,095.00						0				
13	Approved by Exe. Director of Engineering & Water Quality Approved on July 10, 2014				\$10,129.18	\$1,060,170.59	\$1,070,299.77	0.65%	\$164,536,239.77	0	0	0	1,278	10/28/2016
13.1	Modifications to Switchgear 16 (CR-070) PR 21146 (4286) Task 3510	A	FBB	\$10,129.18						0				
14	Approved by General Manager Approved on June 24, 2014				\$44,543.19	\$1,070,299.77	\$1,114,842.96	0.68%	\$164,580,782.96	0	0	0	1,278	10/28/2016
14.1	Slide Gates Clarification Regarding Actuators (CR-039) PR 21146 (4286) Task 3520	A	IRWD	\$44,543.19						0				

**MWRP Biosolids and Energy Recovery Facilities
PR 21146 (4286)
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Design Engine Black & Veatch

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				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
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15	Approved by General Manager Approval on July 31, 2014				\$45,214.40	\$1,114,842.96	\$1,160,057.36	0.71%	\$164,625,997.36	0	0	0	1,278	10/28/2016
15.1	Provide Masonry Shelf Angle at Digester Control Building (CR-031) PR 21146 (4286) Task 3505	C	FBB	\$27,543.19						0				
15.2	Beam Size Increase for Monorail Runway in Solids Handling Building - (CR-074) PR 21146 (4286) Task 3505	C	FBB	\$1,200.47						0				
15.3	Upsize Odor Control Circulation Pump Motor Disconnects (CR-082) PR 21146 (4286) Task 3510	B	FBB	\$1,184.83						0				
15.4	Additional Deck Support for the Solids Handling Building Roof (CR-044) PR 21146 (4286) Task 3505	C	FBB	\$15,285.91						0				
16	Approved by E&O Committee Approved on August 19, 2014				\$62,037.10	\$1,160,057.36	\$1,222,094.46	0.75%	\$164,688,034.46	0	0	0	1,278	10/28/2016
16.1	Installation of Level 3 Diesel Particulate Filter (DPF) on the Standby Generator - (CR-073) PR 21146 (4286) Task 3520	B	IRWD	\$62,037.10						0				
17	Approved by Board of Directors Approved on August 25, 2014				(\$106,241.99)	\$1,222,094.46	\$1,115,852.47	0.68%	\$164,581,792.47	0	0	0	1,278	10/28/2016
17.1	Modifications to Switchgear 16 (CR-070A) PR 21146 (4286) Task 3510	A	FBB	(\$106,241.99)						0				
18	Approved by Board of Directors Approved on August 25, 2014				\$108,087.55	\$1,115,852.47	\$1,223,940.02	0.75%	\$164,689,880.02	0	0	0	1,278	10/28/2016
18.1	Stormwater Drainage System Modification (CR-017) PR 21146 (4286)	A	IRWD	\$108,087.55						0				
19	Approved by Executive Director of Engineering & Water Quality Approved on September 30, 2014				\$72,572.86	\$1,223,940.02	\$1,296,512.88	0.79%	\$164,762,452.88	0	0	0	1,278	10/28/2016
19.1	Modification to Switchgear 16 (CR-070B) PR 21146 (4286) Task 3510	A	IRWD	\$1,125.75						0				
19.2	Alluvium Removal Due to 36-inch Storm Drain Installation (CR-085) PR 21146 (4286) Task 3520	B	N/A	\$14,140.00						0				
19.3	Additional Structural Support for Fats, Oils, and Grease (FOG) Grinders (CR-081) PR 21146 (4286) Task 3505	C	FBB	\$8,323.99						0				
19.4	Portable Lift Truck for 480V ABB Breakers (CR-108) PR 21146 (4286) Task 3510	A	IRWD	\$2,625.12						0				
19.5	Retaining Wall North and West of Biosolids Site (CR-010) PR 21146 (4286) Task 3505	B	IRWD	\$46,358.00						0				
20	Approved by Executive Director of Engineering & Water Quality Approved on November 19, 2014				\$54,485.63	\$1,296,512.88	\$1,350,998.51	0.83%	\$164,816,938.51	0	0	0	1,278	10/28/2016
20.1	Nitrogen Slab Modifications (CR-052) PR 21146 (4286) Task 3505	A	IRWD	\$24,855.80						0				
20.2	Additional Conduits and Circuits for the Access Control Systems for the Solids Handling Building and the Digester Control Building (CR-082) PR 21146 (4286) Task 3510	A	IRWD	\$3,412.13						0				
20.3	Digital Power Meters Change for SWGR-14 and SWGR-15 (CR-109) PR 21146 (4286) Task 3510	A	IRWD	\$3,863.22						0				
20.4	Truck Unloading Panel Modifications (CR-115) PR 21146 (4286) Task 3510	A	IRWD	\$12,843.50						0				
20.5	Switchgear SWGR-14 Modifications (CR-116) PR 21146 (4286) Task 3510	A	IRWD	\$9,510.98						0				
21	Approved by General Manager Approved on January 30, 2015				\$ 98,506.19	\$1,350,998.51	\$1,449,504.70	0.89%	\$164,915,444.70	0	0	0	1,278	10/28/2016
21.1	Additional Anchorage for Methane Digesters (CR-051A) PR 21146 (4286) Task 3520	B	FBB	\$92,367.44						0				
21.2	Additional Input/Outputs Review of Master I/O List (CR-136) PR 21146 (4286) Task 3510	C	FBB	\$6,138.75						0				

**MWRP Biosolids and Energy Recovery Facilities
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Design Engine Black & Veatch

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Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
22	Approved by Board of Directors Approved on February 9, 2015				\$964,324.51	\$1,449,504.70	\$2,413,829.21	1.48%	\$165,879,769.21	0	0	0	1,278	10/28/2016
22.1	Electrical Conduit Overfill (CR-055) PR 21146 (4286) Task 3510	C	FBB	\$485,250.28						0				
22.2	Heat Dryer Equipment Escalation Costs (CR-057) PR 21146 (4286) Task 3520	B	FBB	\$333,477.50						0				
22.3	Glass-lining Sludge Density Meters (CR-067) PR 21146 (4286) Task 3510	A	IRWD	\$71,010.74						0				
22.4	Switchgear-16 Enclosure (CR-040) PR 21146 (4286) Task 3510	C	FBB	\$56,882.30						0				
22.5	Propane Gas Tank Foundation Demolition (CR-084) PR 21146 (4286) Task 3505	C	IRWD	\$2,004.98						0				
22.6	Credit for travel costs related to inspection of centrifuges in Germany (CR-091) PR 21146 (4286) Task 3520	A	IRWD	(\$5,573.42)						0				
22.7	Deletion of MMC Switchgear-14 Breaker (CR-092) PR 21146 (4286) Task 3510	A	IRWD	(\$5,032.00)						0				
22.8	Increase of Fiber Optic Conduit Size (CR-097) PR 21146 (4286) Task 3510	C	IRWD	\$23,269.61						0				
22.9	Overtime to perform work in the Solids Handling electrical room (CR-103) PR 21146 (4286) Task 3510	A	IRWD	\$1,384.47						0				
22.10	Credit for modification to the Uninterruptible Power System (CR-118) PR 21146 (4286) Task 3510	A	IRWD	(\$9,771.72)						0				
22.11	Addition of Low Voltage Compartment in SCE Switch "C" (CR-160) PR 21146 (4286) Task 3510	A	IRWD	\$2,156.20						0				
22.12	Addition of input/output points relating to sump pumps located at the Solids Handling Building (CR-161) PR 21146 (4286) Task 3510	A	FBB	\$9,265.57						0				
23	Approved by General Manager Approved on February 26, 2015				\$97,005.10	\$2,413,829.21	\$2,510,834.31	1.54%	\$165,976,774.31	0	0	0	1,278	10/28/2016
23.1	Additional Steel Reinforcement the Pellet Storage Silos Anchor Bolts (CR-094) PR 21146 (4286) Task 3505	B	FBB	\$5,514.57						0				
23.2	Differential Pressure Transmitter (CR-094) PR 21146 (4286) Task 3510	A	IRWD	\$2,535.33						0				
23.3	Additional Aluminum Trench Grating in Digester Control Building (CR-107) PR 21146 (4286) Task 3520	A	IRWD	\$7,552.11						0				
23.4	Light Weight Concrete for Electrical Conduits Underneath the Solids Handling Building Electrical Room (CR-113) PR 21146 (4286) Task 3510	A	IRWD	\$30,535.94						0				
23.5	Adding Energyjets Weir Plates to Dewatering Centrifuges - (CR-124) PR 21146 (4286) Task 3520	A	IRWD	\$11,139.25						0				
23.6	Provide Angle Supports for the Removable Slabs at the Solids Handling Building - (CR-137) PR 21146 (4286) Task 3520	A	IRWD	\$20,671.61						0				
23.7	Structural Modification at Solids Handling Building - (CR-140) PR 21146 (4286) Task 3520	C	FBB	\$1,109.42						0				
23.8	Increase of Fiber Optic Conduit Size (CR-097) PR 21146 (4286) Task 3510	A	IRWD	\$5,516.45						0				
23.9	Steel Joist Framing Modifications at Digester Control Building (CR-151) PR 21146 (4286) Task 3505	C	FBB	\$2,286.29						0				
23.10	WAS Valve Vault and Piping Modifications (CR-100) PR 21146 (4286) Task 3520	A	IRWD	\$10,144.13						0				
24	Approved by General Manager Approved on March 6, 2015				\$99,122.95	\$2,510,834.31	\$2,609,957.26	1.60%	\$166,075,897.26	0	0	0	1,278	10/28/2016
24.1	Coating of WAS/Primary Sludge Pump Stations & Sludge Wetwells per RFI-0612A (CR-127) PR 21146 (4286) Task 3505	A	FBB	\$99,122.95						0				

**MWRP Biosolids and Energy Recovery Facilities
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25	Approved by Board of Directors Approved on March 23, 2015				\$280,575.97	\$2,609,957.26	\$2,890,533.23	1.77%	\$166,356,473.23	0	0	0	1,278	10/28/2016
25.1	Lightning Protection for the Methane Digesters (CR-121) PR 21146 (4286) Task 3505	C	FBB	\$158,259.68						0				
25.2	Deflagration Quench Tubes outside of the Dryer Room (CR-143) PR 21146 (4286) Task 3505	B	FBB	\$122,316.29						0				
26	Approved by Exe. Dir. Of Engineering & Water Quality Approved on April 14, 2015				\$74,815.79	\$2,890,533.23	\$2,965,349.02	1.81%	\$166,431,289.02	0	0	0	1,278	10/28/2016
26.1	UPS and Power Fail Alarms per RFI 357 (CR-056) PR 21146 (4286) Task	C	FBB	\$3,646.82						0				
26.2	I/O Points for Methane Digester Sump Pumps per RFI-356 (CR-077) PR 21146 (4286) Task 3510	C	FBB	\$6,489.00						0				
26.3	Loss of Power Alarms to the SCADA Network per RFI-0393B (CR-093) PR	A	FBB	\$20,297.16						0				
26.4	FOG Flushing and Rock Trap Modifications per RFI-0534 (CR-101) PR	A	IRWD	\$18,093.61						0				
26.5	Install Grounding Pig Tails in Solids Handling Building Area Electrical Room per RFI 0594 (CR-105) PR 21146 (4286) Task 3510	A	IRWD	\$1,593.10						0				
26.6	Additional Pushbuttons, Light and Relays for the FOG Receiving Control Panel (CR-114) PR 21146 (4286) Task 3510	A	IRWD	\$6,892.40						0				
26.7	Changes to the HMI Enclosures at the Sludge Receiving Area (CR-133) PR 21146 (4286) Task 3510	A	IRWD	\$7,114.17						0				
26.8	Provide Storage Shelf for Keyboard and Mouse to the HMI Enclosures at the Sludge Receiving Area (CR-135) PR 21146 (4286) Task 3510	A	IRWD	\$1,163.26						0				
26.9	Dewatering Feed Pump Station Guardrail Additions (CR-142) PR 21146 (4286) Task 3520	C	FBB	\$4,204.00						0				
26.10	Additional I/O Points for PLC-4300 (CR-156) PR 21146 (4286) Task 3510	C	FBB	\$3,035.28						0				
26.11	Shoring Revision to Roof Slab of Dewatering Feed Pump Station (CR-189) PR 21146 (4286) Task 3510	B	FBB	\$1,286.99						0				
26.12	Coating of the Sludge Receiving Bins (CR-199) PR 21146 (4286) Task 3520	A	FBB	\$1,000.00						0				

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27	Approved by Board of Directors Approved on April 27, 2015				\$107,253.26	\$2,965,349.02	\$3,072,602.28	1.88%	\$166,538,542.28	0	0	0	1,278	10/28/2016
27.1	Modifications to Human-Machine Interface (HMI) for the Microturbine Area (CR-078) PR 21146 (4286) Task 3510	A	IRWD	\$29,744.43						0				
27.2	Modifications to the Piping and Automation Features at Fats, Oils, and Grease (FOG) Facility (CR-129) PR 21146 (4286) Task 3510	A	IRWD	\$35,771.81						0				
27.3	Structural Support to the Monorail at the Dewatering Feed Pump Station (CR-152) PR 21146 (4286) Task 3505	C	FBB	\$13,697.51						0				
27.4	Two Additional Magnetic Flowmeters at Polymer Feed System (CR-158) PR 21146 (4286) Task 3510	A	IRWD	\$9,522.81						0				
27.5	Modifications to PLCs at Sludge Receiving Area (CR-180) PR 21146 (4286) Task 3510	A	IRWD	\$18,516.70						0				
28	Approved by Exe. Dir. Of Eng. & Water Quality Approved on May 15, 2015				\$74,550.35	\$3,072,602.28	\$3,147,152.63	1.93%	\$166,613,092.63	0	0	0	1,278	10/28/2016
28.1	Decanter Control Panel Modifications (CR-215) Task 3520	C	FBB	\$22,451.01						0				
28.2	Additional Structural Support in the Solids Handling Building (CR-075) Task 3505	C	FBB	\$12,028.44						0				
28.3	Additional Sump Pump Drain Line in the Bulk Polymer Storage Area (CR-119) Task 3520	C	FBB	\$1,433.86						0				
28.4	Install Three 5-inch conduits on Southwest Side of the Biosolids Site (CR-120) Task 3510	C	FBB	\$16,033.58						0				
28.5	Provide Power to Several Instruments Located at the Solids Handling Building and Digester Control Building (CR-154) Task 3520	C	FBB	\$3,454.91						0				
28.6	Install Foam Separator Drain at Digester Control Building (CR-167) Task 3520	C	FBB	\$11,013.75						0				
28.7	Install Support for 14-inch Plug Valve at Centrate Treatment Wetwell (CR-197) Task 3520	C	FBB	\$1,715.20						0				
28.8	Trench Modifications at the Sludge Cake Load-Out Area of the Solids Handling Building (CR-123) Task 3505	C	FBB	\$6,419.60						0				
29	Approved by Board of Directors Approved on June 22, 2015				\$225,971.77	\$3,147,152.63	\$3,373,124.40	2.06%	\$166,839,064.40	0	0	0	1,278	10/28/2016
29.1	Foul Air Pipe Supports in the Solids Handling Building Basement (CR-106) PR 21146 (4286) Task 3520	C	FBB	\$119,937.87						0				
29.2	Secondary Circuit Breaker for Transformer T-14 (CR-185) PR 21146 (4286) Task 3510	A	IRWD	\$106,033.90						0				

**MWRP Biosolids and Energy Recovery Facilities
PR 21146 (4286)
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty
Design Engine Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
30	Approved by Board of Directors Approved on July 27, 2015				(\$47,976.59)	\$3,373,124.40	\$3,325,147.81	2.03%	\$166,791,087.81	0	0	0	1,278	10/28/2016
30.1	Credit for Changing Storm Drain line from Ductile Iron to PVC (CR-042) PR 21146 (4286) Task 3520	A	IRWD		(\$1,890.92)					0				
30.2	Installation of Additional Digester Anchorage (CR-051B) PR21146 (4286) Task 3505	B	FBB		\$118,335.54					0				
30.3	Huber Screens I/O Modifications per RFI-0391 and RFI-0525A (CR-068) PR 21146 (4286) Task 3510	A	IRWD		\$12,579.20					0				
30.4	Credit for FBB's Portion of Partnering (CR-090) PR 21146 (4286) Task	E	FBB		(\$81,948.33)					0				
30.5	Deletion of Waterstops at Methane Digester Complex (CR-102) PR 21146 (4286) Task 3505	A	IRWD		(\$2,505.79)					0				
30.6	Deletion of Bid Item No. 18.4 - Computers and Networking Hardware for the Control System (CR-138) PR 21146 (4286) Task 3510	A	IRWD		(\$200,000.00)					0				
30.7	Electrical and Gas Modifications (CR-146) PR 21146 (4286) Task 3510	C	IRWD		\$363,978.41					0				
30.8	Credit for Changing Heat Dryer Wet Material Mixer from A24 Steel to A36 Steel (CR-157) PR 21146 (4286) Task 3520	E	FBB		(\$2,392.66)					0				
30.9	Credit for Travel Cost of On-Site Inspection for Acid Phase Digester (CR-175) PR 21146 (4286) Task 3520	B	IRWD		(\$683.39)					0				
30.1	Heat Dryer I/O Modifications per RFI-0626 (CR-179) PR 21146 (4286) Task 3510	A	IRWD		\$11,191.41					0				
30.11	Decant Trough I/O Modifications per RFI-0979 (CR-202) PR 21146 (4286) Task 3510	A	IRWD		\$9,960.55					0				
30.12	Deletion of Interior Coating of Methane Digesters (CR-188) PR 21146 (4286) Task 3520	A	IRWD		(\$398,571.00)					0				
30.13	Piping Modifications and Addition of Carbon Canisters (CR-218) PR 21146 (4286) Task 3520	A	IRWD		\$88,076.01					0				
30.14	Pickling and Passivation of Sludge Mixers (CR-248) PR 21146 (4286) Task 3520	C	IRWD		\$73,997.23					0				
30.15	IRWD Costs Associated to Repairing the Pile and Installing Couplers (CR-139) PR 21146 (4286) Task 3505	E	FBB		(\$38,102.85)					0				

**MWRP Biosolids and Energy Recovery Facilities
PR 21146 (4286)
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31	Approved by Exe. Dir. Of Eng. & Water Quality Approved on July 28, 2015				\$74,999.74	\$3,325,147.81	\$3,400,147.55	2.08%	\$166,866,087.55	0	0	0	1,278	10/28/2016
31.1	Provide Circuit and Breaker for Standby Generator in the Microturbine Area (CR-170) PR 21146 (4286) Task 3510	C	FBB	\$4,296.86						0				
31.2	Additional Pipe Support for 14-inch Air Line at the Centrate Facility (CR-226) PR 21146 (4286) Task 3520	C	FBB	\$893.78						0				
31.3	Addition of E-stops (CR-128) PR 21146 (4286) Task 3510	A	FBB	\$57,916.71						0				
31.4	Structural Support of Jib Crane at Dewatering Feed Pump Station Stairwell (CR-243) PR 21146 (4286) Task 3520	C	FBB	\$11,892.39						0				
32	Approved by Exe. Dir. Of Eng. & Water Quality Approved on August 31, 2015				\$74,682.96	\$3,400,147.55	\$3,474,830.51	2.13%	\$166,940,770.51	0	0	0	1,278	10/28/2016
32.1	Additional Conduits and Circuits for Fire Alarm in the Solids Handling	A	IRWD	\$21,637.57						0				
32.2	Additional Davit Bases at Centrate Treatment Facility (CR-111) PR 21146 (4286) Task 3520	A	IRWD	\$1,809.77						0				
32.3	Additional Fire Alarm Panel in Digester Control Building (CR-169) PR 21146 (4286) Task 3510	A	IRWD	\$25,153.79						0				
32.4	Modifications to FOG Sump Pumps Controls (CR-177) PR 21146 (4286) Task 3510	A	IRWD	\$5,690.83						0				
32.5	Additional Truck Load-out Conveyor Input and Output (CR-201) PR 21146 (4286) Task 3510	A	IRWD	\$2,220.12						0				
32.6	Additional Spare Conduits in the Microturbine Area (CR-229) PR 21146 (4286) Task 3510	A	FBB	\$14,602.41						0				
32.7	Conduits for Electrical Disconnect Switch for Roll-Up Doors of the Digester Control Building (CR-230) PR 21146 (4286) Task 3510	A	IRWD	\$3,568.47						0				
33	Approved by Executive Director of Engineering & Water Quality Approved on September 30, 2015				\$58,247.75	\$3,474,830.51	\$3,533,078.26	2.16%	\$166,999,018.26	0	0	0	-	1/0/1900
33.1	Realignment of 8-inch Reclaimed Water Line at Gate 2 (CR-225) PR 21146 (4286) Task 3520	B	FBB	\$24,017.48						0				
33.2	Additional Conduits and Wires for Lighting Circuits to Minimize Voltage Drop (CR-228) PR 21146 (4286) Task 3510	C	IRWD	\$32,399.41						0				
33.3	Cable and Conduit Changes at Solids Handling Building and Dewatering Feed Pump Station (CR-231) PR 21146 (4286) Task 3510	C	IRWD	\$1,830.86						0				

**MWRP Biosolids and Energy Recovery Facilities
PR 21146 (4286)
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				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
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34	Approved by Board of Directors Approved on October 26, 2015				\$164,775.28	\$3,533,078.26	\$3,697,853.54	2.26%	\$167,163,793.54	0	0	0	1,278	10/28/2016
34.1	Credit for Third Submittal Review Through 05/31/2015 (CR-088) PR 21146 (4286) Task 1065	B	IRWD		(\$39,502.50)					0				
34.2	Credit for Overtime Inspection Hours Through 05/31/2015 (CR-089) PR 21146 (4286) Task 3520	E	FBB		(\$80,850.00)					0				
34.3	Credit for Special Inspections for Structural Anchors and Geotechnical Investigation (CR-295) PR 21146 (4286) Task 1065	A	IRWD		(\$27,500.00)					0				
34.4	Change in Knife Gate Valve Manufacturer (CR-187) PR 21146 (4286) Task 3520	E	FBB		\$275,954.90					0				
34.5	Credit for Changes in Low Voltage SWGR-14 Circuit Breaker (CR-163) PR 21146 (4286) Task 3510	A	IRWD		(\$1,978.00)					0				
34.6	Change to Addressable Smoke Detectors (CR-220) PR 21146 (4286) Task 3510	B	IRWD		\$38,650.88					0				
35	Approved by General Manager Approved on November 25, 2015				\$97,980.54	\$3,697,853.54	\$3,795,834.08	2.32%	\$167,261,774.08	0	0	0	1,278	10/28/2016
35.1	Change in Naming Convention for Storm Water Pump Station (Area 1500) SCADA Programming (CR-181) PR 21146 (4286) Task 3510	E	FBB		\$9,027.00					0				
35.2	Valve Status Override Functionality (CR-182) PR 21146 (4286) Task 3510	E	FBB		\$38,999.08					0				
35.3	Control Changes for Primary Sludge and Waste Activated Pump Stations (Area 1900) SCADA Programming (CR-184) PR 21146 (4286) Task 3510	A	IRWD		\$36,772.78					0				
35.4	Motor Protection Relay (CR-239) PR 21146 (4286) Task 3510	A	IRWD		\$13,181.68					0				
36	Approved by General Manager Approved on December 3, 2015				\$86,007.50	\$3,795,834.08	\$3,881,841.58	2.37%	\$167,347,781.58	0	0	0	1,278	10/28/2016
36.1	Light Weight Concrete for Underslab Conduits at Microturbine Area (CR-253) PR 21146 (4286) Task 3510	A	FBB		\$21,117.50					0				
36.2	Outstanding CB&I Items (CR-099A) PR 21146 (4286) Task 3520 – This change order includes: CR-098 (Guard Rail at Biogas Storage Tank); CR-099 (Tube Steel Supports); additional Off-Site Storage Costs, and credit for Use of SS 308 in Lieu of SS 316L Welds.	B	FBB		\$64,890.00					0				
37	Approved by Exe. Director of Engineering and Water Quality Approved on January 21, 2016				\$47,446.49	\$3,881,841.58	\$3,929,288.07	2.40%	\$167,395,228.07	0	0	0	1,278	10/28/2016
37.1	Additional Pressure Relief Valves in the Digester Control Building Slab (CR-112) PR 21146 (4286) Task 3520	C	IRWD		\$1,065.72					0				
37.2	Change Feeder Circuit Breaker Size in MCC-4102 (CR-165) PR 21146 (4286) Task 3510	C	IRWD		\$4,157.60					0				
37.3	Change Feeder Circuit Breaker Size for the Primary Sludge Pump Variable Frequency Drive (CR-233) PR 21146 (4286) Task 3510	C	IRWD		\$2,430.59					0				
37.4	SCADA Programming Changes Due to Change to Schweitzer Power Quality	A	FBB		\$16,814.00					0				
37.5	Additional Labeling of Parallel Conduits and Cables (CR-262) PR 21146 (4286) Task 3510	A	IRWD		\$8,410.00					0				
37.6	Change in Sludge Receiving Entrance Beacon Operation CR-263) PR 21146 (4286) Task 3510	A	IRWD		\$5,382.19					0				
37.7	Anodize Aluminum Light Fixture Stanchions/Sun Shades (CR-283) PR 21146 (4286) Task 3510	A	IRWD		\$5,911.61					0				
37.8	Hot Tap 8-Inch ACP Potable Water Line (CR-311) PR 21146 (4286) Task 3520	A	FBB		\$3,274.78					0				

**MWRP Biosolids and Energy Recovery Facilities
PR 21146 (4286)
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Design Engine Black & Veatch

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38	Approved by General Manager Approved on February 29, 2016				\$83,345.07	\$3,929,288.07	\$4,012,633.14	2.45%	\$167,478,573.14	0	0	0	1,278	10/28/2016
38.1	Software Control Block Revision for Area 4300 – Dewatering (CR-211) PR 4286 Task 3510	C	FBB	\$18,908.76						0				
38.2	Revised Master List of SCADA Templates (CR-247) PR 4286 Task 3510	C	FBB	\$47,274.54						0				
38.3	Additional Overflow Alarms at Sludge Holding Tanks (CR-280) PR 4286 Task 3510	A	IRWD	\$9,654.54						0				
38.4	Leak Detection at Sulfuric Acid Facility (CR-290) PR 21146 (4286) Task 3510	A	IRWD	\$5,499.97						0				
38.5	Insulation for Acid Phase Gas Piping (CR-218A) PR 21146 (4286) Task 3520	A	IRWD	\$2,007.26						0				
39	Approved by General Manager Approved on March 7, 2016				\$98,006.46	\$4,012,633.14	\$4,110,639.60	2.51%	\$167,576,579.60	0	0	0	1,278	10/28/2016
39.1	SCE Installation - Final Accounting of Work Items Between Negotiated Change Order and Actual Work (CR-146E) PR 4286 Task 3510	B	FBB	\$7,809.51						0				
39.2	Installation of Southern California Gas (SCG) Boxes (CR-146F) PR 4286 Task 3510	A	FBB	\$3,479.81						0				
39.3	Schweitzer SEL-735 Power Monitors for Centrifuge Panels (CR-207) PR 4286 Task 3510	A	IRWD	\$34,274.40						0				
39.4	Hirschmann Ethernet Switches for Centrifuge Panels (CR-208) PR 4286 Task 3510	A	IRWD	\$9,569.15						0				
39.5	Addition of Sample Pump Variable Frequency Drives for Thickening Centrifuges (CR-237) PR 4286 Task 3520	E	IRWD	\$24,496.55						0				
39.6	Upgrade of Exit Signs and Ceiling Lights in the Gas Room of the Digester Control Building to NEC Class 1 Division 1 (CR-313) PR 4286 Task 352	A	IRWD	\$18,377.04						0				
40	Pending Approval by General Manager Pending Approval on April 20, 2016				\$97,287.05	\$4,110,639.60	\$4,207,926.65	2.57%	\$167,673,866.65	0	0	0	1,278	10/28/2016
40.1	Brace Plates in Solids Handling Building (CR-069) PR 4286 Task 3505	C	FBB	\$40,216.76						0				
40.2	Relocation of RIO-50 Panel (CR-186) PR 4286 Task 3510	B	FBB	\$4,818.64						0				
40.3	Addition of Two Doors at the bases of the stairways at Methane Digesters Nos. 1 and No. 2 (CR-232) PR 4286 Task 3505	C	FBB	\$52,251.65						0				

**MWRP Biosolids and Energy Recovery Facilities
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41	Pending Approval By Board of Directors Pending approved on May 23, 2016				\$1,103,650.56	\$4,207,926.65	\$5,311,577.21	3.25%	\$168,777,517.21	0	0	0	1,278	10/28/2016
41.1	Additional SCE and SCG Modifications (CR-146A) PR 4286 Task 3510	B	FBB	\$51,238.69						0				
41.2	Additional Potholing Due to SCE and SCG Realignment (CR-146B) PR 4286 Task 3510	B	FBB	\$36,706.57						0				
41.3	Additional Cameras at the Unloading/Loading Area of the Solids Handling Facility (CR-164) PR 4286 Task 3505	A	IRWD	\$61,731.96						0				
41.4	Fire Sprinkler System Modifications – Mechanical (CR-174) PR 4286 Task 3520	B	IRWD	\$154,592.08						0				
41.5	Fire Sprinkler System Modifications – Electrical (CR-166) PR 4286 Task 3510	B	IRWD	\$13,730.06						0				
41.6	Fiber Optic System Modifications (CR-172/CR-306/CR-314) PR 4286 Task 3510	A	IRWD	\$178,879.46						0				
41.7	T-15, T-16, and T-17 Secondary Breakers (CR-185A, CR-185B, and CR-185C) PR 4286 Task 3510	A	IRWD	\$254,941.66						0				
41.8	Cable and Conduit Changes at the Sludge Receiving Area of the Solids Handling Building (CR-203) PR 4286 Task 3510	C	FBB	\$14,338.94						0				
41.9	Concrete Surface Treatment (CR-222) PR 4286 Task 3505	A	IRWD	\$68,714.34						0				
41.1	Heating Water Boiler Control Modifications (CR-246) PR 4286 Task 3510	A	IRWD	\$71,379.00						0				
41.11	SCADA Control Modifications for the Acid Phase Digesters, Methane Digesters, and Sludge Holding Tank (CR-252) PR 4286 Task 3510	A	IRWD	\$50,540.23						0				
41.12	Ambient Gas Analyzer Wiring Modification (CR-264) PR 4286 Task 3510	B	IRWD	\$19,734.51						0				
41.13	Disconnect Switches for Flow Valves in the Solids Handling Building (CR-272) PR 4286 Task 3510	C	IRWD	\$25,550.26						0				
41.14	Centrifuge Pedestal Modifications (CR-301) PR 4286 Task 3505	C	IRWD	\$30,603.14						0				
41.15	SCADA, Instrumentation, and Electrical Modifications (CR-287, CR-294, and CR-322) PR 4286 Task 3510	A	IRWD	\$70,969.66						0				
42	Pending Approval By Board of Directors Pending approved on May 23, 2016				(\$199,771.09)	\$5,311,577.21	\$5,111,806.12	3.13%	\$168,577,746.12	0	0	0	1,278	10/28/2016
42.1	Value Engineering of Chemical Pump Systems (CR-054) PR 4286 Task	E	FBB	(\$48,549.90)						0				
42.2	Change in Lightning Protection Installation for Egg-Shaped Digesters (CR-121A) PR 4286 Task 3510	A	IRWD	(\$10,557.28)						0				
42.3	Deletion of Seal Water Stations and Seal Water Piping (CR-214) PR 4286 Task 3520	A	IRWD	(\$1,748.17)						0				
42.4	Deletion of Low Pressure Switches for Centrate Pumps (CR-257) PR 4286 Task 3510	A	IRWD	(\$24,064.00)						0				
42.5	Centrifuge Seismic Restraint Design Costs (CR-345) PR 4286 Task 1065	E	FBB	(\$97,141.74)						0				
42.6	Credit for Overtime Inspection Hours From 6/1/2015 to Through 12/31/2015 (CR-089B) PR 4286 Task 1065	E	FBB	(\$17,710.00)						0				

**MWRP Biosolids and Energy Recovery Facilities
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Category	Total Amount	% of Original Contract
A - District Convenience/Initiation - Project Related	\$ 1,138,890.32	0.70%
B - Differing Site Conditions	\$ 2,137,161.84	1.31%
C - Design Oversight	\$ 1,853,971.91	1.13%
D - District Convenience/Initiation - Non-Project Related	\$ -	0.00%
E - Contractor Convenience/Initiation	\$ (18,217.95)	-0.01%
TOTAL (A + B + C + D)	\$ 5,111,806.12	3.13%

Category	Total Amount	% of Original Contract
IRWD-Initiation/Driven	\$ 1,973,245.90	1.21%
FBB-Initiation/Driven	\$ 2,967,840.00	1.82%
Not applicable	\$ 170,720.22	0.10%
TOTAL	\$ 5,111,806.12	3.13%

EXHIBIT "D"

05/19/16 draft

AMENDMENT NO. 1 TO AGREEMENT FOR
TRANSFER OF WASTEWATER SOLIDS RESIDUALS

This Amendment No. 1 to Agreement For Transfer of Wastewater Solids Residuals (this "Amendment") is made and entered into, to be effective the _____ day of _____, 2016, by and between the ORANGE COUNTY SANITATION DISTRICT ("OCSD") and the IRVINE RANCH WATER DISTRICT, ("IRWD"). OCSD is a County Sanitation District, organized and existing pursuant to the County Sanitation District Act, California Health & Safety Code Section 4700 *et seq.* IRWD is a California Water District, organized and existing pursuant to the California Water District Law, California Water Code Section 34000 *et seq.* OCSD and IRWD are sometimes individually referred to herein as each "Party" and collectively as the "Parties." Capitalized terms used herein and not otherwise defined shall have the meanings given such terms in the Agreement.

RECITALS

This Amendment is entered into with reference to the following facts:

WHEREAS, the Parties have entered into the Agreement For Transfer of Wastewater Solids Residuals, dated as of April 28, 2010 (the "Agreement"); and

WHEREAS, Section 7.2 of the Agreement provides that during the Initial Term, IRWD may notify OCSD that the date for completion of the project to construct solids handling facilities at MWRP has been delayed beyond December 31, 2016, in which event the Parties shall meet and confer in good faith to enter into an amendment to the Agreement to extend the Initial Term, including consideration of whether the duration of the extension requires any change to the methodology for calculating the interim Solids Handling Charge Capital Component; and

WHEREAS, IRWD has notified OCSD that the construction of the solids handling facilities at MWRP by IRWD's contractor is ongoing but completion will not occur prior to the expiration of the Initial Term on December 31, 2016; and

WHEREAS, the Parties have met and conferred and determined that a two-year extension of the Initial Term will accommodate the expected completion of the MWRP solids handling facilities construction contract, and that such duration does not require any change to the current methodology for calculating the interim Solids Handling Charge Capital Component; and

WHEREAS, the Parties agree that the definition of "Solids" includes primary and secondary settled material only.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the Parties agree as follows:

Section 1. Extension of Initial Term. (a) Section 6 of the Agreement is amended to read as follows:

“Section 6. Initial Term.

IRWD may transfer Solids to the OCSD Wastewater System in accordance with the terms of this Agreement from the effective date set forth above until the earlier of (i) the date that the proposed MWRP solids handling facilities are operational and all non-emergency discharges of wastewater solids residuals by IRWD to the OCSD Wastewater System have ceased, or (ii) December 31, ~~2018~~2016. This period shall be called the ‘Initial Term.’”

(b) Upon the effective date of this Amendment, Section 7.2 of the Agreement shall be deleted in its entirety. ~~is amended to read as follows:~~

~~“Section 7.2. Delay of MWRP Solids Project. If, during the Initial Term, IRWD notifies OCSD that completion of the project to construct solids handling facilities at the MWRP has been delayed beyond December 31, ~~2018~~2016, the Parties shall meet and confer in good faith to prepare and enter into an amendment to this Agreement setting forth an extension of the Initial Term and an adjusted methodology for the interim Solids Handling Charge Capital Component that reflects a reasonable and appropriate capital payment for the use of expansion facilities taking into consideration the duration of the delay.”~~

Section 2. Terms of Agreement.

Except as expressly amended by this Amendment, all terms and conditions of the Agreement and all attachments and exhibits thereto, shall remain in full force and effect.

IN WITNESS WHEREOF, this Amendment has been executed in duplicate in the names of the respective Parties by their duly authorized officers, effective as of the day and year first above written.

[Signatures on the following page.]

ORANGE COUNTY SANITATION DISTRICT

By _____
Chair, Board of Directors

By _____
General Manager

By _____
Clerk of the Board

APPROVED AS TO FORM:
BRADLEY R. HOGIN,
GENERAL COUNSEL

By _____

IRVINE RANCH WATER DISTRICT

By _____
President, Board of Directors

By _____
General Manager

By _____
Secretary

APPROVED AS TO FORM:
BOWIE, ARNESON,
WILES & GIANNONE

By _____

May 23, 2016

Prepared by: K. Welch *KW*

Submitted By: R. Jacobson / P. Weghorst *PW*

Approved By: Paul Cook *PC*

ACTION CALENDAR

HOLT PROPERTY PURCHASE

SUMMARY:

IRWD is pursuing the purchase of property within the Palo Verde Irrigation District (PVID) that will become another element of IRWD's long-term program to increase water supply reliability for its customers during droughts and other potential water supply interruptions. On April 18, 2016, Bardeen Partners, Inc., pursuant to provisions included in its Articles of Incorporation, executed a Real Property Purchase Agreement (Purchase Agreement) for the Holt Property, comprised of approximately 103 acres of land within PVID in Riverside County (Property). The Purchase Agreement provides an opportunity to conduct tests, inspections, evaluations and such other due diligence activities as deemed necessary prior to the acquisition of the Property. This report provides the Board with the findings of the due diligence work. Subject to Bardeen approval of the assignment of the Purchase Agreement to IRWD, staff recommends the Board:

- Authorize the General Manager to execute the Assignment and Assumption of Real Property Purchase Agreement accepting the assignment of the Purchase and Sale Agreement from Bardeen Partners, Inc.;
- Authorize the Treasurer to request and execute any necessary amendment to the Purchase and Sale Agreement or an addendum to the escrow instructions to extend the due diligence period for up to thirty days to correct a title issue identified on the Property;
- Find that all matters currently identified with regard to the condition of title, subject to correction of a title issue identified on the Property, physical condition and suitability of the Property for the uses contemplated are acceptable;
- Approve the addition of Project 11956 (7305) to the FY 2015-16 Capital Budget in the amount of \$1,690,000 for the purchase of the Property;
- Determine the acquisition of the Property is exempt from CEQA, approve the project and authorize staff to post and file the Notices of Exemption in Orange and Riverside Counties; and
- Authorize the General Manager and Treasurer and each other officer of the District to execute and deliver any and all documents, program assignments, certificates, instructions and instruments necessary or proper for carrying out and closing the real estate purchase transaction for the acquisition of the Property, subject to correction of a title issue identified on the Property.

BACKGROUND:

IRWD is pursuing the purchase of property in Riverside County that is located within PVID. PVID is located in Riverside and Imperial Counties adjacent to the Colorado River and has the highest priority rights to water from the Colorado River in California. As an owner of land within PVID, IRWD would be able to participate in water conservation programs implemented by Metropolitan Water District of Southern California (MWD) and PVID, such as land

fallowing, which would make water available for other uses. Because MWD owns the rights to any Colorado River water that is conserved as a result of MWD and PVID programs, water conserved from the land owned by IRWD would benefit the MWD service area which includes IRWD. In the future, IRWD would work with MWD and Municipal Water District of Orange County (MWDOC) to develop mutually-beneficial agreements through which IRWD would receive increased water supply reliability during periods of drought and supply interruptions in consideration of the water conserved on IRWD land in PVID.

On April 18, 2016, Bardeen Partners, pursuant to provisions included in its Articles of Incorporation, executed a Purchase and Sale Agreement to purchase the Holt Property comprised of 103 acres which is within the vicinity of the Eaton property that was purchased by IRWD in March 2016. Location maps of the Holt Property are provided as Exhibit "A". Following is an overview of the Holt Property; due diligence work conducted on the Property; the existing MWD and PVID Fallowing Program; recommendations for acceptance of the assignment of the Purchase Agreement from Bardeen Partners; and recommendations for the purchase of the Property.

Holt Property Overview:

The Holt Property is located within PVID in Riverside County and consists of approximately 103 acres which are actively farmed by the owner or are fallowed. Water tolls are paid on 100 acres of the Property which are enrolled in the existing MWD/PVID Fallowing Program.

Plan for Holt Property:

In the near term, land purchased by IRWD in the PVID service area would continue to be farmed essentially as it is today:

- Tenant farm leases, which would generate income for IRWD, would be secured and maintained on the Property and the farming operations would be supervised by District staff and consultants, and
- As a landowner and therefore a participant in the existing MWD/PVID fallowing program, IRWD would receive fallowing payments from MWD.

In the long term, IRWD-owned land within PVID would be utilized as follows:

- The land would continue to be cultivated through tenant farm leases;
- As a landowner, IRWD could participate in any fallowing and other water conservation programs developed and implemented by MWD and PVID; and
- IRWD would work with MWD and MWDOC to develop mutually-beneficial programs and agreements through which IRWD would receive increased water supply reliability during periods of drought and supply interruptions in exchange for water conserved on IRWD-owned lands in PVID.

Due Diligence Investigations:

The Purchase Agreement provides for a 40-day due diligence period in which there is an opportunity to conduct any studies, tests and inspections that are deemed necessary prior to the acquisition of the Property. The due diligence period for the Holt Property ends on May 30, 2016. Dee Jaspar & Associates (DJA) was retained to oversee the due diligence investigations and to complete a Baseline Property Assessment Report on the Holt Property. The due diligence investigations for the Property have been completed which include a Preliminary Title Report review; an Environmental Phase 1 site assessment; examination of surface soils, flood and seismic hazards; a review of mineral rights; a review of the general plan for the area; and a review of Williamson Act and zoning designations. DJA is finalizing the American Land Title Association survey and crop water use study of the Property.

Due diligence work completed to date shows the Holt Property is generally maintained with no recognized onsite environmental conditions. The Property is currently planted in alfalfa with 37 acres fallowed per the Fallowing Program. There is a drainage channel and concrete irrigation ditches that provide water to the Property. DJA reported that the alfalfa crop appears to be slightly spotty and less dense than growth in an adjacent field. The difference can be due to the different varieties of alfalfa planted, the age of the crop, or farming practices.

Following is a summary of the findings of the due diligence work:

Phase 1 Environmental Site Assessment:

A Phase 1 Environmental Site Assessment was performed by subcontractor Advanced Environmental Concepts, Inc. (AEC). The Phase 1 evaluation did not identify any environmental conditions or concerns.

Surface Soils, Flood and Seismic Hazards:

The soils are clays, silty and sandy clays, silty sands and sandy silts. Hand auger borings were performed excavated to seven feet and no groundwater was encountered in the borings. Historic groundwater levels have been reported as shallow as 4 to 10 feet below ground surface. There are no active faults crossing the Property. The Property is included in a Riverside County liquefaction hazard zone which makes it susceptible to liquefaction hazard. The Property is not included in a flood hazard zone but it is mapped as susceptible to subsidence based on Riverside County subsidence maps.

ALTA Survey:

An American Land Title Association (ALTA) survey of the Property is being finalized by DJA which will identify and document all easements to the Property. DJA has confirmed that the ALTA survey shows the Property's total gross acreage is 103.38. There is no Williamson Act Contract on the Property, and the Property is not located in the boundaries of the Blythe Redevelopment Project Area.

Mineral Rights:

The Purchase Agreement provides for the buyer to acquire any oil, gas or mineral rights (“mineral rights”) held by the seller. Based on the mineral rights search and the Preliminary Title Report, the seller owns the mineral rights for the Property.

Existing Facilities:

The Property has berms that were constructed around the perimeter of the farmed fields and a portion of the Property comprises water supply channels. Irrigation water is provided by PVID through a series of water transfer canals and ditches.

Preliminary Title Report Review:

Staff found no items of record to contest in the initial Preliminary Title Report. While performing the mineral search of the Property, DJA identified a possible illegal transfer of approximately 11 acres of property adjacent to two neighboring five-acre home sites. This transfer occurred in 1995. On May 11, the escrow provider and seller were notified of this finding. Exhibit “B” shows the area of the identified title issue. If this transfer is found to be legal or is made legal via a parcel map or lot line adjustment, then it would remove about 11 acres from the Holt Property which would reduce the purchase from 103 acres to 92 acres. The seller’s broker is working with the seller to resolve this issue.

Existing Fallowing Program:

In 2002, MWD and PVID entered into a 35-year Palo Verde Land Management, Crop Rotation and Water Supply Program (Fallowing Program), whereby MWD makes fallowing payments to PVID landowners who chose to participate in the Fallowing Program. Holt entered into an agreement with PVID and MWD in March 2006 to participate in the Fallowing Program enrolling all 100 water toll acres with a maximum fallowing commitment of 37 acres. Exhibit “C” provides an overview of the Fallowing Program, the landowner agreement and the landowner’s obligations related to the Fallowing Program. The landowner agreement will be assigned by the seller to the buyer.

Assignment of the Purchase Agreement:

Bardeen Partners entered into the Purchase Agreement pursuant to provisions included in its Articles of Incorporation on April 18, 2016. Staff recommends that the Board request and authorize acceptance of an assignment of the Purchase Agreement so that IRWD may conclude the transaction. The Purchase Agreement permits Bardeen without the consent of the seller, to assign its interests to IRWD as an entity under common control with Bardeen. Staff recommends that an Assignment and Assumption of Real Property Purchase Agreement, which is attached as Exhibit “D”, be approved and executed by IRWD.

FISCAL IMPACTS:

The total purchase cost for the Property is \$1,650,000, plus approximately \$40,000 for closing costs. The cost for the Baseline Property Assessment work including staff and legal time was approximately \$30,000. Sufficient budget exists in Project No. 11764 (5500) to cover the due diligence work. Staff requests the addition of Project 11956 (7305) to the FY 2015-16 capital budget in the amount of \$1,690,000 as shown below to provide for the purchase of the Property and the associated closing costs.

<u>Project No.</u>	<u>Current Budget</u>	<u>Addition <Reduction></u>	<u>Total Budget</u>
11956(7305)	\$-0-	\$1,690,000	\$1,690,000

ENVIRONMENTAL COMPLIANCE:

Any new lands purchased for water supply purposes would be subject to compliance with the California Environmental Quality Act of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Pursuant to direction by the Board, staff will file a Notice of Exemption for the purchase of the Holt Property within the Counties of Orange and Riverside. The Notice of Exemption states that the District is not presently contemplating changes in the existing use of the land and therefore no environmental impacts associated with the Property acquisition are expected. The Notice of Exemption states that the District specifically conditions any proposed future change in use of the Property on subsequent CEQA compliance actions.

COMMITTEE STATUS:

This item was discussed the Bardeen Property Ad Hoc Committee on May 19, 2016.

RECOMMENDATION:

THAT THE BOARD, SUBJECT TO BARDEEN PARTNERS, INC. APPROVAL OF THE ASSIGNMENT OF THE PURCHASE AGREEMENT TO IRWD, AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE ASSIGNMENT AND ASSUMPTION OF REAL PROPERTY PURCHASE AGREEMENT ACCEPTING THE ASSIGNMENT OF THE PURCHASE AND SALE AGREEMENT FROM BARDEEN PARTNERS, INC.; AUTHORIZE THE TREASURER TO REQUEST AND EXECUTE ANY NECESSARY AMENDMENT TO THE PURCHASE AND SALE AGREEMENT OR AN ADDENDUM TO THE ESCROW INSTRUCTIONS TO EXTEND THE DUE DILIGENCE PERIOD FOR UP TO THIRTY DAYS TO CORRECT THE TITLE ISSUE IDENTIFIED ON THE PROPERTY; FIND THAT ALL MATTERS CURRENTLY IDENTIFIED WITH REGARD TO THE CONDITION OF TITLE, SUBJECT TO CORRECTION OF THE TITLE ISSUE IDENTIFIED ON THE PROPERTY, PHYSICAL CONDITION AND SUITABILITY OF THE PROPERTY FOR THE USES CONTEMPLATED ARE ACCEPTABLE; APPROVE THE ADDITION OF PROJECT 11956 (7305) TO THE FY 2015-16 CAPITAL BUDGET IN THE AMOUNT OF \$1,690,000

FOR THE PURCHASE OF THE PROPERTY; FIND THAT THE PROPERTY ACQUISITION ONLY IS EXEMPT FROM CEQA; APPROVE THE PROJECT AND AUTHORIZE STAFF TO POST AND FILE THE NOTICES OF EXEMPTION IN ORANGE AND RIVERSIDE COUNTIES; AND, AND AUTHORIZE THE GENERAL MANAGER AND TREASURER AND EACH OTHER OFFICER OF THE DISTRICT, EACH ACTING SINGLY, TO EXECUTE AND DELIVER ANY AND ALL DOCUMENTS, PROGRAM ASSIGNMENTS, CERTIFICATES, INSTRUCTIONS AND INSTRUMENTS NECESSARY OR PROPER FOR CARRYING OUT AND CLOSING THE REAL ESTATE PURCHASE TRANSACTION FOR THE ACQUISITION OF THE PROPERTY, SUBJECT TO CORRECTION OF THE TITLE ISSUE IDENTIFIED ON THE PROPERTY.

LIST OF EXHIBITS:

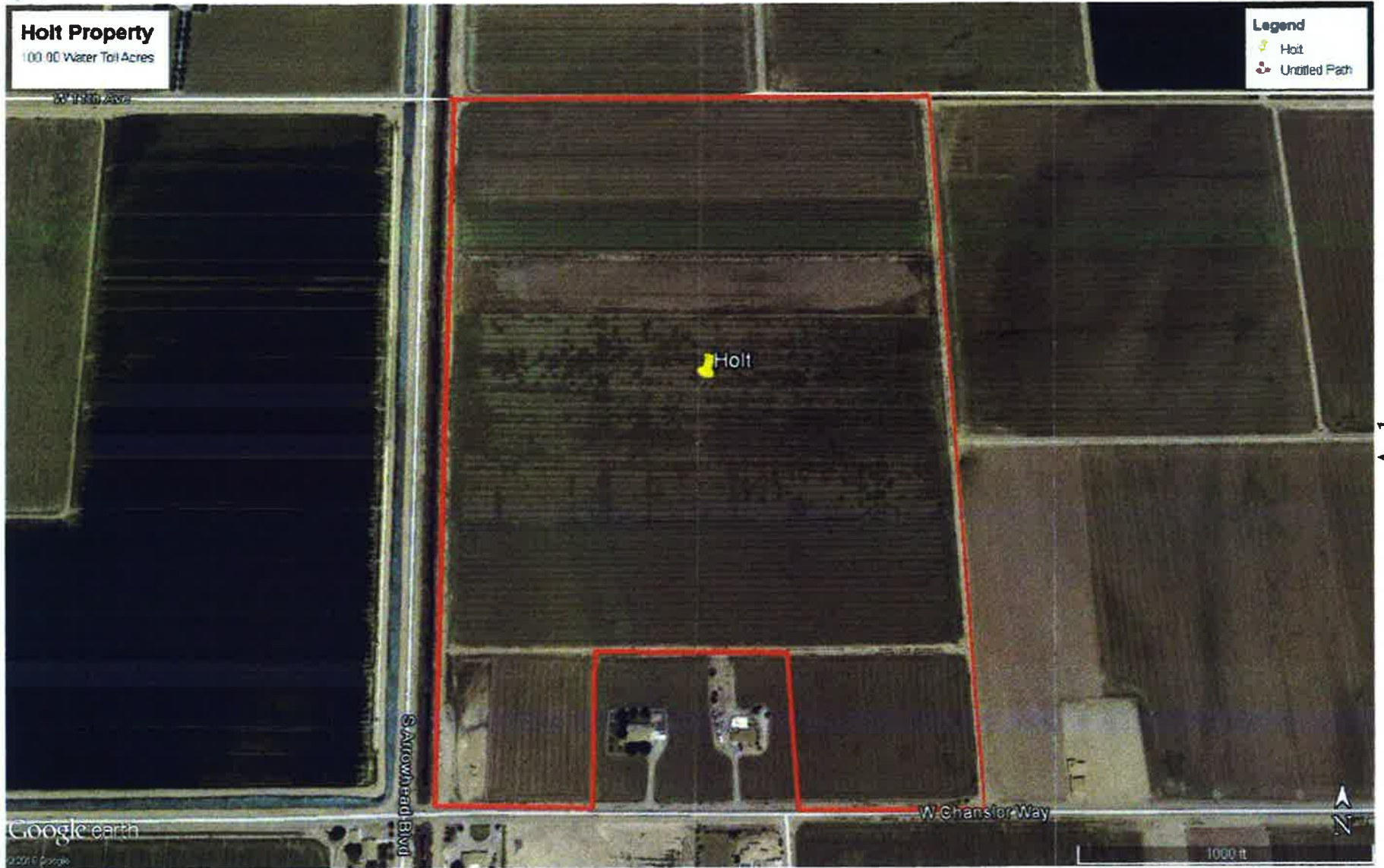
Exhibit "A" – Location Maps of Holt Property

Exhibit "B" – Area with Identified Title Issue

Exhibit "C" – Following Program Agreement Overview

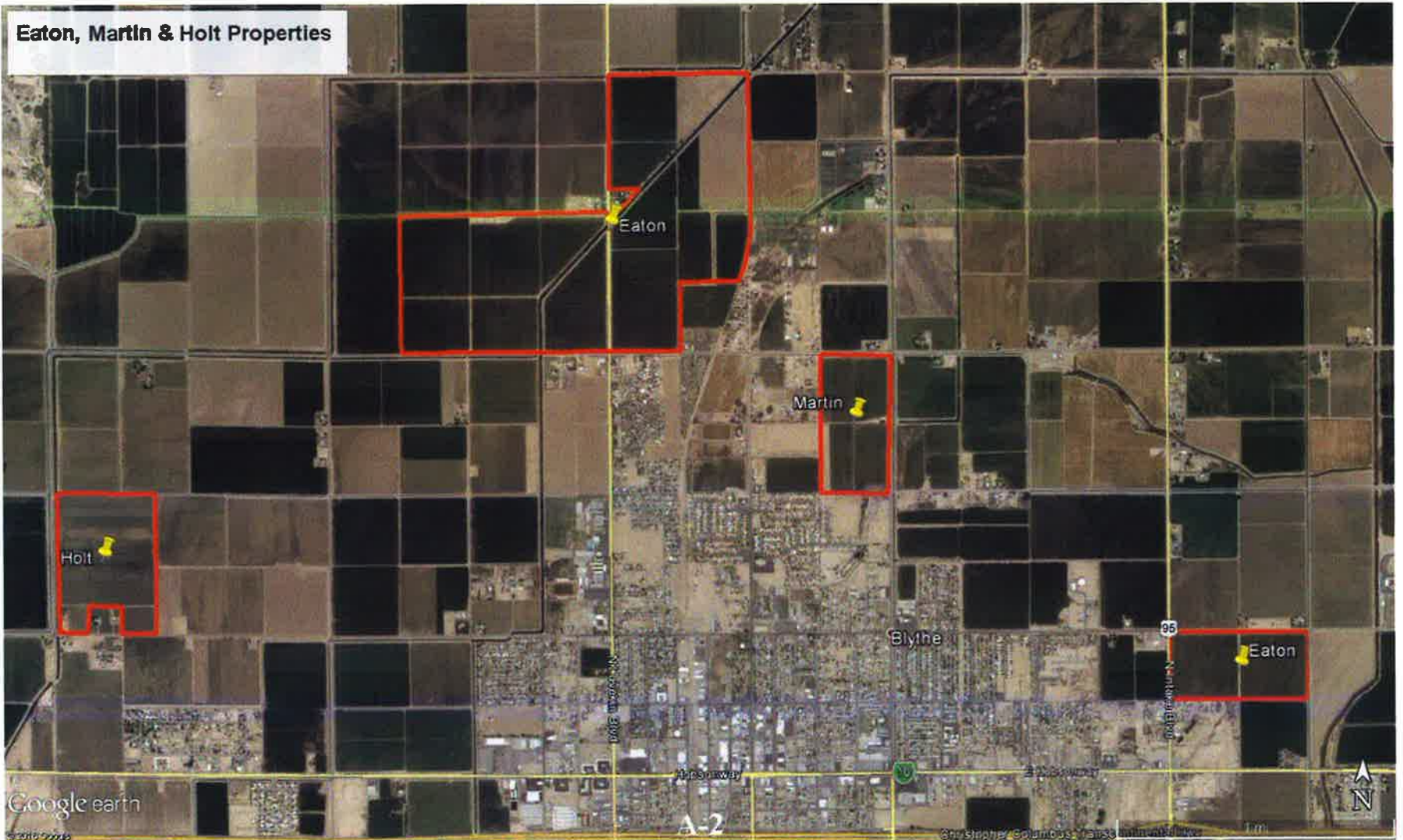
Exhibit "D" – Assignment and Assumption of Real Property Purchase Agreement

Exhibit "A"



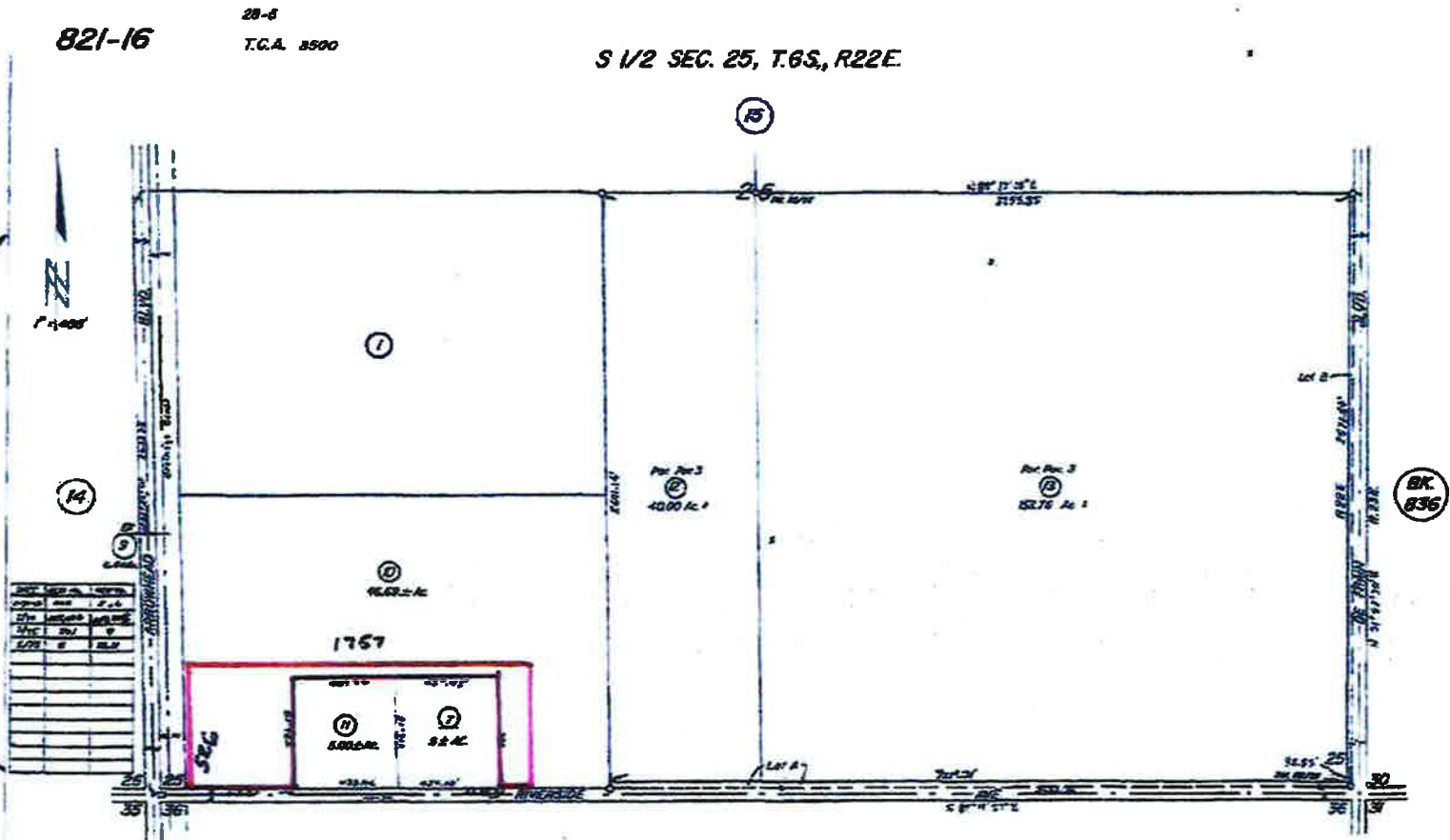
A-1

Eaton, Martin & Holt Properties



A-2

AREA WITH IDENTIFIED TITLE ISSUE
EXHIBIT "B"



821-16

28-8
T.C.A. 8500

S 1/2 SEC. 25, T.6S, R22E.

13

1

14

14

Lot 3
40.00 AC.

Lot 4
152.76 AC.

BK 836

16.02 AC

1757

5.00 AC

9.8 AC

BK 824

ENL 88/98 Parcel Map 13966

DATE: 8/5 12/66, 23/66
NO. 22/66

JUNE 1965

ASSESSOR'S MAP, BK 821 PG. 18
RIVERSIDE COUNTY, CALIF.

Description: Riverside, CA Assessor Map 821.16 Page: 1 of 1
Order: Riverside Comment:
B-1

EXHIBIT “C”

Following Program Agreement Overview

Metropolitan Water District of Southern California (Metropolitan) and the Palo Verde Irrigation District (PVID) developed a 35-year Land Management, Crop Rotation and Water Supply Program (Following Program), expiring in 2040. Key provisions of the Following Program include:

- Total following under the Program is limited to a maximum of 26,500 acres or 29% of PVID’s irrigated lands with Priority 1 water rights.
- A minimum base of 6,000 acres (7% of irrigated PVID lands) must be fallowed each contract year.
- The maximum area that would be fallowed each contract year would not exceed 24,000 acres in any 25 years and 26,500 acres in any 10 years during the 35 years.
- Eligible land must have Priority 1 Colorado River water and a history of irrigated crop production for two out of five years preceding Program enrollment.

In March 2006, Holt and Metropolitan and PVID entered into the standard Landowner Following Program Agreement (Following Agreement). The Following Agreement includes:

- 100 water toll (WT) acres are enrolled in the Program;
- A Maximum Following Commitment (MFC) of 37 WT acres;
- A minimum following requirement of 17 WT acres;
- As required, Holt granted an easement to Metropolitan for the 100 WT acres;
- Metropolitan makes annual payments directly to Holt for fallowed acres. In 2015, Metropolitan paid \$770.62 per fallowed acre (payment escalates a minimum of 2.5% per year)
- Landowners are required control weed growth and wind erosion on the fallowed areas at their own cost. Metropolitan and PVID staff inspect the fallowed areas each year.
- Metropolitan does not pay for any acreage that is fallowed greater than the MFC, this is considered voluntary following.

The Following Agreement includes a total of 105 qualified WT acres with a maximum following commitment of 37 WT acres. The following easement for the Program is on the parcels that IRWD proposes to purchase, so the agreement will transfer to IRWD upon MWD and PVID approval.

Since the commencement of the Following Agreement, the landowner has fallowed the following amounts:

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Acres	37	17	17	37	37	37	37	9	9	19	37
%	100%	45.16%	45.16%	100%	100%	100%	100%	25%	25%	50%	100%

Per the Following Agreement there is a limit of 10 times that Metropolitan can call for the MFC. After 10 times, the maximum would be reduced to 90.6% of MFC, or 34 WT acres. The first two years of the program were not included, so the MFC for the Holt properties has been called 5 times including 2016.

EXHIBIT "D"

ASSIGNMENT AND ASSUMPTION OF REAL PROPERTY PURCHASE AGREEMENT

WHEREAS, Bardeen Partners, Inc., a California nonprofit public benefit corporation, as buyer ("BUYER") and John L. Holt, as Trustee of RJ Trust, dated January 20, 2010, as Restated September 27, 2013, collectively, as seller ("SELLER") have entered into that certain REAL PROPERTY PURCHASE AGREEMENT (the "Agreement") dated April 18, 2016; and

WHEREAS, Section 8.13 of the Agreement permits BUYER's assignment of its rights and delegation of its duties and obligations under the Agreement, without the consent of SELLER, to an entity that controls, is controlled by or is under common control with BUYER; and

WHEREAS, BUYER wishes to assign all of its interests in the Agreement to Irvine Ranch Water District, a California water district organized under California Water Code Section 34000, *et seq.* ("IRWD"), and IRWD wishes to accept such assignment; and

WHEREAS, BUYER and IRWD are under the control of the same Board of Directors, pursuant to Section 7 of BUYER's bylaws, and BUYER was incorporated for specific purposes including the rendering of financial assistance to IRWD by, among other things, acquiring real property interests for the benefit of IRWD;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, BUYER, as assignor, does hereby assign, grant, bargain, sell, convey and transfer to IRWD all of BUYER's right, title and interest in and to the Agreement.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged and further in consideration of the within assignment by BUYER, IRWD, as assignee, does hereby agree to its substitution for BUYER as buyer under the Agreement and agrees to assume and perform all covenants and conditions which are to be performed by BUYER pursuant to the Agreement, except to the extent any such covenants and conditions have been performed prior to the date hereof.

Executed and effective this 23rd day of May, 2016.

BARDEEN PARTNERS, INC.

IRVINE RANCH WATER DISTRICT,

By: _____
Treasurer

By: _____
General Manager

May 23, 2016

Prepared by: K. Welch *KW*

Submitted By: R. Jacobson / P. Weghorst *PW*

Approved By: Paul Cook *PC*

ACTION CALENDAR

MARTIN PROPERTY PURCHASE

SUMMARY:

IRWD is pursuing the purchase of property within the Palo Verde Irrigation District (PVID) that will become another element of IRWD's long-term program to increase water supply reliability for its customers during droughts and other potential water supply interruptions. On April 12, 2016, Bardeen Partners, Inc., pursuant to provisions included in its Articles of Incorporation, executed a Real Property Purchase Agreement (Purchase Agreement) for the Martin Property comprised of approximately 80 acres of land within PVID in Riverside County (Property). The Purchase Agreement provides an opportunity to conduct tests, inspections, evaluations and other such due diligence activities as deemed necessary prior to the acquisition of the Property. This report provides the Board with the findings of the due diligence work. Subject to Bardeen approval of the assignment of the Purchase Agreement to IRWD, staff recommends the Board:

- Authorize the General Manager to execute the Assignment and Assumption of Real Property Purchase Agreement accepting the assignment of the Purchase and Sale Agreement from Bardeen Partners, Inc.;
- Authorize the Treasurer to request and execute any necessary amendment to the Purchase and Sale Agreement or an addendum to the escrow instructions for the Martin Property to allow for buyer abandonment of the well with a credit for the cost of the well abandonment to be applied to the purchase price;
- Find that all matters currently identified with regard to the condition of title, physical condition and suitability of the Property for the uses contemplated are acceptable;
- Approve the addition of Project 11955 (7302) to the FY 2015-16 Capital Budget in the amount of \$1,261,000 for the purchase of the Property;
- Determine the acquisition of the Property is exempt from CEQA, approve the project and authorize staff to post and file the Notice of Exemptions in Orange and Riverside Counties; and
- Authorize the General Manager and Treasurer and each other officer of the District to execute and deliver any and all documents, program assignments, certificates, instructions and instruments necessary or proper for carrying out and closing the real estate purchase transaction for the acquisition of the Property.

BACKGROUND:

IRWD is pursuing the purchase of property in Riverside County that is located within PVID. PVID is located in Riverside and Imperial Counties adjacent to the Colorado River and has the highest priority rights to water from the Colorado River in California. As an owner of land within PVID, IRWD would be able to participate in water conservation programs implemented by Metropolitan Water District of Southern California (MWD) and PVID, such as land fallowing, which would make water available for other uses. Because MWD owns the rights to

any Colorado River water that is conserved as a result of MWD and PVID programs, water conserved from the land owned by IRWD would benefit the MWD service area which includes IRWD. In the future, IRWD would work with MWD and Municipal Water District of Orange County (MWDOC) to develop mutually-beneficial agreements through which IRWD would receive increased water supply reliability during periods of drought and supply interruptions in consideration of the water conserved on IRWD land in PVID.

On April 12, 2016, Bardeen Partners, pursuant to provisions included in its Articles of Incorporation, executed a Purchase and Sale Agreement to purchase the Martin Property comprised of 80 acres which is within the vicinity of the Eaton property that was purchased by IRWD in March 2016. Location maps of the Martin Property are provided as Exhibit "A". Following is an overview of the Martin Property; due diligence work conducted on the Property; the existing MWD and PVID following program; recommendations for acceptance of the assignment of the Purchase Agreement from Bardeen Partners; and recommendations for the purchase of the Property.

Martin Property Overview:

The Martin Property is located within PVID in Riverside County and consists of approximately 80 acres that is actively farmed by the owner or are fallowed. Water tolls are paid on 74 acres of the Property which are enrolled in the existing MWD/PVID Fallowing Program.

Plan for Martin Property:

In the near term, land purchased by IRWD in the PVID service area would continue to be farmed essentially as it is today:

- Tenant farm leases, which would generate income for IRWD, would be maintained on the Property and the farming operations would be supervised by District staff and consultants, and
- As a landowner and therefore a participant in the existing MWD/PVID fallowing program, IRWD would receive fallowing payments from MWD.

In the long term, IRWD-owned land within PVID would be utilized as follows:

- The land would continue to be cultivated through tenant farm leases;
- As a landowner, IRWD could participate in any fallowing and other water conservation programs developed and implemented by MWD and PVID; and
- IRWD would work with MWD and MWDOC to develop mutually-beneficial programs and agreements through which IRWD would receive increased water supply reliability during periods of drought and supply interruptions in exchange for water conserved on IRWD-owned lands in PVID.

Due Diligence Investigations:

The Purchase Agreement provides for a 40-day due diligence period in which there is an opportunity to conduct any studies, tests and inspections that are deemed necessary prior to the acquisition of the Property. This due diligence period ends on May 24, 2016. Dee Jasper & Associates (DJA) was retained to oversee the due diligence investigations and to complete a Baseline Property Assessment Report on the Martin Property. The due diligence investigations for the Property have been completed which include a Preliminary Title Report review; an Environmental Phase 1 site assessment; examination of surface soils, flood and seismic hazards; a crop water use study; a review of mineral rights; a review of the general plan for the area; and a review of Williamson Act and zoning designations. DJA is finalizing the American Land Title Association survey and crop water use study of the Property.

Due diligence work completed to date shows the Martin Property is generally maintained. The Property is currently planted in Bermuda grass with 25 acres fallowed per the Fallowing Program. A concrete-lined irrigation water transfer ditch runs along the north side of the Property and a drainage channel runs along the west side of the Property.

Following is a summary of the findings of the due diligence work:

Phase 1 Environmental Site Assessment:

A Phase 1 Environmental Site Assessment was performed by subcontractor Advanced Environmental Concepts, Inc. (AEC). The Phase 1 evaluation identified no onsite recognized environmental issues but identified the following housekeeping conditions.

1. One condition is the existence of a domestic well, piping and metal water storage tank at the location of an old farmstead which is now used as a hay storage area. The seller's broker is obtaining a cost estimate from a local contractor to properly abandon the well, and the seller is expected to remove the metal water storage tank.
2. The other condition involves a 1.5-acre slough area on the southeast corner of the property that is overgrown with native vegetation which has not been farmed. The area appears to have been used as a dump site for household waste, appliances and railroad ties. The seller is expected to remove these items prior to closing. AEC also noted this area may be classified as a designated "wetlands".

On May 16, IRWD's on-call permitting consultant, Harmsworth & Associates, assessed the site overgrown with vegetation. Harmsworth confirmed that this southeast corner of the property is not a wetland and does not require a streambed alternation agreement or permits for any onsite activities. Harmsworth also confirmed with the local California Department of Fish and Wildlife (CDFW) office that the site does not contain a wetland and that the removal of the brush is allowed but should be conducted outside of the bird nesting season. Harmsworth recommends contacting CDFW prior to any vegetation trimming/removal or changes in the site usage.

Surface Soils, Flood and Seismic Hazards:

Hand auger borings were performed excavated to seven feet. No groundwater was encountered in the borings. Historic groundwater levels are shown to be 8 feet to 10 feet below ground surface. There are no active faults crossing the Property. The Property is included in a Riverside County liquefaction hazard zone which makes it susceptible to liquefaction hazard. The Property is not included in a flood hazard zone but it is mapped as susceptible to subsidence based on Riverside County subsidence maps.

Generally the soils underlying the Martin property are identified as Class 2 and Class 3 soils. These soils are typical of lands in the Blythe area; basically alluvial in origin and characterized as silty, sandy, clayey loam. DJA has reported that with the mix of soil types found on the Martin property, that alfalfa yields could be expected to be below average. This was confirmed with a local farmer with over 30 years of experience farming the Martin property. It was stated that the alfalfa yields on the Martin Property are lower than other lands in the area, likely due to a higher sand content in the soil and that is not as productive as either the Eaton or Holt properties. This could affect the value of the land for farming purposes. The farmer also stated that if the Eaton, Holt and Martin properties were farmed together under one lease, that the Martin property could be fallowed under the MWD/PVID Fallowing Program which would allow farming of more productive acres. This ability to optimize use of productive acres could support the sales price of the Martin Property. The fallowing program requires that at least a one year crop be grown on the rotated fallowed acres every five years. During these periods, the less productive Martin Property would need to be temporarily put into production.

ALTA Survey:

An American Land Title Association (ALTA) survey of the Property is being finalized by DJA which will identify and document all easements to the Property. DJA has confirmed that the ALTA survey shows the Property's total gross acreage is 80 which is the same acreage in the Purchase Agreement. There is no Williamson Act Contract on the Property, and the Property is not located in the boundaries of the Blythe Redevelopment Project Area.

Mineral Rights:

The Purchase Agreement provides for the buyer to acquire any oil, gas or mineral rights ("mineral rights") held by the seller. Based on the mineral rights search and the Preliminary Title Report, the seller owns the mineral rights for the Property.

Existing Facilities:

The Property has constructed berms around the perimeter of the farmed fields and a portion of the Property comprises water supply channels. Irrigation water is provided by PVID through a series of water transfer canals and ditches. There are no tile drains on the Property.

Preliminary Title Report Review:

Staff has found no items of record to contest.

Existing Fallowing Program:

In 2002, MWD and PVID entered into a 35-year Palo Verde Land Management, Crop Rotation and Water Supply Program (Fallowing Program), whereby MWD makes fallowing payments to PVID landowners who chose to participate in the Fallowing Program. The Property owner entered into an agreement with PVID and MWD in May 2005 to participate in the Fallowing Program and enrolled 73 water toll acres with a maximum fallowing commitment of 25 acres. Exhibit "B" provides an overview of the Fallowing Program, the landowner agreement and the landowner's obligations related to the Fallowing Program. The landowner agreement will be assigned by the seller to the buyer.

Assignment of the Purchase Agreement:

Bardeen Partners entered into the Purchase Agreement pursuant to provisions included in its Articles of Incorporation on December 4, 2015. Staff recommends that the Board request and authorize acceptance of an assignment of the Purchase Agreement so that IRWD may conclude the transaction. The Purchase Agreement permits Bardeen without the consent of the seller, to assign its interests to IRWD as an entity under common control with Bardeen. Staff recommends that an Assignment and Assumption of Real Property Purchase Agreement, which is attached as Exhibit "C", be approved and executed by IRWD.

FISCAL IMPACTS:

The total purchase cost for the Property is \$1,221,000, plus approximately \$40,000 for closing costs. The cost for the Baseline Property Assessment work including staff and legal time was approximately \$33,000. Sufficient budget exists in Project No. 11764 (5500) to cover the due diligence work. Staff requests the addition of Project 11955 (7302) to the FY 2015-16 capital budget in the amount of \$1,261,000 as shown below to provide for the purchase of the Property and the associated closing costs.

Project No.	Current Budget	Addition <Reduction>	Total Budget
11955(7302)	\$-0-	\$1,261,000	\$1,261,000

ENVIRONMENTAL COMPLIANCE:

Any new lands purchased for water supply purposes would be subject to compliance with the California Environmental Quality Act of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Pursuant to direction by the Board, staff will file a Notice of Exemption for the purchase of the Martin Property within the Counties of Orange and Riverside. The Notice of Exemption states that the District is not presently contemplating

changes in the existing use of the land and therefore no environmental impacts associated with the Property acquisition are expected. The Notice of Exemption states that the District specifically conditions any proposed future change in use of the Property on subsequent CEQA compliance actions.

COMMITTEE STATUS:

This item was discussed the Bardeen Property Ad Hoc Committee on May 19, 2016.

RECOMMENDATION:

THAT THE BOARD, SUBJECT TO BARDEEN PARTNERS, INC. APPROVAL OF THE ASSIGNMENT OF THE PURCHASE AGREEMENT TO IRWD, AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE ASSIGNMENT AND ASSUMPTION OF REAL PROPERTY PURCHASE AGREEMENT ACCEPTING THE ASSIGNMENT OF THE PURCHASE AND SALE AGREEMENT FROM BARDEEN PARTNERS, INC.; AUTHORIZE THE TREASURER TO REQUEST AND EXECUTE ANY NECESSARY AMENDMENT TO THE PURCHASE AND SALE AGREEMENT OR AN ADDENDUM TO THE ESCROW INSTRUCTIONS FOR THE MARTIN PROPERTY TO ALLOW FOR BUYER ABANDONMENT OF THE WELL WITH A CREDIT FOR THE COST OF THE WELL ABANDONMENT TO BE APPLIED TO THE PURCHASE PRICE; FIND THAT ALL MATTERS CURRENTLY IDENTIFIED WITH REGARD TO THE CONDITION OF TITLE, PHYSICAL CONDITION AND SUITABILITY OF THE PROPERTY FOR THE USES CONTEMPLATED ARE ACCEPTABLE; APPROVE THE ADDITION OF PROJECT 11955 (7302) TO THE FY 2015-16 CAPITAL BUDGET IN THE AMOUNT OF \$1,261,000 FOR THE PURCHASE OF THE MARTIN PROPERTY; FIND THAT THE PROPERTY ACQUISITION ONLY IS EXEMPT FROM CEQA; APPROVE THE PROJECT AND AUTHORIZE STAFF TO POST AND FILE THE NOTICES OF EXEMPTION IN ORANGE AND RIVERSIDE COUNTIES; AND AUTHORIZE THE GENERAL MANAGER AND TREASURER AND EACH OTHER OFFICER OF THE DISTRICT, EACH ACTING SINGLY, TO EXECUTE AND DELIVER ANY AND ALL DOCUMENTS, PROGRAM ASSIGNMENTS, CERTIFICATES, INSTRUCTIONS AND INSTRUMENTS NECESSARY OR PROPER FOR CARRYING OUT AND CLOSING THE REAL ESTATE PURCHASE TRANSACTION FOR THE ACQUISITION OF THE PROPERTY.

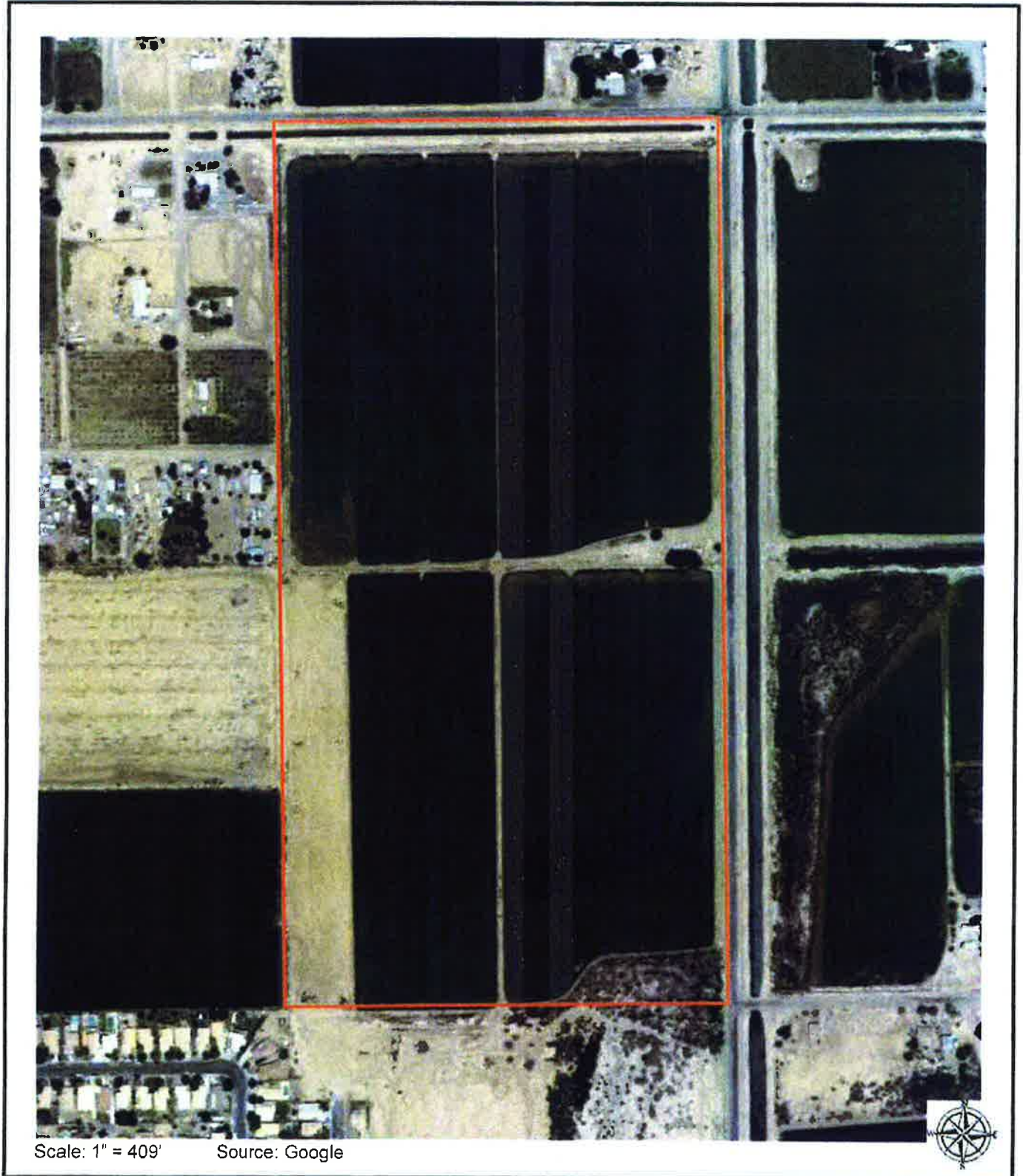
LIST OF EXHIBITS:

Exhibit "A" – Location Map of Martin Property

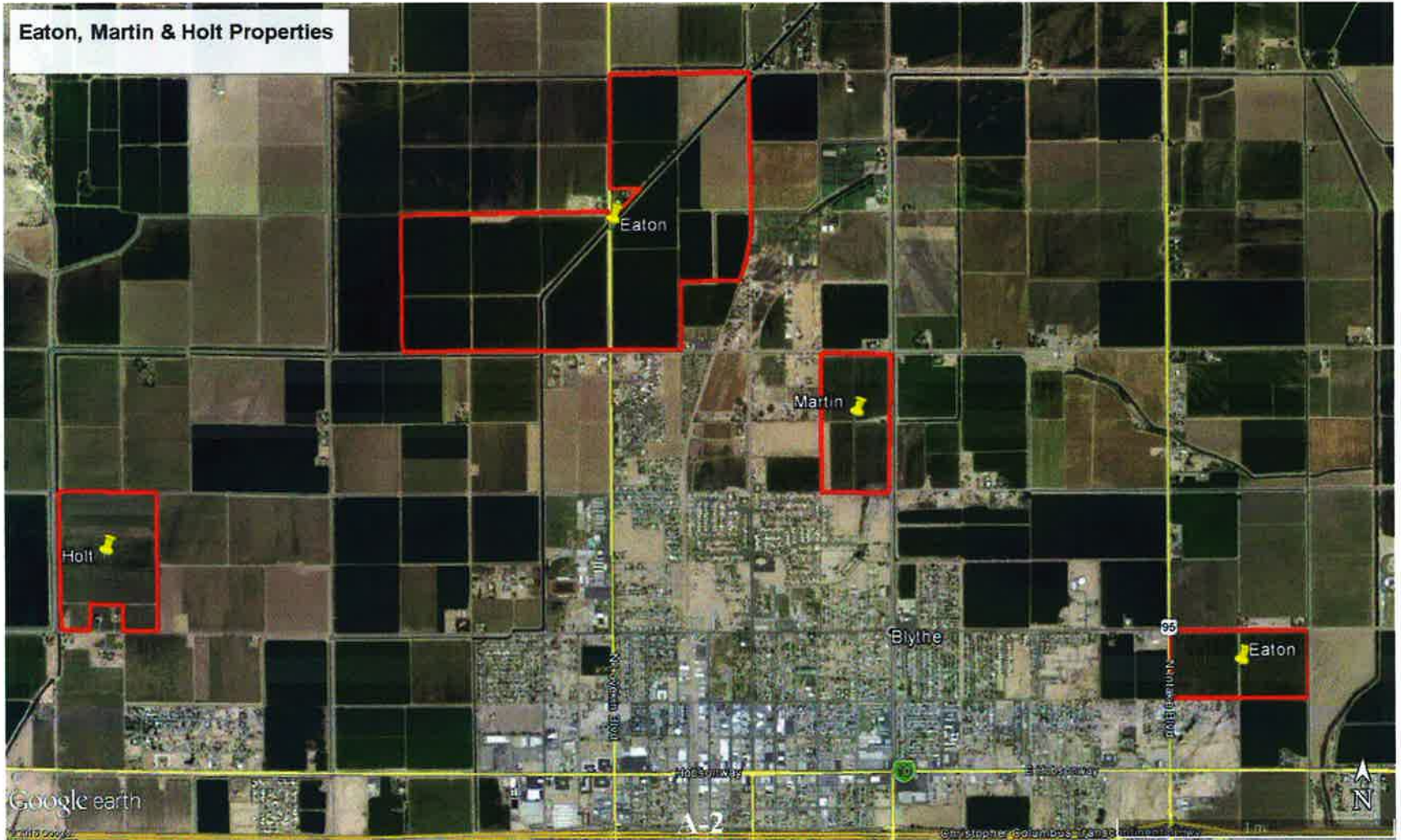
Exhibit "B" – Following Program Agreement Overview

Exhibit "C" – Assignment and Assumption of Real Property Purchase Agreement

MARTIN PROPERTY (80 ACRES)
EXHIBIT "A"



Eaton, Martin & Holt Properties



A-2

EXHIBIT “B”

Following Program Agreement Overview

Metropolitan Water District of Southern California (Metropolitan) and the Palo Verde Irrigation District (PVID) developed a 35-year Land Management, Crop Rotation and Water Supply Program (Following Program), expiring in 2040. Key provisions of the Following Program include:

- Total following under the Program is limited to a maximum of 26,500 acres or 29% of PVID’s irrigated lands with Priority 1 water rights.
- A minimum base of 6,000 acres (7% of irrigated PVID lands) must be fallowed each contract year.
- The maximum area that would be fallowed each contract year would not exceed 24,000 acres in any 25 years and 26,500 acres in any 10 years during the 35 years.
- Eligible land must have Priority 1 Colorado River water and a history of irrigated crop production for two out of five years preceding Program enrollment.

In May 2005, Martin and Metropolitan and PVID entered into the standard Landowner Following Program Agreement (Following Agreement). The Following Agreement includes:

- 73 water toll (WT) acres of Program Qualified Land owned by Martin;
- A Maximum Following Commitment (MFC) of 25 WT acres;
- A minimum following requirement of 11 WT acres;
- As required, Martin granted an easement to Metropolitan for the 73 WT acres;
- Metropolitan makes annual payments directly to Martin for fallowed acres. In 2015, Metropolitan paid \$770.62 per fallowed acre (payment escalates a minimum of 2.5% per year)
- Landowners are required control weed growth and wind erosion on the fallowed areas at their own cost. Metropolitan and PVID staff inspect the fallowed areas each year.
- Metropolitan does not pay for any acreage that is fallowed greater than the MFC, this is considered voluntary fallowing.

At the time Martin entered into the Following Agreement, Martin owned properties with a total of 73 WT acres. The maximum acreage that could be called to fallow is 35% (25 WT acres).

Since the commencement of the Following Agreement, the landowner has fallowed the following amounts:

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Acres	25	11	11	25	25	25	25	6	6	13	25
%	100%	45.16%	45.16%	100%	100%	100%	100%	25%	25%	50%	100%

Per the Following Agreement there is a limit of 10 times that Metropolitan can call for the MFC. After 10 times, the maximum would be reduced to 90.6% of MFC, or 23 WT acres. The first two years of the program (2005, 2006) were not included, so the MFC for the Martin properties has been called 5 times including 2016.

EXHIBIT "C"

ASSIGNMENT AND ASSUMPTION OF REAL PROPERTY PURCHASE AGREEMENT

WHEREAS, Bardeen Partners, Inc., a California nonprofit public benefit corporation, as buyer ("BUYER") and James W. Martin, Successor Trustee of the William and Peggy Martin Family Trust dated July 30, 1998, collectively, as seller ("SELLER") have entered into that certain REAL PROPERTY PURCHASE AGREEMENT (the "Agreement") dated April 12, 2016; and

WHEREAS, Section 8.13 of the Agreement permits BUYER's assignment of its rights and delegation of its duties and obligations under the Agreement, without the consent of SELLER, to an entity that controls, is controlled by or is under common control with BUYER; and

WHEREAS, BUYER wishes to assign all of its interests in the Agreement to Irvine Ranch Water District, a California water district organized under California Water Code Section 34000, *et seq.* ("IRWD"), and IRWD wishes to accept such assignment; and

WHEREAS, BUYER and IRWD are under the control of the same Board of Directors, pursuant to Section 7 of BUYER's bylaws, and BUYER was incorporated for specific purposes including the rendering of financial assistance to IRWD by, among other things, acquiring real property interests for the benefit of IRWD;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, BUYER, as assignor, does hereby assign, grant, bargain, sell, convey and transfer to IRWD all of BUYER's right, title and interest in and to the Agreement.

For good and valuable consideration, the receipt and adequacy of which are hereby acknowledged and further in consideration of the within assignment by BUYER, IRWD, as assignee, does hereby agree to its substitution for BUYER as buyer under the Agreement and agrees to assume and perform all covenants and conditions which are to be performed by BUYER pursuant to the Agreement, except to the extent any such covenants and conditions have been performed prior to the date hereof.

Executed and effective this 23rd day of May, 2016.

BARDEEN PARTNERS, INC.

IRVINE RANCH WATER DISTRICT,

By: _____
Treasurer

By: _____
General Manager