

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

**December 11, 2017**

**PLEDGE OF ALLEGIANCE**

**CALL TO ORDER**                    5:00 p.m., Board Room, District Office  
15600 Sand Canyon Avenue, Irvine, California

**ROLL CALL**                         Directors LaMar, Matheis, Swan, Withers, and President Reinhart

**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.

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**COMMUNICATIONS TO THE BOARD**

1.     A. Written:
- B. Oral:
2.     ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Recommendation: Determine the need to discuss and/or take immediate action on item(s).

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<b><u>CONSENT CALENDAR</u></b>	<b><u>Resolution No. 2017-25</u></b>	<b><u>Items 3-13</u></b>
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| <ol style="list-style-type: none"><li>3.     <u>MINUTES OF REGULAR BOARD MEETINGS</u><br/><br/>Recommendation: That the minutes of the November 27, 2017 Regular Board Meeting be approved as presented.</li><li>4.     <u>RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS</u><br/><br/>Recommendation: That the Board ratify/approve the meetings and events for Steven LaMar and Mary Aileen Matheis as described.</li><li>5.     <u>2017 LEGISLATIVE AND REGULATORY UPDATE</u><br/><br/>Recommendation: Receive and file.</li><li>6.     <u>FY 2016-17 COMPREHENSIVE FINANCIAL REPORT</u><br/><br/>Recommendation: Receive and file the Comprehensive Annual Financial Report subject to nonsubstantive changes.</li></ol> |  |
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**CONSENT CALENDAR - Continued**

**Resolution No. 2017-25**

**Items 3-13**

7. MICHELSON WATER RECYCLING PLANT SECURITY FENCING BID REJECTION

Recommendation: That the Board reject all bids received for the Michelson Water Recycling Plant Security Fencing, Projects 07824, 07825 and 07826, and authorize staff to re-bid the project after revising the project documents.

8. RECYCLED WATER RESERVOIRS FILTRATION BUDGET ADDITION

Recommendation: That the Board authorize the addition of Project 10436 in the amount of \$134,200 to the FY 2017-18 Capital Budget for the Recycled Water Reservoir Filtration, Project 10436.

9. PLANNING AREA 6 PORTOLA SPRINGS NEIGHBORHOOD 5B AND 5C CAPITAL IMPROVEMENTS

Recommendation: That the Board authorize the addition of Planning Area 6 Neighborhood 5B and 5C Improvements, Projects 10100 and 10426, to the FY 2017-18 Capital Budget in the amounts of \$640,000 and \$81,000, respectively, for the design and construction of recycled water improvements under an existing Supplemental Reimbursement Agreement with the Irvine Community Development Company for Planning Area 6 (Portola Springs).

10. TUSTIN LEGACY MOFFETT AND LEGACY ROAD CAPITAL FACILITIES

Recommendation: That the Board authorize the addition of the Moffett Drive and Legacy Road Capital Domestic Water and Recycled Water Improvements, Projects 10260 and 10261 each in the amount of \$643,000, to the FY 2017-18 Capital Budget; and authorize the General Manager to accept the City of Tustin's construction contract with Sukut Construction, LLC in the amount of \$758,337 for the Moffett Drive and Legacy Road Capital Domestic Water and Recycled Water Improvements, Projects 10260 and 10261.

11. VARIANCE NO. 5 TO SYNERGY COMPANIES AGREEMENT FOR WATER-ENERGY GRANT RELATED CUSTOMER PROGRAMS

Recommendation: That the Board authorize the General Manager to execute Variance No. 5 to the Agreement for Non-Consultant Services Between IRWD and Synergy Companies in the amount of \$169,000 to continue providing funding for the One-Stop Shop for Water and Energy Efficiency Program, which will be fully reimbursed through the California Department of Water Resources Water-Energy Grant.

12. ENTERPRISE ASSET MANAGEMENT SUPPORT SERVICES

Recommendation: That the Board authorize the General Manager to execute a Professional Services Variance with Kayuga Solution for a not-to-exceed cost of \$176,800.

<b>CONSENT CALENDAR - Continued</b>	<b>Resolution No. 2017-25</b>	<b>Items 3-13</b>
13. <u>APPROVING DISSOLUTION OF THE IRVINE RANCH WATER DISTRICT IMPROVEMENT CORPORATION</u>  Recommendation: That the Board adopt a resolution approving dissolution of the Irvine Ranch Water District Improvement Corporation.		Reso. No. 2017-
14. <u>NOVEMBER 2017 TREASURY REPORTS</u>  Recommendation: That The Board Receive And File The Treasurer's Investment Summary Report, The Summary Of Fixed And Variable Rate Debt, The Monthly Interest Rate Swap Summary For November 2017, And Disclosure Report Of Reimbursements To Board Members And Staff; Approve The November 2017 Summary Of Payroll Ach Payments In The Total Amount Of \$1,996,983 And Approve The November 2017 Accounts Payable Disbursement Summary Of Warrants 381564 Through 382441 Workers' Compensation Distributions, Wire Transfers, Payroll Withholding Distributions And Voided Checks In The Total Amount Of \$19,270,394.		
<b>ACTION CALENDAR</b>	<b>Resolution No. 2017-25</b>	
15. <u>TERMINATION OF JOINT SERVICES AT CHIQUITA AND LOS ALISOS WATER RECYCLING PLANT</u>  Recommendation: That the Board approve the Term Sheet, subject to non-substantive changes, and authorize the General Manager to execute an agreement based on the Term Sheet.		
16. <u>THREE-YEAR JANITORIAL SERVICES CONTRACT AWARD</u>  Recommendation: That the Board authorize the General Manager to execute a three-year janitorial services contract with American Building Maintenance, Inc. in the amount of \$730,932.71 with its term ending December 31, 2020.		
17. <u>MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES CONTRACT CHANGE ORDER NO. 68</u>  Recommendation: That the Board approve Contract Change Order No. 68 in the amount of \$569,553.19 with Filanc/Balfour Beatty for several mechanical, electrical, instrumentation, and controls items for the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities, Project 04286.		

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**ACTION CALENDAR - Continued**

**Resolution No. 2017-25**

18. SEWER COLLECTIONS SYSTEM INFRASTRUCTURE REHABILITATION SERVICE CONTRACT AWARD

Recommendation: That the Board authorize the General Manager to execute a contract award with Zebron Contracting, Inc. in the amount not to exceed \$990,000 for the period of January 1, 2018 through December 31, 2020.

19. ANNUAL BOARD OF DIRECTORS' FEES

Recommendation: That the Board either accept or decline the five (5%) percent scheduled compensation increase for calendar year 2018.

20. ELECTION OF OFFICERS FOR 2017

Recommendation: That an election be conducted of the President and Vice President of the Board of Directors of the Irvine Ranch Water District.

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**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.

21. A. General Manager's Report

B. Directors' Comments

C. Adjournment

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.

December 11, 2017  
Prepared and  
Submitted by: L. Bonkowski  
Approved by: P. Cook

CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes of the November 27, 2017 Board Meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE NOVEMBER 27, 2017 BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – November 27, 2017 Minutes of Board Meeting

## EXHIBIT "A"

### MINUTES OF REGULAR MEETING – NOVEMBER 27, 2017

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 Reinhart on November 27, 2017 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Water Policy Weghorst, Executive Director of Engineering and Water Quality Burton, Executive Director of Finance and Administration Clary, Director of Public Affairs Beeman, Public Affairs Manager Fabris, Executive Director of Operations Sheilds, Director of Human Resources Roney, Director of Treasury and Risk Manager Jacobson, Director of Water Operations Zepeda, Director of Water Resources Sanchez, Government Relations Officer Compton, Legal Counsel Smith, Secretary Bonkowski, Principle Engineer Malloy, Principle Engineer Cortez, Mr. Joe Lam, Mr. James Pasmore, Mr. James Clark, Ms. Laura Thomas, Mr. Hao Bui, Ms. Connie Ho and Mr. Bruce Newell.

WRITTEN AND ORAL COMMUNICATIONS: None.

ITEMS TOO LATE TO BE AGENDIZED: None.

### PRESENTATION

Mr. James Pasmore, representative of Southern California Edison, presented an incentive check for the District's successful implementation of the LEAP –MBR project in the amount of \$139,047.84 and thanked staff for their efforts. Mr. Pasmore said that the Irvine Ranch Water District and SCE first started working on this project back in 2015. He said that General Electric had recently developed a proprietary enhancement for the Membrane Bioreactor system that was installed at the Michelson Water Reclamation Plant in 2014. He said that the technology allows for more efficient cleaning of the membranes, insuring lower energy usage over time. He further said that this energy savings represents 628 tons of avoided GHG emissions.

### CONSENT CALENDAR

Director Swan asked that Item No. 4 be moved to the Action Calendar as he would like to add a meeting. There being no objections, item No. 4 was moved accordingly. On MOTION by Withers, seconded and unanimously carried, CONSENT CALENDAR ITEMS 5 AND 6 WERE APPROVED AS FOLLOWS:

#### 5. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the November 13, 2017 Regular Board Meeting be approved as presented.

## CONSENT CALENDAR (CONTINUED)

### 6. OCTOBER 2017 TREASURY REPORT

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate Swap Summary for October, and Disclosure Report of Reimbursements to Board members and staff; approve the October 2017 Summary of Payroll ACH payments in the total amount of \$1,783,312 and approve the October 2017 Accounts Payable Disbursement Summary of Warrants 380838 through 381563, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$32,528,998.

## ACTION CALENDAR

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

Director Swan reported that he was invited to attend a desalination plant tour on October 25, 2017 while he was on vacation in Perth, Australia, and asked that this item be approved by the Board. There being no objection, on MOTION by Withers, seconded by Matheis, **THE BOARD RATIFIED/APPROVED EVENTS FOR MARY AILEEN MATHEIS, PEER SWAN AND STEVE LAMAR AS DESCRIBED.**

### MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES - VARIANCES AND BUDGET INCREASE

General Manager Cook reported that Filanc/Balfour-Beatty (FBB) is constructing the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities (Biosolids Project). According to FBB's October 2017 Schedule Update, the Biosolids Project will be extended to May 2019. The services of various consultants are needed to supplement the construction management team of the Biosolids project through this time extension.

Executive Director of Engineering and Water Quality Burton reported that FBB started paving of the site which is a very positive step as the site is appearing more completed. Mr. Burton said that Black & Veatch has provided contract administration, construction inspection, and construction management services since 2013. He said that Variance No. 7 is for additional submittal reviews; additional Request for Information reviews; electronic operations and maintenance manual development, installation, and training; start-up testing coordination; and record drawings and atlas map updating.

Mr. Burton said that Variance No. 2 with Arcadis, Inc. is for continued negotiations and preparation of contract change orders, providing as-needed construction management support, assisting with resolving project cost and delay claims submitted by FBB, and assisting with project close-out activities.

Mr. Burton said that HDR Engineering has provided construction inspection since the start of the Biosolids project. He said that Variance No. 3 will provide construction inspection services through April 30, 2019.

Mr. Burton said that Variance No. 2 with EI&C Engineering, Inc. will include continued technical oversight of the process control system (PCS) development which entails witnessing various computer software tests at the manufacturer's panel fabrication facility, bench tests, and field tests. He said that additionally, EI&C will provide automation staff to supplement the start-up testing when it is anticipated that multiple start-up tests are scheduled simultaneously as well as and technical writing support to prepare the operation manuals and associated training presentations related to the PCS.

Mr. Burton said that with the approval of Contract Change Order No. 65 in October 2017, an increase in the capital budget for the Biosolids Project is required. He said that an additional budget is being requested to fund the future CCOs for which individual Change Requests (CRs) have been submitted by FBB. He said that these CRs are being negotiated and are estimated to be worth approximately \$3,000,000. This does not include any CRs submitted by FBB for extended or expanded overhead.

Mr. Burton said that IRWD costs also need to be funded by the budget increase for the extended project duration covering costs for construction management staff, outside specialty legal and claims analysis staff to help resolve more complex construction items, Operations and Maintenance staff during start-up and training, and the MWRP construction trailer and supplies for an estimated cost of \$1,500,000.

Director Withers reported that this item was discussed in length at the Engineering and Operations Committee held on November 21, 2017. Director LaMar apologized for not being in attendance at this meeting. Director Swan inquired about future construction change orders as noted under the Fiscal Impacts and made a recommendation for categorizing this item. Following discussion, on MOTION by Withers, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 7 WITH BLACK & VEATCH IN THE AMOUNT OF \$3,190,018 FOR SUPPLEMENTAL CONTRACT ADMINISTRATION, CONSTRUCTION PHASE, AND START-UP AND COMMISSIONING SERVICES; AUTHORIZED THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 2 WITH ARCADIS, INC. IN THE AMOUNT OF \$1,451,173 FOR SUPPLEMENTAL CONSTRUCTION INSPECTION, CONSTRUCTION MANAGEMENT, AND DOCUMENT CONTROL SYSTEM SERVICES; AUTHORIZED THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 3 WITH HDR ENGINEERING, INC. IN THE AMOUNT OF \$576,739.28 FOR SUPPLEMENTAL CONSTRUCTION INSPECTION; AUTHORIZED THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 2 WITH EI&C ENGINEERING, INC. IN THE AMOUNT OF \$958,720 FOR SUPPLEMENTAL PROCESS CONTROL SYSTEM CONSTRUCTION MANAGEMENT SERVICES, START-UP TESTING, AND DEVELOPMENT OF PROCESS CONTROL SYSTEM OPERATION MANUALS AND ASSOCIATED TRAINING PRESENTATIONS; AND AUTHORIZED A BUDGET INCREASE IN THE AMOUNT OF \$11,500,000, FROM \$216,073,100 TO \$227,573,100, TO THE FY 2017-18 CAPITAL BUDGET FOR THE MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES, PROJECT 04286.

## SANTIAGO CREEK DAM OUTLET TOWER REPLACEMENT BUDGET INCREASE AND CONSULTANT SELECTION

General Manager Cook reported that the Irvine Ranch Water District (IRWD) and Serrano Water District (SWD) have been working with the Division of Safety of Dams (DSOD) to address concerns regarding the seismic stability of the Santiago Creek Dam and the outlet tower, and said that after reviewing 10 alternatives for replacement of the tower, staff selected, and the DSOD concurred with the alternative to construct a new sloped outlet pipe on the dam face or adjacent embankment.

Executive Director of Engineering and Water Quality Burton reported that staff distributed a Request for Proposal to six geotechnical engineering firms to provide Preliminary and Final Design services for the new outlet tower including AECOM, Black and Veatch, Bart Patton Consulting, Genterra, GEI Consulting, and Kleinfelder. Mr. Burton said that Black and Veatch, Kleinfelder and Bart Patton Consulting declined to submit proposals citing lack of resources for the project or proposal. He said that proposals were received from AECOM, GEI Consulting, and Genterra. He said that both IRWD and SWD reviewed and evaluated the proposals based on the consultants' team, project approach, and relevant experience, and recommends the selection of AECOM based on its responsiveness to the Request for Proposal, past performance, and best value. He further said that the cost split between IRWD and SWD will be in accordance with the Irvine Lake ownership agreements.

Director Swan said that this item was reviewed by the SWD/IRWD Ad Hoc Committee at length which consisted of two Board members from each agency on November 20, 2017 along with staff. He said that with the tower replacement, the intakes will be investigated, and if necessary, improvements will also be made accordingly. He said that with the current practice, SWD will be invoiced in two years with SWD's share at 50% of the total costs. On MOTION by Swan, seconded and unanimously carried, THE BOARD AUTHORIZED A BUDGET INCREASE IN THE AMOUNT OF \$1,300,000 FOR PROJECT 01813, FROM \$568,700 TO \$1,868,700; AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT IN THE AMOUNT OF \$787,625 WITH AECOM TO COMPLETE THE PRELIMINARY AND FINAL DESIGNS FOR THE SANTIAGO CREEK DAM OUTLET TOWER REPLACEMENT, PROJECT 01813.

## GENERAL MANAGER'S REPORT

General Manager Cook reported that at the last Strategic Planning Workshop, one of the topics discussed was OCSD issues, including extending the lease for biosolids handling, billing issues, pension costs, and flow monitoring, and said that all of these issues are resolved. Additionally, he said that OCSD staff also assisted staff with a water quality permitting issue.

Mr. Cook reported that management staff met a few weeks ago to prepare for the upcoming Strategic Planning Workshop on December 19, 2017, and he was looking forward to presenting new programs to the Board suggested during that meeting.

## DIRECTORS' COMMENTS

Director Matheis reported that she attended a WaterStar Certification presentation to the Hyatt House, an ACC-OC Thanksgiving reception at the San Joaquin Marsh, and an Irvine Community Thanksgiving breakfast that the District sponsored.

Director Withers reported on the opening of a Marriott hotel in the Irvine Spectrum.

Director LaMar reported on his attendance at an OCWA lunch meeting, an ACC-OC Thanksgiving reception, two ACWA Board meetings, and a CalEPA meeting with State Board Chairwomen Felicia Marcus relative to amendments to legislation.

Director Swan reported on his attendance at an ACWA JPIA meeting today, an SWD/IRWD Ad Hoc Committee meeting, and a desalination plant tour in Perth, Australia while on vacation.

Director Reinhart reported on his attendance at an ACC-OC Thanksgiving reception.

## CLOSED SESSION

President Reinhart reported that a Closed Session would be held as follows:

Closed Session: CONFERENCE WITH LEGAL COUNSEL RELATIVE TO EXISTING LITIGATION – Government Code Section 54956.9(d)(1) IRWD v. OCWD Case No. 30-2016-00858584-CU-WM-CJC).

## OPEN SESSION

Following the Closed Session, the meeting was reconvened with five Board members present. President Reinhart said there was no action to report.

## ADJOURNMENT

There being no further business, President Reinhart adjourned the meeting at 7:10 p.m.

APPROVED and SIGNED this 11th day of December, 2017.

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President, IRVINE RANCH WATER DISTRICT

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Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

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Alfred Smith, Legal Counsel – Nossaman LLP

December 11, 2017  
Prepared and  
Submitted by: L. Bonkowski  
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.

Event/Meeting

Steven LaMar

December 1	IRWD Briefing for State Water Resources Control Board Member Joaquin Esquivel
December 14-15	California Environmental Dialogue Plenary, Sacramento

Mary Aileen Matheis

November 15 Nov. 27 – Dec. 1	WaterStar Certification Presentation to Hyatt House, Irvine ACWA 2017 Fall Conference, Anaheim
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RECOMMENDATION:

THAT THE BOARD RATIFY/APPROVE THE MEETINGS AND EVENTS FOR STEVEN LAMAR AND MARY AILEEN MATHEIS AS DESCRIBED.

LIST OF EXHIBITS:

None.

December 11, 2017

Prepared and

submitted by: C. Compton *CC*

Approved by: Paul A. Cook *PA Cook*

## CONSENT CALENDAR

### 2017 LEGISLATIVE AND REGULATORY UPDATE

#### SUMMARY:

This report provides an update on legislative or regulatory activities related to IRWD priorities since the end of the first year of the 2017-2018 legislative session. As legislation and regulations continue to develop, staff will provide updates and recommendations to the Water Resources Policy and Communications Committee and the Board, as appropriate.

Staff recommends that the Board receive and file this update.

#### BACKGROUND:

September 15, 2017, was the last day of the 2017 legislative session and the last day for the Legislature to act on regular session bills before the Interim Recess. The Governor had until October 15 to sign or veto legislation passed by the Legislature this year. The State Legislature will reconvene from the Interim Recess on January 3, 2018, unless a special session is called. Legislators will have until the end of January to act upon two-year bills from 2017.

#### State Budget Update:

##### *October Revenue Numbers:*

On November 9, 2017, State Controller Betty Yee released her monthly report on the State's finances. She announced that the State took in \$6.74 billion during the month of October. This was \$38.7 million lower than the projections contained in the FY 2017-2018 Budget Act.

Despite October's lower revenues, the Controller reported:

“For the first four months of the 2017-18 fiscal year, total revenues of \$32.65 billion are outpacing budget projections by \$544.8 million, or 1.7 percent, with all of the “big three”—personal income, retail sales and use, and corporation taxes—in the black.

Sales tax receipts of \$936.1 million for October were \$45.0 million higher than anticipated in the budget. For the fiscal year, sales tax receipts of \$6.86 billion are \$195.3 million above budget estimates.

Personal income tax (PIT) receipts for October totaled \$5.38 billion, falling \$49.8 million short of budget estimates. For the fiscal year to date, total PIT receipts of \$22.97 billion are \$166.4 million above assumptions in the 2017-18 Budget Act.

Corporation tax receipts for October totaled \$285.6 million, \$78.1 million below projections—or 21.5 percent—after beating expectations for three consecutive months.

For the fiscal year, corporation tax receipts of \$1.81 billion are outpacing budget projections by 8.6 percent.”

The State’s outstanding loan balance was \$19.54 billion, which was \$1.26 billion more than budget estimates.

2017 State Legislative Update:

*Long-Term Water-Use Efficiency Framework:*

Since the beginning of the year, staff has worked with various stakeholders and the Association of California Water Agencies (ACWA) on long-term water use efficiency and drought planning legislation. As reported to the Board, at the end of session there remained two active bills on “Making Water Conservation a California Way of Life”— AB 1668 (Friedman, D-Glendale) and SB 606 (Hertzberg, D-Van Nuys/Skinner, D-Oakland). SB 606 and AB 1668 are two-year bills. SB 606 is currently located on the Assembly Third Reading File and AB 1668 is in the Senate Rules Committee.

As part of the District’s efforts on the “Making Water Conservation a California Way of Life” legislation, IRWD took an “oppose unless amended” position on AB 1668 and SB 606 at the end of session and signed onto the water community’s “oppose unless amended” letter for the two bills, which included amendments being sought by the coalition. Over the legislation recess, staff has continued to meet with various stakeholders on the bills in order to seek amendments requested by the water community that would improve the proposals currently before the Legislature and ensure they can be implemented consistent with the intent of the authors and the Administration. Attached in Exhibit “A” is a list of the amendments being sought by the water community coalition on AB 1668 and SB 606.

Staff will be available to provide an update on the ongoing discussions taking place with regard to the long-term water use efficiency and drought planning legislation.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on December 5, 2017.

RECOMMENDATION:

RECEIVE AND FILE.

LIST OF EXHIBITS:

Exhibit "A" – Summary of Requested Water Community Amendments

## EXHIBIT "A"

### Summary of Requested Water Community Amendments (as of November 15, 2017)

Issue	Requested Amendment
Indoor Water Use Standard	That the legislation require the evaluation of and report on the impacts of reducing the indoor water use standard below 55 GPCD on water, wastewater and recycling/reuse systems, infrastructure, operations and supplies.
Outdoor Water Use Standard	<p>That the language in the legislation be made clearer so that there is no confusion as to what the principles of MWEL0 means and what factors the SWRCB shall consider when setting the standards for both outdoor residential and outdoor CII water use.</p> <p>One approach to providing clarification is as follows: <i>“The standards shall incorporate the principles of and be set to provide at least an equivalent level of water use as the evapotranspiration adjustment factors provided in the model water efficient landscape ordinance as adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code) in 2015.”</i></p>
Water Loss	<p>That the legislation exclude water loss from the urban retail water use objective as existing law already addresses this issue. Under SB 555, the SWRCB is required to adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses.</p> <p>Also, that water use and loss cause by a disaster (e.g. fire or earthquake) be expressly excluded from the compliance calculation.</p>
Variances	That the legislation include language requiring the SWRCB to adopt variances/processes for calculating variances for a variety of anomalous situations, including irrigation with recycled water in areas having high levels of total dissolved solids, seasonal populations, environmental uses, etc. The water community understands that whether a specific variance is applicable to an urban retail water supplier will be a factual determination.
Data	To make retail-level water budgets effective and implementable, that the legislation require DWR to provide the data urban retail water suppliers need to calculate an urban water use objective at regular intervals, and that the data provided be reasonably accurate.
Reporting Compliance	To ease the annual reporting burden on urban retail water suppliers, as has been done in other bills (e.g. SB 555), that the legislation allow suppliers to report water use on either a fiscal or calendar year basis. To allow for this and, if water losses remain a factor in the compliance calculation, to allow for data from water loss audits to be used in the compliance calculation, that the annual reporting deadline be moved to November 1 of each year.

Providing for Unique Situations Affecting Calculation of an Urban Water Use Objectives	That the legislation grant DWR or the SWRCB the authority to develop alternative methods for calculating an urban water use objective where unique conditions make it technically, economically, or administratively infeasible to calculate the objective using the standard method developed.
CII Performance Measures	That feasibility and cost-benefit be listed in the legislation as the key factors DWR and the SWRCB must consider in the development of performance measures that urban water suppliers will be asked to implement for the CII sector.
Separation of Mixed CII Meters	That recommendations related to separating mixed CII meters only be applicable where feasible and cost-effective.
Enforcement	That the legislation be modified to ensure a glide path approach is taken to enforcement and that the enforcement provisions be modified to incorporate remedial actions plans prior to conservation orders and fines. And that conservation orders and fines be a result of a Supplier not taking the actions detailed in any SWRCB approved remedial action plan.
Potable Reuse Credit	That the legislation be amended to include a potable reuse credit cap higher than 10%.
Recycled Water Irrigation Sites	That the legislation include a recognition that the outdoor irrigation standard for site irrigated with recycled water should be set at no less than the standard contained in MWEL0.
Drought Resilient Water Supplies	That, in a manner that does not limit the Governor's power and authority to respond to emergencies, the legislation expressly provide that upon proclamation of a drought emergency that the: <ul style="list-style-type: none"> <li>• The SWRCB shall defer to local adopted water shortage contingency plans to the extent practicable and allow suppliers to implement their plans based on the level of shortage being experienced locally; and</li> <li>• Recycled water (including potable reuse), emergency, desalination, and other drought resilient supplies identified in an urban water supplier's water shortage contingency plan not be restricted during a declared drought emergency, but instead used efficiently for beneficial uses.</li> </ul>
Drought Planning	That the planning horizons for urban water management plans, water shortage contingency plans, drought risk assessments, and water supply and demand assessments be clearly defined and that vague language, such as "or more", which leaves the planning horizon opened be removed from the legislation.

December 11, 2017

Prepared by: Eileen Lin 

Submitted by: Cheryl Clary 

Approved by: Paul Cook 

## CONSENT CALENDAR

### FY 2016-17 COMPREHENSIVE ANNUAL FINANCIAL REPORT

#### SUMMARY:

The District's auditor, Davis Farr LLP has completed its annual audit of the District's financial statements for the Fiscal Year (FY) ended June 30, 2017. As stated in its report, Davis Farr concluded that in all material aspects, the statements fairly present the District's financial position as of June 30, 2017 and conform with generally accepted accounting principles.

A draft of the Comprehensive Annual Financial Report (CAFR), including the Introductory Section, audited financial statements, accompanying auditor's report, Management's Discussion and Analysis, and Statistical Section is attached as Exhibit "A".

#### BACKGROUND:

At the November Finance and Personnel Committee meeting, Davis Farr presented its required Auditor Communication pursuant to Statement on Auditing Standards 114 *The Auditor's Communication with Those Charged with Governance*. This letter, attached as Exhibit "B", reflects the auditor's understanding of key management assumptions and practices and indicates that there were no disagreements with management during the scope of the audit. The auditors have also provided a *Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards*, attached as Exhibit "C", which states that the audit did not identify any material weakness deficiencies in internal control. In addition, the report states that the result of the audit disclosed no instances of noncompliance or other matters that were required to be reported under *Government Auditing Standards*.

#### The IRWD Comprehensive Annual Financial Report:

The FY 2016-17 CAFR is being prepared for the fourteenth consecutive year by the District. All of the District's previous CAFRs have won awards from the Government Finance Officers Association (GFOA), which encourages state and local governments to prepare and publish expanded financial reports in conformity with generally accepted accounting principles (GAAP) and provides awards to recognize contributions to the practice of government finance that exemplify outstanding financial management. The awards stress practical, documented work that offers leadership to the profession and promotes improved public finance.

Staff will continue to produce an enhanced electronic version with key references hyperlinked throughout the document. The CAFR will be available on the District's website.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on November 14, 2017.

FISCAL IMPACTS:

None.

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:

RECEIVE AND FILE THE COMPREHENSIVE ANNUAL FINANCIAL REPORT SUBJECT TO NONSUBSTANTIVE CHANGES.

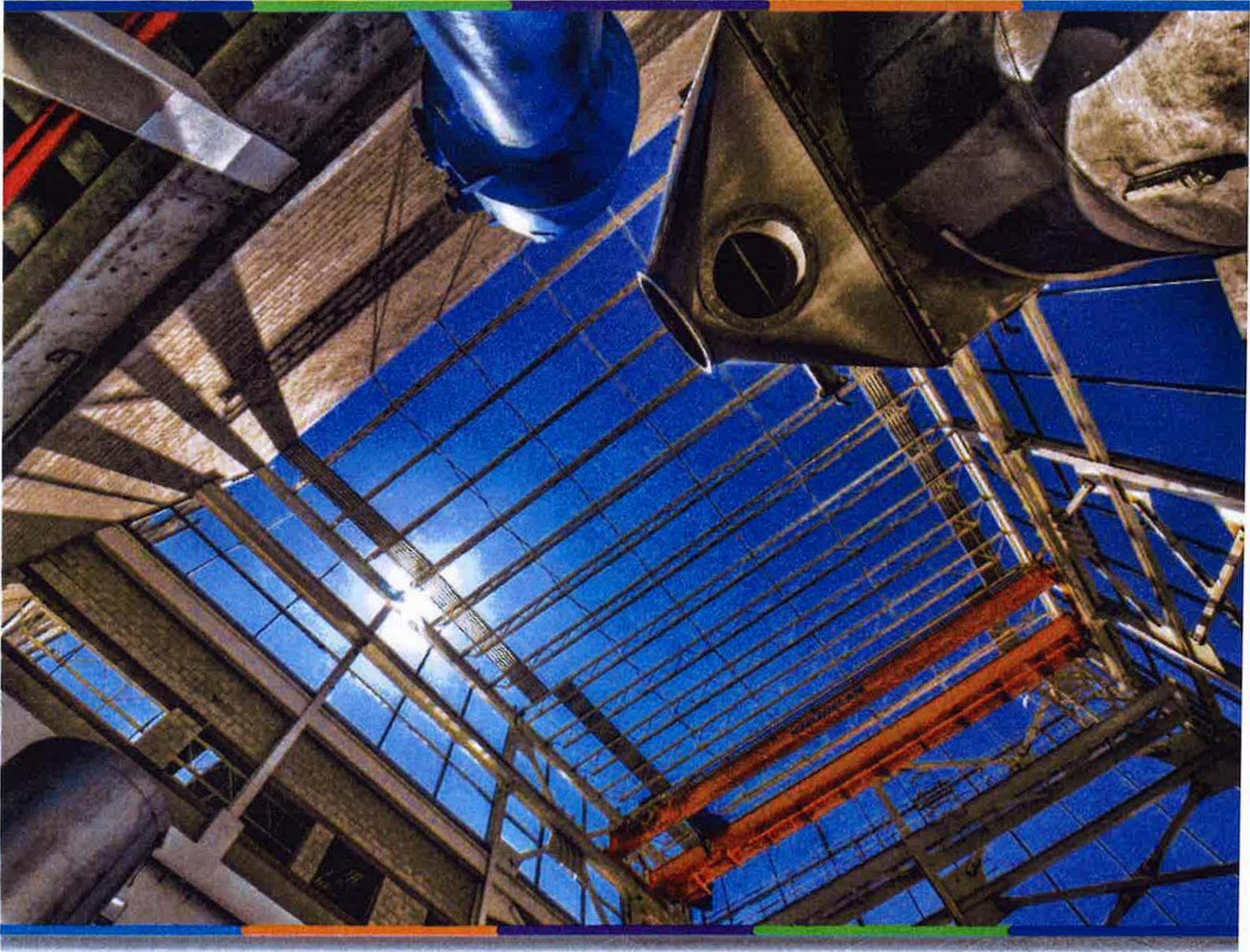
LIST OF EXHIBITS:

- Exhibit "A" – Draft FY 2016-17 Comprehensive Annual Financial Report
- Exhibit "B" – SAS 114 Auditor's Communication with Those Charged with Governance from Davis Farr LLP
- Exhibit "C" – Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards from Davis Farr LLP

EXHIBIT "A"



Irvine Ranch  
WATER DISTRICT



Irvine Ranch Water District  
**COMPREHENSIVE ANNUAL  
FINANCIAL REPORT**  
For Fiscal Year Ended June 30, 2017

EXHIBIT "A"

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# Comprehensive Annual Financial Report

For fiscal year ended June 30, 2017

Irvine Ranch Water District  
Irvine, California

## Board of Directors

Douglas J. Reinhart, President  
Peer A. Swan, Vice President  
Steven E. LaMar  
Mary Aileen Matheis  
John B. Withers

## General Manager

Paul A. Cook

## Prepared by:

Irvine Ranch Water District  
Finance Department

EXHIBIT "A"

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# INTRODUCTORY SECTION

EXHIBIT "A"

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INTRODUCTION  
SECTION

## Table of Contents

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### Introductory Section

- 1 Letter of Transmittal
- 2 Profile of Irvine Ranch Water District
  - 2 Overview
  - 2 People
  - 3 Services
- 5 Infrastructure Assets
- 6 2017 Accomplishments
- 7 Drought and Water Use Efficiency
- 8 Legislative and Regulatory Affairs
- 9 Financial Plan
- 10 User Rates & Charges
- 12 Factors Affecting Financial Condition
- 13 Financial Planning & Budgeting
- 14 Pension Funding
- 15 Cash Management Policies and Practices
- 15 Real Property Investments
- 15 Debt Management Policies and Practices
- 17 Risk Management
- 17 Major Initiatives
  - 17 Water Supply Reliability
  - 19 Expanded Water Recycling Options, Resource Recovery and System Reliability
  - 20 Community Education and Outreach
- 22 Awards and Acknowledgments
- 23 List of Principal Officials
- 24 Organizational Chart by Function
- 25 GFOA Certificate of Achievement for Excellence in Financial Reporting

### Financial Section

- 30 Independent Auditors' Report
- 33 Management's Discussion and Analysis (Required Supplementary Information)
- 44 Basic Financial Statements:
  - 45 Statement of Net Position
  - 46 Statement of Revenues, Expenses and Changes in Net Position
  - 47 Statement of Cash Flows
  - 49 Statement of Fiduciary Net Position – Fiduciary Fund
  - 50 Statement of Changes in Fiduciary Net Position – Fiduciary Fund
- 51 Notes to the Basic Financial Statements
- 98 Required Supplementary Information:
  - 98 Schedule of Changes in the Net Pension Liability and Related Ratio
  - 99 Schedule of Contributions

### Statistical Section

- 106 Net Position
- 108 Changes in Net Position
- 110 Water Sold by Type of Customer
- 112 Water Rates
- 113 Largest Water Customers
- 114 Sewer Rates
- 115 Largest Sewer Customers
- 116 Ad Valorem Property Tax Rates
- 117 Assessed Valuation and Estimated Actual Value of Taxable Property and 1% Property Tax Revenue
- 118 Direct and Overlapping Property Tax Rates
- 119 Principal Property Taxpayers
- 120 Property Tax Collections/Delinquency
- 122 Outstanding Debt by Type
- 124 Outstanding General Obligation Bonds by Improvement District
- 125 Ratio of General Obligation Debt to Assessed Values
- 128 Ratio of Annual Debt Service Expenditures to Total General Expenditures
- 129 Debt Service Coverage
- 131 Principal Employers
- 132 Demographic and Economic Statistics
- 133 Operating Indicators by Function - Water and Sewer Service Connections
- 134 Operating Indicators by Function - New Service Connections
- 135 Operating Indicators by Function - Average Monthly Usage
- 136 Source of Supply and Water Deliveries / Sales
- 137 Capital Asset Statistics
- 138 Full-Time Employees

EXHIBIT "A"

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December 11, 2017

To The Board of Directors,  
Irvine Ranch Water District:

Management of the Irvine Ranch Water District (IRWD or the District) has prepared a Comprehensive Annual Financial Report of IRWD for the fiscal year ended June 30, 2017. This document, which contains a complete set of basic financial statements, is presented in conformity with generally accepted accounting principles (GAAP) and audited in accordance with generally accepted auditing standards by a firm of licensed certified public accountants. State law requires that all special-purpose local governments publish these basic financial statements within six months of the close of the agency's fiscal year.

This report contains management's representations concerning the finances of the District. Management assumes full responsibility for the completeness and reliability of the information contained in this report. To provide a reasonable, rather than absolute, basis for making these representations, IRWD management has established a comprehensive framework of internal controls. These controls are designed to protect the District's assets from loss, theft, or misuse, and to ensure sufficiently reliable information for the preparation of the District's basic financial statements in conformity with GAAP. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the basic financial statements are free of any material misstatements. As management, we assert that this financial report is complete and reliable in all material respects.

The District's basic financial statements have been audited by Davis Farr LLP, a firm of licensed certified public accountants. The goal of the independent audit was to provide reasonable assurance that the basic financial statements of the District for the fiscal year ended June 30, 2017 were free of material misstatements. The independent audit involved examining, on a test basis, evidence supporting the amounts and disclosures in the basic financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. The independent auditor rendered an unmodified opinion that the District's basic financial statements for the fiscal year ended June 30, 2017 are fairly presented in conformity with GAAP. The independent auditor's report is presented as the first component of the financial section of this report.

A profile of the District is presented in this Introductory Section. In the Financial Section, Management's Discussion and Analysis (MD&A) immediately follows the independent auditor's report and provides an overview and analysis of the basic financial statements. This letter of transmittal and introduction is designed to complement the MD&A and should be read in conjunction with it.

## Profile of Irvine Ranch Water District

### Overview

Irvine Ranch Water District was established in 1961 as a California Water District under the provisions of the California Water Code. As a special district, IRWD focuses on four primary services - providing potable water, collecting sewage, producing and distributing recycled and other non-potable water, and implementing urban runoff source control and treatment programs.

IRWD is an independent public agency governed by a five-member, publicly elected Board of Directors. The members of the Board each have varied professional backgrounds, coupled with an average tenure for the Board members of approximately 23 years. The District is a leader in developing and implementing resource management initiatives such as water recycling, urban runoff and water conservation. The District is a pioneer in financial management practices such as variable rate debt financing and long-term infrastructure replacement program development and funding.

The District serves a 181 square mile area, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange and Lake Forest, as well as certain unincorporated areas of Orange County. Extending from the Pacific Coast to the top of the foothills of eastern Orange County, the District's region is semi-arid with a mild climate and an average annual rainfall of approximately 12 inches. The total estimated daytime population served is in excess of 500,000 includes approximately 111,000 water and 106,000 sewer service and recycled water connections. The number of service connections has increased by approximately 17% over the last ten years.

The District provides its core services to its customers by focusing on the following areas:

- *Operational Reliability* – having multiple sources of water supply and various sewage treatment alternatives to ensure reliable services.
- *Organizational Strength* – having professional staff work in close collaboration with the Board of Directors striving to exceed the expectations of our customers.
- *Long-Term Financial Planning* – ensuring sufficient funds are available to construct, operate, and replace facilities, while maintaining competitive rates now and in the future.

### People

The District employs approximately 366 staff who are responsible for daily operations and implementing strategic objectives and policies set forth by the Board. The District actively promotes the training and education of employees to increase effectiveness and retention. The average tenure of District employees is approximately 9 years.



**Sand Canyon Headquarters Building**

## Services

The District is functionally organized into four core service areas:

### Drinking or "Potable" Water System

For many years, the District received virtually all of its drinking water from imported sources. To minimize this dependence on imported water, in the early 1980's, the District developed a series of local wells known as the Dyer Road Wellfield to access high quality groundwater from the Orange County Groundwater Basin, managed by the Orange County Water District (OCWD).

The District also operates and treats numerous groundwater wells. In Fiscal Year (FY) 2016-17, local groundwater accounted for 56% of its total water supply.

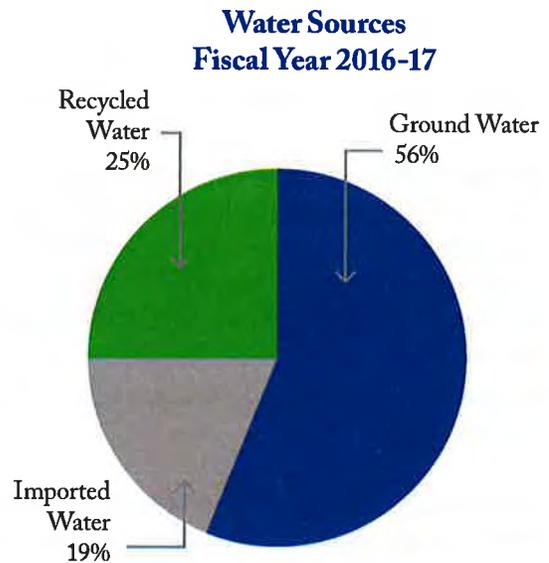
Groundwater currently is significantly less expensive, more reliable, and less energy intensive than imported water that is transported over hundreds of miles into Southern California and subsequently treated.

The District purchased 19% of its water supply in FY 2016-17 from the Metropolitan Water District, the region's wholesale water supplier. This water is imported from both the Colorado River, which is transported approximately 240 miles through deserts and over mountain ranges to Southern California, and from the Delta, which is transported approximately 400 miles from Northern California.

### Recycled and Non-Potable Water Systems

The District treats sewage to provide water for irrigation, commercial, industrial and agricultural purposes which further reduces its reliance on the more expensive imported water and increases its system reliability. Sewage from the community is collected and recycled to California State Water Resources Control Board Title 22 standards at the Michelson Water Recycling Plant and the Los Alisos Water Recycling Plant, which have the combined capacity to produce nearly 33.5 million gallons of tertiary recycled water per day of which the District currently utilizes approximately 21 million gallons per day.

Once treated, the recycled water is used throughout the service area and in FY 2016-17 accounted for approximately 25% of the District's total water supply. Approximately 85% of all business and community landscaped areas (parks, school grounds, golf courses, street medians, etc.) in the District's service area are irrigated with recycled water. The District also provides recycled water for various industrial and commercial uses. IRWD's goal is to recycle its sewage flows whereby recycled water will represent 25% to 30% of its total water supply after the District is fully developed.



## EXHIBIT "A"

The District operates a non-potable system which includes 5 wells, 5 open reservoirs and 11 tanks that store water for non-potable uses, including a majority ownership in the Irvine Lake, a 25,000 acre-feet reservoir. In total, the District has approximately 4,500 acre feet of active recycled water storage capacity.

### **Sewage Collection and Treatment System**

The District has an extensive network of gravity sewers, force mains, sewage lift stations, and siphons that convey sewage to two District-owned Resource Recovery plants or to capacity owned at the Orange County Sanitation District. In FY 2016-17, the District treated approximately 76% of its sewage while the remainder of the sewage collected by the District was diverted to the Orange County Sanitation District treatment facilities. The District plans to expand its treatment capacity when necessary to serve its growing population. This expansion is discussed in more detail in the *Major Initiatives* section of this document.

### **Urban Runoff Source Control and Treatment System**

IRWD is statutorily authorized to control and treat urban runoff, and conducts various projects and programs as part of an effort to protect water quality in the San Diego Creek watershed. In the 1990s, the District constructed wetlands at the San Joaquin Marsh where natural biological processes remove a substantial pollutant load from San Diego Creek dry weather flow before it reaches environmentally sensitive Upper Newport Bay State Ecological Reserve. The District operates a regional urban runoff treatment network known as the Natural Treatment System (NTS). As of June 30, 2017, the NTS consists of 27 constructed wetland treatment sites located throughout the San Diego Creek Watershed and some outside of the IRWD service area with several more currently under construction. In addition, IRWD has recently added an urban runoff diversion facility along Peters Canyon Wash, which pumps runoff resulting from selenium-rich high groundwater into OCSD's sewers, eventually becoming part of OCWD's groundwater replenishment system.



**San Joaquin Marsh**

## Infrastructure Assets

The District builds and maintains significant capital infrastructure in order to provide superior service to its customers. The table below provides key information relating to its water and sewer system assets from 2008 to 2017.

Infrastructure Assets		
	2008	2017
<b>Potable System</b>		
Miles of Water Line	1,132	1,810
Number of Storage Tanks	37	36
Maximum Storage Capacity (acre feet)	456	456
Number of Pumping Plants	38	39
Number of Wells	24	27
Well Production Capacity (cfs)	117	118
Water Banking Storage Capacity (acre feet)	0	126,000
Potable Treatment Plants	2	4
<b>Non-Potable and Recycled Systems</b>		
Miles of Recycled Line	399	540
Number of Storage Tanks	11	11
Number of Open Reservoirs	4	5
Maximum Storage Capacity (acre feet)	23,703	24,155
Number of Pumping Plants	19	20
Number of Wells	5	5
Well Production Capacity (cfs)	9.8	9.8
<b>Sewer System</b>		
Miles of Sewer Line	899	1,081
Number of Lift Stations	19	23
Treatment Plants	2	2
Treatment Capacity (mgd) (Tertiary)	23.5	33.5
Sewage Flows to Michelson Plant	57%	59%
Sewage Flows to Los Alisos Plant	19%	11%
Sewage Flows to Orange County Sanitation District	24%	30%
1 acre foot = 325,900 gallons		
cfs = cubic feet per second		
mgd = millions gallons per day		

## 2017 Accomplishments

The District has a Strategic Planning Process where the Board annually adopts goals and target activities. The approved Target Activities are associated with sixteen Goals for the District to accomplish within the next Five Years. Major accomplishments achieved in FY 2016-17 are:

1. Started up the Baker Water Treatment Plant producing approximately 28 million gallons of water per day and providing an operational source of supply to IRWD and four other water agencies resulting in increased reliability in the event of a water supply shortage.



**Baker Water Treatment Plant**

2. Continued to promote water use efficiency and conservation measures leading District's customers to have one of the lowest residential gallons per capita per day (gpcd) rates in California. In 2016-17, IRWD's residential water use (indoors and outdoors) averaged 66 gpcd, which was 42% lower than the statewide average of 114 gpcd.
3. Completed the final map approval process for IRWD's Serrano Summit property enabling IRWD to market the property to potential buyers. Utilizing anticipated proceeds from the sale of the property, IRWD's Lake Forest customers were brought onto the same rates as users in the Irvine Ranch rate area. The average residential bill for the Lake Forest customers was reduced by over 12%.
4. Completed land purchases of approximately 2,100 acres within the Palo Verde Irrigation District, which have first priority water rights on the Colorado River enhancing IRWD's overall water supply reliability in the event of a drought.
5. Made significant progress on the construction of the \$200 million Michelson Water Recycling Plant Biosolids & Energy Recovery Facilities capital project for the handling of solids, which will cost effectively provide resource recovery of solids and gas for IRWD.
6. Completed two debt financings of \$117 million in Certificates of Participation and \$103 million in General Obligation Bonds to finance the cost of certain capital improvements, and refunded callable portion of a previous 2010 Certificates of Participation issue which was at a higher interest rate.
7. Completed construction of eight water banking wells and stored an additional 17,000 acre feet of water in the water bank in Kern County, California for increased diversification of water supply reliability.
8. Completed an upgrade to the Oracle Financial and Project Management System, implemented a new Employee Performance Evaluation System and Operations Database Management System to provide for a single data source of information.
9. Funded pension plan to cover more than 95 percent of CalPERS projected liability.

### **Future Goals:**

1. Start-up of the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities capital project.
2. Complete the sale of the Serrano Summit Property. This was completed in September 2017 for \$136 million.
3. Complete build out of IRWD's infrastructure and ensure adequate replacement funding for future infrastructure replacement needs.
4. Maintain low rates for IRWD customers while continuing to provide a high level of customer service.
5. Continue to pursue projects and supply arrangements to enhance water supply reliability, including increased recycled water storage.
6. Secure additional sources of water for the water banking project.
7. Implement new Asset Management System to enhance planned maintenance activities.
8. Maintain pension plan funding of at least 90 percent.

### **Drought and Water Use Efficiency**

The District continues to be a leader in the innovation and implementation of water use measures that promote the most efficient use of water, both on a per capita and per acre basis. As a result, the District was well positioned to handle the effects of the recent drought.

On April 1, 2015, Governor Brown issued an Executive Order requiring the State Water Resources Control Board (SWRCB) to adopt a regulation mandating a 25% reduction in statewide urban potable water use from 2013 levels.

Water agencies were assigned specific reduction targets based on 2013 usage. While some agencies were assigned reduction targets of up to 36%, IRWD was required to achieve a 16% reduction. The District utilized the effectiveness of its rate structure, combined with increased outreach and expanded conservation programs to meet its mandated reduction in a financially sustainable way. The District's budget-based tiered rate structure, implemented in 1991, was carefully designed to promote the efficient use of water by providing customers pricing signals related to over-use of water. This structure, which the District updated in 2015, is recognized as a model for other agencies to emulate. District customers responded well to the reduced usage and the tiered rate structure successfully supported no increase in rates.

On May 18, 2016, the State Board adopted a revised regulation extending the term of the regulation until January 2017. The revised regulation incorporated a new self-certification methodology for calculating water reduction targets. IRWD submitted its self-certification, which demonstrated the sufficiency of available supplies to meet projected demands. Therefore, IRWD's mandatory conservation target was reduced to zero percent, retroactive to June 1, 2016. On April 7, 2017, Governor Brown issued an Executive Order ending the drought State of Emergency in California.

## EXHIBIT "A"

Governor Brown issued a separate Executive Order calling for Californians to build on the actions taken during the drought, and to “Make Conservation a Way of Life in California”. IRWD has a long history of implementing cost-effective water efficiency programs. The District’s customers have one of the lowest residential gallons per capita per day (gpcd) rates in California.

The District’s Water Use Efficiency Plan provides a comprehensive strategy that includes environmental considerations and addresses the considerable financial benefits of water use efficiency for the District and its customers. Specifically, the Plan addresses:

- Increasing water demands and the impact to the District’s unit cost of water, which would increase if the District needed to purchase more expensive imported water.
- Reducing urban runoff (typically the result of “over-watering”) which minimizes water quality degradation from fertilizers, pesticides and animal waste in creeks, rivers and the ocean.
- Reducing water demands which reduces energy demand and related costs needed to convey water.
- Reducing water use indoors which results in reduced sewage generation and attendant treatment costs and capital costs for additional infrastructure.

The basic tenets of the Water Use Efficiency Plan include local, state and national policy development and leadership, rate structure improvements, focused customer interface, extensive education and outreach, technology advances, and the development of financial incentives. The Board is regularly updated on the effectiveness of the Plan and funding needs.

During the past fiscal year, the District provided financial incentives to residential and business customers to install water efficient devices such as high efficiency clothes washers, toilets, irrigation equipment, and conversions from high water use turf landscape to water-efficient landscapes. Due to the investments made by the District to diversify its resources, expand the use of recycled water and improve water use efficiency, IRWD provides reliable, high quality water to its customers at the lowest possible cost.



**IRWD Drought Expo**

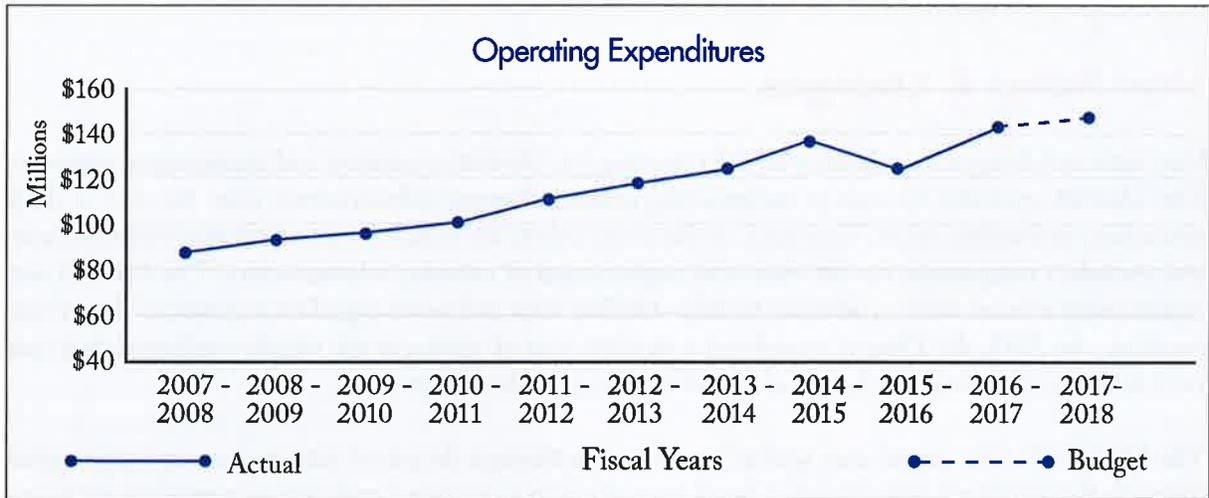
The District has also led the use of recycled water beginning in the late 1960s and presently serves over 5,400 sites, with more than 27,000 acre feet of recycled water sold in FY 2016-17 representing 25% of the District’s total water supply. The use of recycled water helped the District achieve its conservation targets and has reduced its need to import more expensive potable supplies.

## **Legislative and Regulatory Affairs**

The District actively monitors and works to influence local, state and federal legislation, policies and regulatory actions that could affect IRWD’s operations, existing and future facilities and strategic planning efforts. The Board of Directors is frequently engaged in, and takes active positions on, relevant pending legislation and regulatory actions. The District continues to engage proactively in policy discussions surrounding water use efficiency and drought response, recycled water, and water rates in California. The District and its Board of Directors also participate in state and regional trade associations including the Association of California Water Agencies, the California Association of Sewer Agencies, the Water Reuse Association and the California Special District Association.

## Financial Plan

Each year, the Board approves an annual operating budget. The goal of the District’s operating budget process is to appropriately fund the resources required to provide excellent service to IRWD customers as cost-efficiently as possible. The graph below shows the actual operating expenditures through FY 2016-17, as well as the Board approved operating budget for FY 2017-18. Increases reflect costs associated with customer growth within the District, as well as an increase in overall operating expenses. Increases have been kept to a minimum by aggressively pursuing reductions in expenses to offset uncontrollable expenses, such as pass-through rate increases from outside agencies. The approved FY 2017-18 budget increased to \$148.7 million from \$146.9 million in FY 2016-17, or 1.2%. Primary reasons were increases in labor and associated benefits from additional positions necessary to support new or planned operating facilities and salary increases, increases in the cost of water due to rate increases from outside agencies, higher operating and maintenance costs associated with additional facilities coming on line and increased expenditures for general legal support. These were partially offset by lower overall cost of water associated with a change in the supply mix (less imported water) and lower conservation expenses associated with fewer tactical incentives and programs.



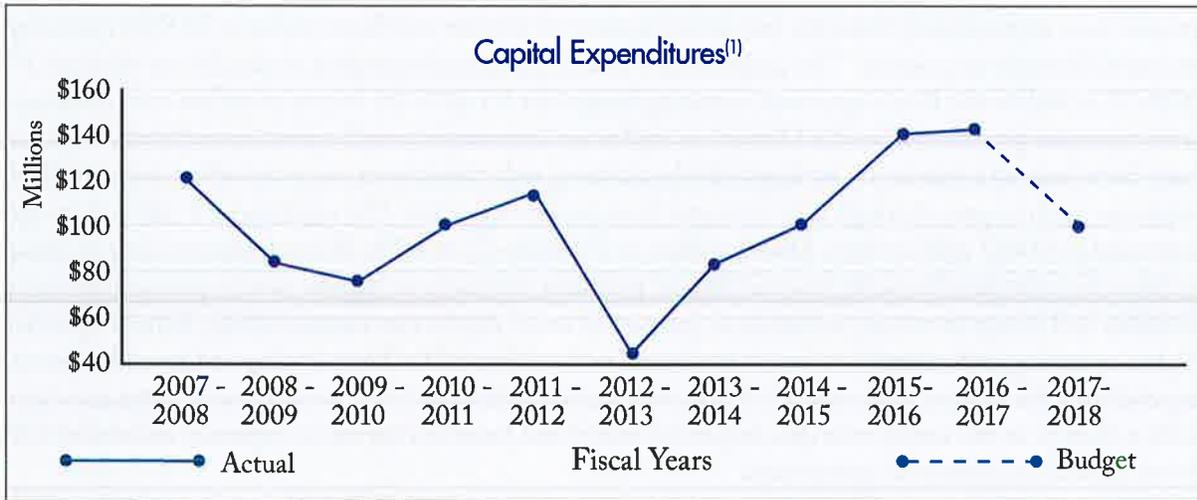
The Board also approves an annual capital budget based on new, enhancement and replacement infrastructure needs. Below are the actual capital expenditures through FY 2016-17. The reduced spending in 2012-13 from prior years represents the District’s completion of several projects and the subsequent design phase for two new key projects, the MWRP Biosolids and Energy Recovery Facilities and the Baker Water Treatment plant, both of which began construction in FY 2013-14. For FY 2017-18, the Board approved capital budget was \$97.2 million. Many capital budget projects extend beyond one fiscal year.



**Biosolids and Energy Recovery Facilities Project**

## EXHIBIT "A"

The District's capital program currently includes more than 400 active and planned projects with expenditures estimated at approximately \$550 million over the next 20 years.



(1) Actual capital expenditures excluding overhead, intangibles and capitalized interest.

## User Rates & Charges

User rates and charges are primarily used for funding the District's operation and maintenance expenses. The District separates the cost of constructing water and sewer infrastructure from the cost of daily operations and maintenance. User rates, as discussed below, are billed to customers on a monthly basis, and include a component for the inevitable replacement of existing infrastructure. The District sets replacement monies aside in advance to help stabilize rates and avoid significant potential future rate impacts. In 2015, the District completed a detailed cost of service study which confirmed that user rates billed to customers are based on actual costs to provide the services.

The District allocates capital costs within its service area through the use of water and sewer improvement districts, for which general obligation bond authorization is obtained and used as needed to fund new capital projects. Ad valorem property tax rates are set annually by the District, as are connection fees paid by property developers and landowners. Generally, the District's policy is to allocate the cost of new infrastructure evenly between the developers/landowners and the ultimate property owners who benefit from the water and sewer infrastructure.

### Water Rates

The District's rate structure for water use is separated into a commodity charge component and a fixed service charge component. The commodity charge reflects the cost of the District's water supplies while the fixed service charge funds the fixed operational and maintenance expenses of the District. For FY 2016-17, the District's water fixed service charge was \$10.30 per month. The District has a long history of planning for the inevitable replacement of capital infrastructure, and sets monies aside into enhancement and replacement funds for this purpose. In FY 2016-17, the monthly fixed service charge includes a user enhancement and replacement component of \$0.70 and \$2.10, respectively, per month, intended to fund current and future replacement and refurbishment costs that provide reliability and redundancy to the District's infrastructure.

## EXHIBIT "A"

The District has a four-tiered rate structure that promotes water use efficiency. A basic use allocation is established for each customer account that provides a reasonable amount of water for the customer's needs based on factors such as the number of occupants, type or classification of use, size of the irrigated area, evapotranspiration rate for the billing period and other consistently applied criteria. The chart below illustrates the four-tier structure that reflects the increased cost associated with usage in the higher tiers.

### FY 2016-17 Residential Rate Structure – Potable Water (Commodity Charge)\*

Tier	Percent of Estimated Customer Need	Cost per ccf
Low Volume	0 – 40%	\$1.21
Base Rate	41 – 100%	\$1.65
Inefficient	101 – 130%	\$4.01
Wasteful	131% +	\$12.01

As of June 2017, approximately 80% of the District's customers were within the first two tiers and approximately 90% of customers fell within the District's first three tiers. IRWD residential bills are consistently among the lowest in Orange County. The District is working hard to get all customers within the first two tiers.

One ccf (100 cubic feet) = 748 gallons

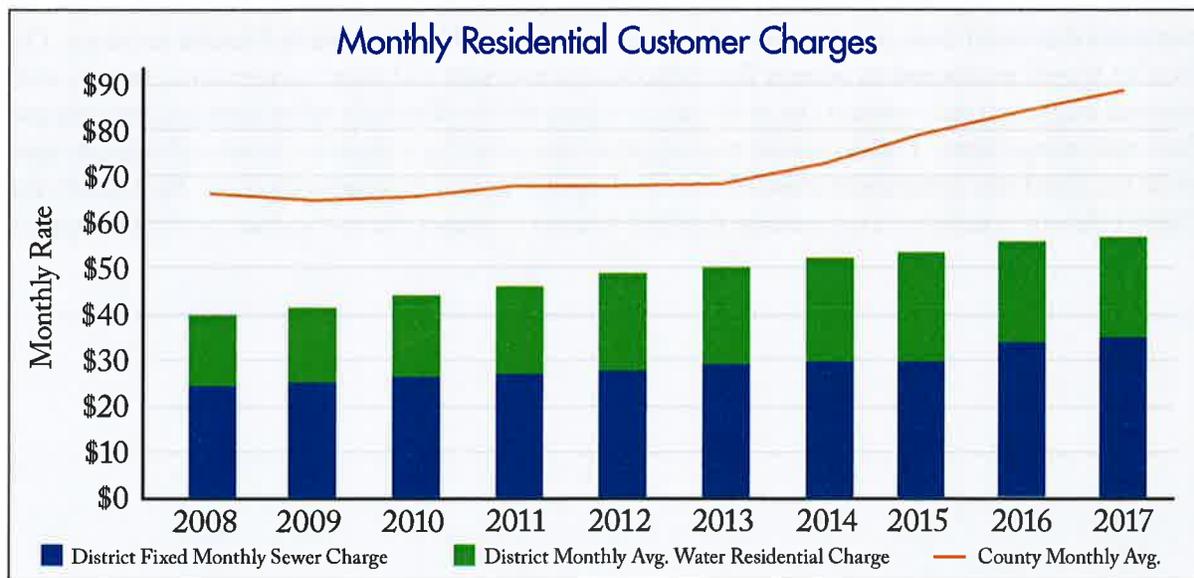
\*This rate structure is for residential detached dwelling units in the Irvine Ranch Rate Area. Customers of the former Los Alisos Water District were on a separate rate structure to reflect the cost of water.

### Sewer Rates

The District's sewer rates are also among the lowest in Orange County, with a fixed monthly service charge of \$25.75 in FY 2016-17 for a typical residential customer covering the collection and treatment of sewage. This monthly service charge includes a user enhancement and replacement component of \$0.80 and \$9.30, respectively, per month, which is intended to fund current and future capital costs to replace, refurbish and upgrade the existing system. The monthly service fee of \$9.30 includes \$3.00 to fund the replacement portion of the MWRP Biosolids and Energy Recovery Facilities discussed in more detail under *Major Initiatives – Expanded Water Recycling Options and System Reliability*.

### Historic Rate Trends

The following chart reflects the annual "base rate" charge for an average customer's water and sewer service through FY 2016-17. The District has raised rates in each of the last several years due largely to increased costs from outside agencies or wholesale supplies and increased fixed service costs for both water and sewer, including funding for future infrastructure replacement.



## Factors Affecting Financial Condition

The information presented in the Financial Section is perhaps best understood in the context of the economic environment in which the District operates, as discussed below.

### State and Local Economy

Orange County is the third most populous county in California with over 3.1 million residents and a varied economy in which no single industry is considered dominant. With a location central to Orange County, the District's service area is the home to numerous corporate headquarters such as Allergan Inc., Oakley, Blizzard Entertainment and Edwards Life Sciences. The District is also home to various educational institutions, including University of California Irvine, Concordia University, two community colleges, and other colleges and universities with satellite campuses. The total estimated daytime population served is in excess of 500,000.

During FY 2016-17, the District continued to expand its operating facilities to accommodate approximately 2,500 new water and sewer service connections constructed within District boundaries. There remains about 20% of future development, including the Northern Sphere area of Irvine, Lake Forest and property from two de-commissioned military bases. Requirements for these areas have been included in the planning and facilities included in the capital budget.

The assessed value of land within the District's service area has grown significantly in the last decade from \$35.5 billion in 2008 to more than \$56.0 billion in 2017, demonstrating the strength of the local economy.

The State of California's financial condition has historically impacted local governments such as cities, counties and special districts. In 1992, special districts were subjected to legislation that shifted substantial amounts of property tax revenue to the State. In FY 2009-10, the State borrowed approximately \$2 million from the District which was repaid in June 2013. Under Proposition 1A, the State can only exercise its borrowing right one more time prior to 2019.

### Drought

As discussed in more detail in Drought and Water Use Efficiency, in 2015, the State Water Resources Control Board mandated that the District achieve a 16% reduction from its 2013 base usage. As customers decreased their consumption, there was a corresponding decrease in District revenues. The District is well positioned to sustain the reduction in revenues and meet conservation targets with minimal impact on net revenues due to its rate structure which effectively splits costs into variable and fixed rate components. The decreased consumption was offset by a decrease in related variable costs while the fixed rate component covered the fixed operating and maintenance costs. As a result, the District did not experience a net revenue shortfall to cover expenses due to the decreased consumption.

## Financial Planning & Budgeting

### Short-Term

The Board of Directors approves operating and capital budgets annually and allocates required funding accordingly. The General Manager has limited discretion to transfer capital between activities and Board approval is required for any overall increase or substantial changes. Throughout the fiscal year, actual expenditures are compared to budget. Variances between budget and actual results are analyzed and evaluated to ensure the District's financial goals and objectives are being met.

The budget process is further supported by the District's long-term financial models, enabling the Board to make informed decisions on setting rates and charges that ensure the long-term stability of the District. Funding needs are assessed using these financial planning models.

### Long-Term

Meeting the goals of reliable, cost effective long-term water and sewer service requires substantial planning for both capital improvements and changing operating conditions. The District's capital program anticipates the need to update, expand or provide redundancy as well as refurbish and replace existing facilities as they reach the end of their useful life. District staff identifies future infrastructure requirements well in advance of needs to ensure the necessary funding for those projects is available. Capital projects are funded through a combination of connection fees, property taxes and user rates.

The District has a long history of planning for the enhancement and replacement of aging water and sewer infrastructure. Recognizing that infrastructure replacement is both inevitable and costly, the District established infrastructure Enhancement and Replacement Funds to provide funding for updating, expanding, creating redundancy, as well as replacing and refurbishing various components of the water and sewer systems. The objective of the funds is to help moderate the financial impact on future user rates attributable to expenditures associated with enhancing and replacing capital facilities.

For FY 2015-16, the combined water and sewer user enhancement/replacement fees were \$11.60 per month. For FY 2016-17, the combined water and sewer user enhancement/replacement fees are \$12.90 per month. The increase is part of a planned approach to avoid significant rate fluctuations resulting from future major capital initiatives.

Over time, the District has evolved from a newly developing area towards being a fully developed area. While many of the projects slated for construction will provide additional capacity for ultimate demands, the focus of the District is transitioning from building new infrastructure projects to ongoing operations and maintenance activities, as well as upgrading and replacing existing infrastructure. Connection fees paid by developers, which contributed \$25.6 million to new capital in FY 2016-17 will decline as the District nears build-out. The District utilizes a sophisticated financial model to factor in such variables as future development, construction costs, growth rates, inflation, redevelopment and other criteria in order to project rate setting for funding future capital needs.

## EXHIBIT "A"

In 2011, the District initiated a strategic process to review its existing current capital funding plan which resulted in a master consolidation plan that combined certain improvement districts in order to maintain the future financial viability of each area. The master plan allocates funding responsibility for capital improvements to the areas which will benefit from those respective facilities and separates areas on the basis of projected timing of development. Diversification of the District's water supply and sewage treatment options are also major objectives of the District's master plan. Those objectives are discussed in further detail in the *Major Initiatives* section of this introduction.

The District's approach to infrastructure replacement and funding reflects industry best practice and illustrates the District's commitment to financial stability and protection of its customers from significant future rate increases.

### Pension Funding

The District recognizes that defined benefit plans and the related future pension obligations pose significant issues for many government agencies. The District has taken a proactive approach to address the issue and in 2013, established a Pension Benefits Trust to substantially fund its PERS unfunded liability. The Pension Benefits Trust provides the District with an alternative to PERS that allows for investment by a professional fund management team selected and monitored by the District. The Pension Benefits Trust holds the funding contributions for the District pending future remittance to the PERS pension trust fund which will pay all retiree benefit payments to employees associated with the plan. Future contributions will be transferred from the Pension Benefits Trust to PERS at the District's discretion.

Investment policy and asset allocation decisions relating to the Pension Benefits Trust are made by a Retirement Board consisting of two members from the IRWD Board of Directors and the District's General Manager. In FY 2013, the District made an initial \$35.0 million contribution to the Pension Benefits Trust, and in FY 2014, 2015, 2016, and 2017 the District made additional contributions of \$2.2 million, \$2.1 million, \$1.9 million, and \$12.8 million, respectively. As of June 30, 2017, the fair market value of the assets in the Pension Benefits Trust was approximately \$66.1 million. As of June 30, 2017, the assets were invested in the Vanguard Institutional Index Fund, Vanguard Extended Market Index Fund, Vanguard Developed Market Index Fund, Metropolitan West Total Return Bond Fund, Baird Core Plus Bond Fund, Vanguard High-Yield Corporate Fund, Vanguard Short-Term Corporate Bond Fund and Fidelity Government Cash Reserve.

Under GASB 68, implemented for FY 2015, the District's pension plan was fully funded as of June 30, 2015. As of June 30, 2016 and 2017, the District had a net pension liability of \$1.9 million and \$11.1 million, or a funded ratio of 99.2% and 95.3%, respectively. Additional information on the District's net pension asset/liability can be found in Note 13 of the Notes to the Basic Financial Statements.

## Cash Management Policies and Practices

The District is regulated by State law (primarily California Government Code Section 53600, et seq.) as to the types of fixed-income securities in which it can invest cash assets. In addition, the Board of Directors annually adopts an investment policy that is generally more restrictive than the State codes. The District's standard practice is to maintain an appropriate balance between safety, liquidity and yield of investments while meeting required expenditures in conformance with all applicable State laws, the District's investment policy, and prudent cash management principles.

For FY 2016-17, the District's fixed-income investment portfolio consisted primarily of short-term securities with a portfolio average maturity of approximately 14 months. These securities included U.S. government agency notes, U.S. government agency discount notes, the State-managed Local Agency Investment Fund and local government investments. The annual return on all of the District's cash investments in FY 2016-17 was approximately 1.04%. Including real estate investments, the weighted average rate of return was 3.17% for the same period.

At June 30, 2017, the District's cash, investments totaled approximately \$356.8 million. Cash balances are allocated to various funds including the Replacement Fund, New Capital Fund, Construction Fund, Debt Service Fund and others.

## Real Property Investments

As a means to match its long-term responsibility to replace water and sewer facilities when they reach the end of their useful lives with long-term funding investments, the District obtained legislative authority from the State to invest a portion of its capital facilities Replacement Fund in real property located in Orange County.

As of June 30, 2017, the District owns or has an interest in seven properties with an approximate market value of \$353.3 million. The District's income-producing real estate investments have a weighted average return (on original cost) for FY 2016-17 of 14.6%. Net revenues of \$9.1 million generated in FY 2016-17 from the District's real estate investments are retained within the Replacement Fund.

## Debt Management Policies and Practices

The District strives to minimize the cost of its long-term debt. In 1984, the District obtained State legislation that allowed for the use of variable rate debt to help achieve this goal. The Board minimizes its exposure to interest rate risk by utilizing both fixed and variable rate debt and has leveraged opportunities provided by the low interest rate environment in recent years. The District maintains a healthy balance between fixed and variable rate debt. As of June 30, 2017, the District's debt portfolio included fixed rate debt at 57.0%, synthetically fixed (hedged) variable rate debt at 28.0% and unhedged variable rate debt at 15.0%, resulting in an average all-in cost of debt of approximately 3.52% for the year.

## EXHIBIT "A"

In FY 2016-17, the Board of Directors adopted a Debt Management Policy Statement (Debt Policy). Debt Policy objectives formalize previous District guidelines related to timing and amount of future debt issuance, allowable debt types and structures and spending requirements of bond proceeds. The Debt Policy also addresses underwriter selection and allowable methods of sale, continuing disclosure requirements, financial advisor and credit rating agency relationships and other key debt-related topics.

The District has primarily used General Obligation (GO) bonds and Certificates of Participation (COPs) to fund its capital facilities. In FY 2016-2017 the District issued \$116.7 million of Certificates of Participation to finance the cost of certain capital improvements and refund a portion of the outstanding principal amount of the 2010 Certificates of Participation Refunding and \$103.4 million of General Obligation Bonds to finance the cost of certain capital improvements. As of June 30, 2017, there were nine outstanding GO bond issues consisting of \$303.3 million in variable rate mode and \$278.4 million in fixed rate mode (excluding any unamortized premium or discount). As of June 30, 2017, the District also had two outstanding COPs issues with a balance of \$122.1 million in fixed rate mode. The District has secured direct pay letters of credit to enhance certain issues of its variable rate debt.

The GO bond issues are secured by the District's ability to levy ad valorem property taxes to pay debt service. Although the District has elected to use a combination of ad valorem property taxes and other legally available funds to pay debt service, the legal authority exists to fully fund GO bond debt service through such ad valorem taxes. In addition to the ad valorem tax pledge, certain GO bond issues are also secured by the net revenues of the District.

The COPs issues are secured by the net revenues of the overall District. The District is required under some of its debt covenants to collect revenues sufficient to provide net revenues equal to 125% of senior debt service payable during the fiscal year.

Prior to FY 2003-04, all of the District's outstanding debt was in a variable rate mode and the Board of Directors took certain actions to manage and mitigate the interest rate risk. The Board adopted a policy to maintain a target amount of investment assets equal to at least 75% of the District's outstanding unhedged variable rate debt. In addition, the District began an interest rate swap program under which \$130 million notional amount of LIBOR-based fixed payer swaps were executed. These interest rate swaps have allowed the District to limit the interest rate risk exposure on approximately \$194 million (or 64.0%) of its remaining variable rate debt to approximately 4.01% (assuming a historical ratio for the tax-exempt SIFMA Index versus taxable 1-month LIBOR of 67%).

In FY 2010-11, the District issued \$175 million of general obligation fixed rate debt utilizing the taxable Build America Bond (BABs) program. BABs, created under the American Recovery and Reinvestment Act, are taxable bonds with subsidy payments made by the Treasury Department to issuers equaling 35% of the interest costs. In FY 2016-17, Federal subsidy payments were cut by 6.9% under Congressionally-mandated sequestration. As a result of the reduced subsidy payments, the net interest rate for the District's BABs issue increased from 4.30% to 4.46%.

## Risk Management

The District utilizes a combination of self-insurance and third-party liability insurance to minimize loss exposures from property claims, third-party liability claims and workers compensation claims. The District self-insures the first \$25,000 per occurrence for property losses, \$100,000 per occurrence for third-party liability claims and \$125,000 per occurrence for workers compensation claims. Various control techniques used to minimize loss include, but are not limited to, routine employee safety meetings and training sessions, the use of uniform language in contracts designed to limit or prevent liability exposure, general risk assessments, and the development of emergency plans, including a business continuation plan.

## Major Initiatives

The District's major initiatives during FY 2016-17 include continuing programs to secure water supplies, as well as expanding sewage treatment capacity and diverting sewage flows, water education programs, and the continuing implementation of the Water Use Efficiency Plan.

## Water Supply Reliability

### Groundwater Program

One of the goals of the District's Water Resources Master Plan is to identify a reliable water supply mix which includes developing sufficient groundwater production capacity to pump IRWD's portion of the Orange County Ground Water Basin, additional local groundwater production, and to have enough capacity to meet demands during outage conditions. Currently, the District has the ability to produce approximately 45,000 – 50,000 acre feet per year (AFY) of potable groundwater and 4,000 – 5,000 AFY of non-potable groundwater.

### Water Banking

In addition to developing its local groundwater and recycled water systems, the District is further diversifying its water supply reliability by developing and operating water banking facilities in Kern County, California. These projects are known as the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project (collectively, the Water Bank). The District's Water Bank is situated on groundwater recharge lands that overlie the regional Kern County groundwater basin. The purpose of the Water Bank is to improve the District's water supply reliability by capturing and storing low cost water available during wet hydrologic periods for use during dry periods. The Water Bank enhances the District's ability to respond to drought conditions and potential water supply interruptions and enables it to reduce the cost of water delivered under such conditions.

The District has entered into agreements for a 30-year water banking partnership with the Rosedale-Rio Bravo Water Storage District (Rosedale) in Kern County. These agreements provide for Rosedale to operate the Water Bank on behalf of the District and permits the District: (i) to store up to 76,000 acre feet of water in the aquifer; (ii) to recharge a minimum of 44,600 acre feet of water per year in the aquifer; and (iii) to recover a minimum of 28,750 acre feet of water per year from the aquifer. An additional 50,000 acre feet of storage will be available in the future as part of the Stockdale Integrated Banking Project.



### **Water Banking Pumps**

The District has constructed groundwater recharge ponds and related facilities at its Water Bank that are necessary to divert water from an adjacent canal into the ponds. Groundwater wells have been constructed on the Strand Ranch and Stockdale West properties. The District, in partnership with Rosedale and others, is also constructing additional wells that will increase the ability to recover water from the Water Bank during peak summer demand periods. The District has secured water from a number of sources for recharge at the Water Bank.

The District has entered into agreements with Metropolitan Water District of Southern California (MWD) which allows it to transfer water from the Water Bank into the District's service area. The District recovered and delivered approximately 1,000 acre feet from the Water Bank in FY 2015-16.

Since 2010, the District has delivered a total of approximately 56,200 acre feet of water to the Water Bank through its water supply partnerships. The District has returned its partner's share of the water and holds approximately 32,000 acre feet of water in storage for future use. The District is currently pursuing additional potential water supply opportunities for diversion into the Water Bank.

### **Water Rights**

The District also owns property with rights to State Water Project water which can be stored in the Water Bank. The water is available as a result of the District's acquisition of property located within the Dudley Ridge Water District, including the rights to use approximately 1,750 acre feet of Table A State Water Project water allocated to Dudley Ridge. The District can store its Table A water in the Water Bank with half of the water being available for future use in the District's service area. The acquisition also includes certain participation rights in the Kern Water Bank allowing the District to store up to approximately 9,500 acre feet of water.

As of June 30, 2017, the District has purchased agricultural land (PVID Properties) in Riverside County, California. The PVID Properties are located within Palo Verde Irrigation District (PVID), which has first priority rights on the Colorado River. Approximately 969 acres of the land are included in a Metropolitan Water District of Southern California (MWD) and PVID fallowing program under which MWD makes payments to landowners in exchange for letting land lie fallow. Water that is conserved through fallowing is available for use within MWD's service area (which includes the District's service area). In the near term, the District expects to lease the PVID Properties to tenant farmers for agricultural uses. The District plans to work with MWD and the Municipal Water District of Orange County (MWDOC) in the future to develop mutually beneficial arrangements.

### **Baker Water Treatment Plant**

The Baker Water Treatment Plant (Baker WTP), which was brought online in January 2017, produces approximately 28 million gallons per day of drinking water. The Baker WTP treats imported water from MWD and local water from Irvine Lake utilizing microfiltration and ultraviolet disinfection as the primary treatment processes. Although the Baker WTP is owned and operated by the District, partial capacity in the plant was purchased by four other water agencies located in southern Orange County. The Baker WTP provides an operational source of supply to the project participants and, in the event of a short-term water shortage emergency, can provide regional water reliability to other neighboring southern Orange County water agencies.

### **Syphon Recycled Water Seasonal Storage Facility**

Syphon Reservoir, located in the northern portion of Irvine, is a sixty-year-old untreated water storage reservoir historically used for agricultural purposes. The District purchased Syphon Reservoir in January 2010, and in 2015 completed the process of converting the reservoir into a recycled water seasonal storage facility. Seasonal storage reservoirs allow the District to store excess recycled water produced in the winter months for use in higher demand summer months. This will increase water reliability by reducing the District's dependency on imported water from MWD used to supplement the recycled water system.

In 2013, the District completed a feasibility study to increase storage capacity in Syphon Reservoir from its current capacity of 450 acre feet to 5,000 acre feet. Additional storage capacity could allow the District to recycle more sewage flows at MWRP. An expansion of Syphon Reservoir to 5,000 acre feet would allow for recycling 100% of the sewage flows tributary to MWRP and could reduce the District's need to supplement the recycled water system with imported water in dry years. The District is currently evaluating funding alternatives for the reservoir expansion.

## **Expanded Water Recycling Options, Resource Recovery and System Reliability**

The District is continuing its program to increase the reliability of the sewage system by diversifying treatment options and increasing the reliability of critical sewage collections facilities. The goals of the program are to collect sewage in the most cost effective method available, create a high quality and reliable recycled water supply for irrigation and commercial uses and minimize environmental impacts and risks. Sewage collected throughout the District is treated at three locations: The Michelson Water Recycling Plant (MWRP), the Los Alisos Water Recycling Plant (LAWRP) and at the Orange County Sanitation District (OCSD). The District owns and operates the MWRP and LAWRP, and owns capacity in the OCSD facilities.

## EXHIBIT "A"

The most recent example of expanded water recycling reliability is a major capacity expansion of the MWRP from 18 million gallons per day (mgd) to 28 mgd, completed in 2014. The two plants operated by the District currently have capacities of 28 (MWRP) and 7.5 (LAWRP) mgd, with a collective capacity of 35.5 mgd. Expanding existing infrastructure for sewage treatment has four primary benefits including:

- Increased recycled water production and utilization,
- Decreased exposure to third party treatment costs and operational constraints,
- Decreased dependencies on imported water supplies, and
- Lower total cost.

In addition to the projects identified above, the District evaluated alternative approaches to recover the solids generated by its water recycling facilities. The evaluation of alternative approaches for handling MWRP solids, currently conveyed to Fountain Valley for treatment by OCSD, included consideration of many factors such as costs and potential community impacts. As a result, in FY 2013-14, the District began construction of new capital facilities at the MWRP to thicken, digest, dewater, and dry biosolids to allow safe reuse of pellets as either fertilizer or e-fuel, reducing the District's overall treatment costs. The dryer is sized to accept solids from LAWRP.

The biosolids treatment process also allows for the conversion of biogas into energy thereby further reducing the District's dependency and costs from its third party electricity and natural gas providers. The construction of the MWRP Biosolids and Energy Recovery Facilities is anticipated to be completed in late 2018 at an estimated project cost in excess of \$200 million.

### **Community Education and Outreach**

The District's commitment to community education and outreach recognizes the significant impact lifelong water education can have on a community. Today, the District's water efficiency and environmental programs provide a key Best Management Practice under the California Urban Water Conservation Council's memorandum of understanding dedicated to increasing efficient water use statewide. From student water and science education programs to resident tours, IRWD is dedicated to educating and fostering an appreciation for water and the environment which are both vital resources.

Community water education and an awareness of water use efficiency begins at a young age. The District provides innovative water education programs to students in its service area through a unique partnership with the Discovery Science Foundation. These exceptional programs are available to all kindergarten through middle school students in any public, private or home school in the District's service area and meet all California curriculum content standards while bringing water education to life for local students. The partnership with the Discovery Science Foundation allows the District to effectively reach students in its service area with innovative and informative water education. Through these programs, the District teaches the next generation of community members to be good stewards of its precious water and environmental resources.

## EXHIBIT "A"

The District's San Joaquin Marsh Campus, which houses the IRWD Learning Center and Visitors Center, is the embodiment of the District's dedication to lifelong water education. The location of the Campus at the San Joaquin Marsh provides a wide variety of educational venues and teaching opportunities utilizing the District's Natural Treatment System, the Butterfly Garden, and the San Diego Creek. The Learning Center is a dedicated facility for water education in our community. The Learning Center features two state-of-the-art classrooms and a patio that can be utilized as an outdoor learning facility.



**IRWD Visitors Center at the San Joaquin Marsh Campus**

Throughout the year, the Learning Center houses not only the District's education programs but also its resident tours, community events, and programs run by the District's Marsh partner, Sea & Sage Audubon. The Visitor's Center at the historic Irvine Ranch Marsh House provides informative self-guided tours on the District's environmental and water use efficiency efforts and is open to the public seven days a week.

These programs and the District Marsh Campus provide the backbone of the District's community education and outreach efforts. In addition, the District offers water use efficiency workshops and webinars; customized in-class lectures for high school and college classes, and customized educational tours for community organizations in its service area.

In addition to already established water use efficiency community outreach efforts, the District has responded to abatement of statewide drought conditions by moving from urgency-based water efficiency outreach efforts to the development of a new water efficiency outreach program that communicates the value of water, sustains current levels of water savings, and seeks additional permanent water savings among customer groups that have been traditionally difficult to reach. The new outreach efforts build on the success of drought outreach efforts which effectively increased awareness and participation in District conservation programs and resulted in IRWD's success in meeting its previous state-mandated drinking water conservation targets.

To support these efforts the District continues to offer targeted workshops that teach customers about water efficient landscaping and efficient irrigation techniques. The IRWD water use efficiency website offers enhanced self-guided landscape design and interactive demonstration resources as well as inspirational garden galleries and customized plant lists. The newly launched IRWD WaterStar Certified Water-Efficient Business certification program provides incentives to local businesses to increase their efficiency and recognizes them for their efforts.

Drought Tolerant Demonstration Gardens display over 80 different types of drought tolerant plants and provide practical information for customers to use when redesigning their home landscapes with water efficient plants. The IRWD Recycled Water Fill Station allows customers that do not yet have access to recycled water the ability to use this water source for outdoor irrigation purposes.

## Awards and Acknowledgments

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Irvine Ranch Water District for its comprehensive annual financial report (CAFR) for the fiscal years ended June 30, 2004 through June 30, 2016. In order to be awarded a Certificate of Achievement, IRWD was required to publish an easily readable and efficiently organized CAFR that satisfied both GAAP and applicable legal requirements.

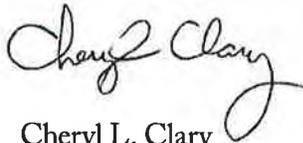
A Certificate of Achievement is valid for a period of one year. We believe that our current CAFR continues to meet the Certificate of Achievement Program's requirements and will be submitting it to the GFOA to determine its eligibility for another certificate.

Staff would like to acknowledge the IRWD Board of Directors for their support and for maintaining the highest standards of professionalism in the management of the District's operations and finances. We would also like to thank the dedicated employees of the District for their commitment to providing high quality service to the District's customers. The preparation of this report would not have been possible without the efficient and dedicated service of the entire Finance Department staff. We also wish to express our appreciation to all staff that assisted and contributed to the preparation of this report.

Respectfully submitted,



Paul A. Cook  
General Manager



Cheryl L. Clary  
Executive Director of Finance & Administration

**Irvine Ranch Water District**  
**List of Principal Officials**

**Board of Directors**

President and Director  
Vice President and Director  
Director  
Director  
Director

Douglas J. Reinhart  
Peer A. Swan  
Steven E. LaMar  
Mary Aileen Matheis  
John B. Withers

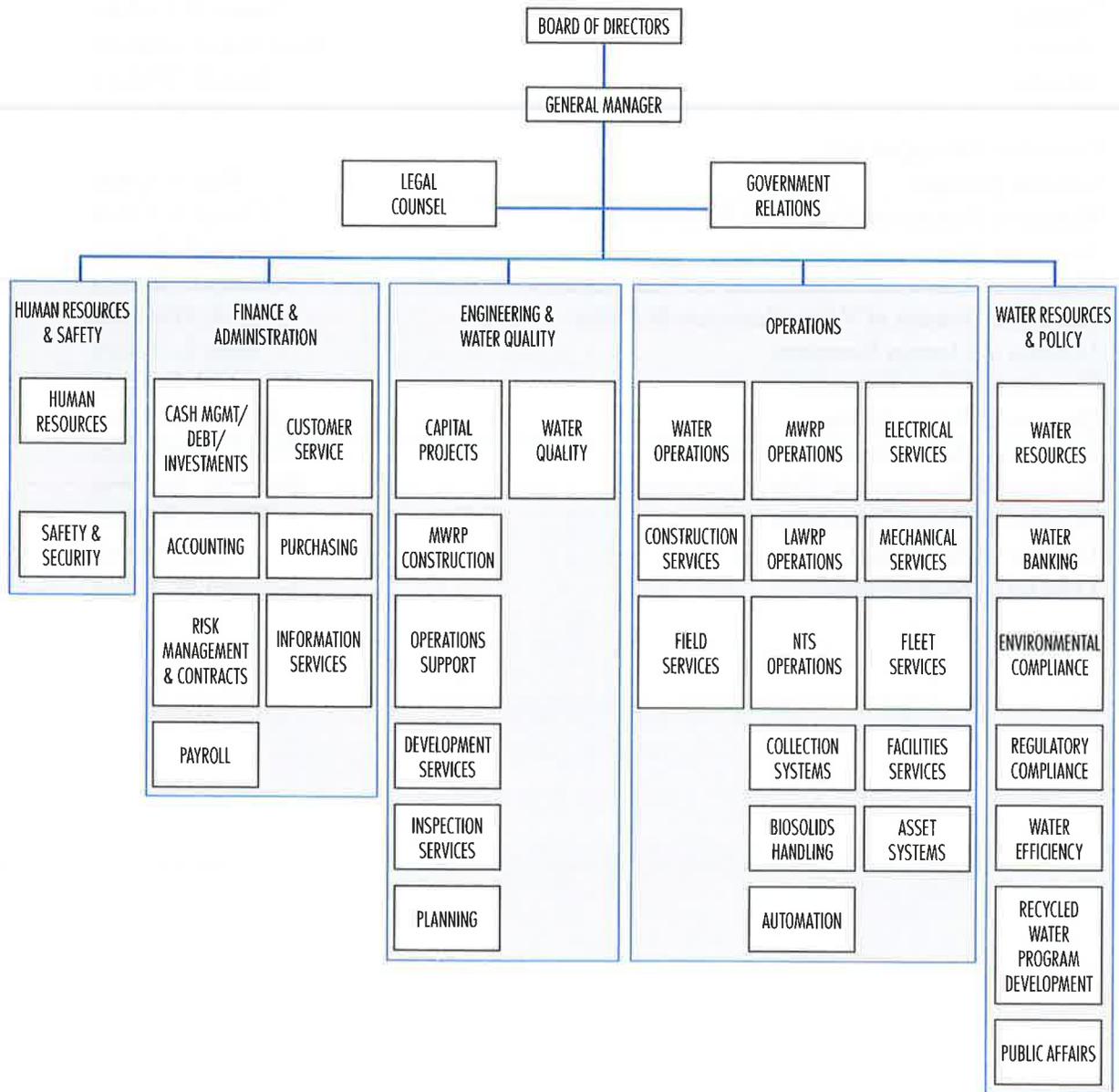
**Executive Management**

General Manager  
Executive Director of Finance & Administration  
Executive Director of Operations  
Executive Director of Engineering & Water Quality  
Executive Director of Water Resources & Policy  
Director of Human Resources  
Director of Water Resources  
Director of Public Affairs  
Director of Administrative Services  
Director of Treasury and Risk Management  
Director of Water Operations  
Director of Recycling Operations  
Director of Maintenance

Paul A. Cook  
Cheryl L. Clary  
Patrick O. Sheilds  
Kevin L. Burton  
Paul A. Weghorst  
Jenny L. Roney  
Fiona M. Sanchez  
Beth M. Beeman  
Tony J. Mossbarger  
Robert C. Jacobson  
Thomas Roberts  
Jose Zepeda  
Kenneth W. Drake

EXHIBIT "A"

Irvine Ranch Water District  
 Organizational Chart  
 (By Function)  
 Fiscal Year 2016-17





**Government Finance Officers Association**

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

**Presented to**

**Irvine Ranch Water District  
California**

**For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended**

**June 30, 2016**

A handwritten signature in black ink, reading "Jeffrey R. Egan". The signature is written in a cursive, flowing style.

**Executive Director/CEO**

EXHIBIT "A"

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# FINANCIAL SECTION

EXHIBIT "A"

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FINANCIAL  
SECTION

# Financial Section

Irvine Ranch Water District  
Fiscal Year Ended June 30, 2017



Davis Farr LLP  
2301 Dupont Drive | Suite 200 | Irvine, CA 92612  
Main: 949.474.2020 | Fax: 949.263.5520

Board of Directors  
Irvine Ranch Water District  
Irvine, California

## **Independent Auditor's Report**

### **Report on the Financial Statements**

We have audited the accompanying financial statements of each major fund, and the aggregate remaining fund information of the Irvine Ranch Water District, as of and for the year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

#### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### ***Auditor's Responsibility***

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

## EXHIBIT "A"

Board of Directors  
Irvine Ranch Water District  
Page Two

### ***Opinions***

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of each major fund, and the aggregate remaining fund information of the Irvine Ranch Water District, as of June 30, 2017, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Emphasis of Matter***

The financial statements of the year ended June 30, 2017 reflect certain prior period adjustments as described further in Note 18 to the financial statements. Our opinion is not modified with respect to this matter.

### **Report on Summarized Comparative Information**

We have previously audited Irvine Ranch Water District's financial statements, and we expressed an unmodified audit opinion on those financial statements in our report dated December 5, 2016. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2016 is consistent, in all material respects, with the audited financial statements from which it has been derived.

### **Other Matters**

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the *management's discussion and analysis and pension schedules* be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Board of Directors  
Irvine Ranch Water District  
Page Three

***Other Information***

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the District's basic financial statements. The *introductory section* and the *statistical section* are presented for purposes of additional analysis and are not a required part of the basic financial statements. The *introductory section* and the *statistical section* have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated November 22, 2017, on our consideration of the District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control over financial reporting and compliance.



Irvine, California  
November 22, 2017

## MANAGEMENT'S DISCUSSION AND ANALYSIS

The following discussion and analysis of the financial performance of the Irvine Ranch Water District (District) provides an overview of the District's financial activities for the fiscal year ended June 30, 2017. This section should be read in conjunction with the basic financial statements and notes to the basic financial statements, which follow this analysis.

### Financial Highlights:

- Total assets and deferred outflows of resources exceed total liabilities and deferred inflows of resources by \$1,772.0 million (net position), consisting of \$1,087.9 million in net investment in capital assets, \$264.3 million restricted for water services and \$419.8 million restricted for sewer services. This is an increase of \$193.7 million or 12.3 percent over the prior fiscal year net position of \$1,578.3 million.
- Total assets are \$2,583.4 million, an increase of \$395.2 million or 18.1 percent over the prior fiscal year. Other noncurrent real estate investments assets increased \$154.5 million primarily due to the reclassification of certain assets to real estate investments which are reported at fair market value. Cash increased \$140.5 million primarily due to the receipt of bond proceeds for reimbursements for capital project expenditures incurred in prior and the current fiscal years.
- Total deferred outflows of resources are \$61.6 million, an increase of \$11.9 million or 23.9 percent over the prior fiscal year. This is due primarily to a \$13.1 million increase in cumulative differences between projected and actual earnings on pension plan investments and an \$11.3 million increase in pension contributions over the prior year. These were partially offset by a \$13.8 million increase in the accumulated fair value of interest rate swaps.
- Total deferred inflows of resources decreased \$0.8 million or 18.2 percent over the prior year due primarily to cumulative differences between expected and actual plan participant experience partially offset by the amortization of a change in the discount rate assumption.
- Total debt is \$762.9 million, an increase of \$209.8 million or 37.9 percent over the prior fiscal year. This is due primarily to the issuance of \$279.0 million in bonds and related premiums, partially offset by \$62.5 million of principal payments and \$6.7 million amortization of premiums.
- During 2017, the District funded \$12.8 million in excess of its annual required contribution to the Irvine Ranch Water District Post-Employment Benefits Trust (Pension Benefits Trust) in order to reduce its unfunded pension liability. The Pension Benefits Trust was established in June 2013 to assist in funding the District's CalPERS unfunded liability. As of June 30, 2017, the District had an \$11.1 million net pension liability which is 95.3% funded. For more detail, see Note 13 of the Notes to the Basic Financial Statements.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Financial Highlights (Continued):

- Total revenues are \$232.4 million, an increase of \$14.0 million or 6.4 percent over the prior fiscal year. Operating revenues were higher by \$4.9 million or 3.4 percent due to Board approved rate increases as well as customer growth during the year. Non-operating revenues increased \$9.1 million or 12.3 percent due to \$5.0 million of higher property tax receipts and \$4.5 million increase in the fair value of real estate investments during the year.
- Total expenses are \$209.9 million, an increase of \$11.6 million or 5.8 percent over the prior fiscal year. This is due primarily to an increase of \$5.8 million in the cost of handling, treatment, and disposal of sewage solids residuals sent to the District's third party provider (Orange County Sanitation District), \$3.5 million higher depreciation expense relating to the additional capital assets as well as \$3.4 million in higher interest expense associated with higher debt.
- Capital contributions are \$41.9 million, a decrease of \$11.4 million or 21.4 percent over the prior fiscal year due primarily to a high number of projects that were in design and construction phases resulting in a decrease of \$7.7 million of donated facilities from developers.

More detailed analysis about the overall District's financial position and operations is provided in the following sections.

### Overview of the Financial Statements:

The basic financial statements of the District consist of the financial statements (the Statement of Net Position, the Statement of Revenues, Expenses, and Changes in Net Position, the Statement of Cash Flows, Statement of Fiduciary Net Position, and Statement of Changes in Fiduciary Net Position) and notes to the basic financial statements. The basic financial statements are prepared using the accrual basis of accounting. This report also contains other supplementary information in addition to the basic financial statements.

**Statement of Net Position** depicts the District's financial position at June 30, the end of the District's fiscal year. The statement of net position shows all financial assets and liabilities of the District. Net position represents the District's residual interest after liabilities and deferred inflows of resources are deducted from assets and deferred outflows of resources. Net position is displayed in two components: net investment in capital assets and restricted for water and sewer services.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Overview of the Financial Statements (Continued):

**Statement of Revenues, Expenses and Changes in Net Position** provides information on the District's operations and can be used to determine whether the District has recovered all of its costs through operating and non-operating revenues.

**Statement of Cash Flows** provides information on the District's cash receipts, cash payments and changes in cash resulting from operations, investments and financing activities.

**Fiduciary Fund** is used to account for resources held for the benefit of parties outside the government. The District's fiduciary fund consists of the Pension Benefits Trust fund, which is maintained to account for assets held by the Pension Benefits Trust in a trustee capacity. The Pension Benefits Trust was established to assist in funding the CalPERS unfunded liability, providing the District with an alternative to CalPERS that allows for investment by a professional fund management team selected and monitored by the District, with future excess contributions transferred to CalPERS at the District's discretion.

**Notes to the Basic Financial Statements** provide additional information essential to a full understanding of the data provided in the basic financial statements.

The **Other Information** includes *required supplementary information* concerning the District's progress in funding its obligations to provide pension and other post-employment benefits to its employees.

### Financial Analysis of the District:

The following condensed schedules contain summary financial information extracted from the basic financial statements to assist general readers in evaluating the District's overall financial position and results of operations as described in this Management's Discussion and Analysis (MD&A). Increases or decreases in these schedules can be used as performance indicators to assess whether the District's overall financial position has improved or deteriorated. Other external factors such as changes in economic conditions, customer growth, and legislative mandates should also be considered as part of this analysis.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Financial Position Summary:

The Statement of Net Position reflects the District's financial position as of June 30. The statement includes assets, deferred outflow of resources, and liabilities. The net position represents the District's net worth including, but not limited to, capital contributions and investments in capital assets. A condensed summary of the District's total net position at June 30 is set forth below:

	2017	2016	Increase/(Decrease)	
			Amount	Percentage
<b>Assets</b>				
Current assets	\$ 379.0	\$ 235.8	\$ 143.2	60.7%
Capital assets, net	1,848.3	1,731.6	116.7	6.7%
Other noncurrent assets	356.1	220.8	135.3	61.3%
<b>Total assets</b>	<b>2,583.4</b>	<b>2,188.2</b>	<b>395.2</b>	<b>18.1%</b>
<b>Deferred Outflow of Resources</b>				
Deferred refunding charges	2.6	1.2	1.4	116.7%
Accumulated decrease in fair value of swap agreements	27.4	41.2	(13.8)	-33.5%
Pension contributions	18.2	6.9	11.3	163.8%
Pension actual changes	13.4	0.4	13.0	3250.0%
<b>Total deferred outflow of resources</b>	<b>61.6</b>	<b>49.7</b>	<b>11.9</b>	<b>23.9%</b>
<b>Liabilities</b>				
Current liabilities	78.5	65.4	13.1	20.0%
Long-term liabilities	790.9	589.8	201.1	34.1%
<b>Total liabilities</b>	<b>869.4</b>	<b>655.2</b>	<b>214.2</b>	<b>32.7%</b>
<b>Deferred Inflows of Resources</b>				
Pension actuarial changes	3.6	4.4	(0.8)	-18.2%
<b>Net Position</b>				
Net investment in capital assets	1,087.9	1,178.5	(90.6)	-7.7%
Restricted for water services	264.3	221.5	42.8	19.3%
Restricted for sewer services	419.8	178.3	241.5	135.4%
<b>Total net position</b>	<b>\$ 1,772.0</b>	<b>\$ 1,578.3</b>	<b>\$ 193.7</b>	<b>12.3%</b>

As shown in Table 1, the District's total assets increased \$395.2 million or 18.1 percent. Cash increased \$140.5 million due to the receipt of bond proceeds for the reimbursement of capital project expenditures incurred in prior and current fiscal years. Other noncurrent assets increased \$135.3 million or 61.3 percent primarily due to an increase in real estate investment fair values which reflect the reclassification of two additional real estate investment properties previously included in capital assets at cost. The fair market value of those properties at the end of fiscal year 2016 is reflected as a prior period adjustment in 2017 as required under the accounting standards. The fair market value of real estate assets increased \$154.5 million from \$198.8 million in the prior fiscal year to \$353.3 million in the current fiscal year. Additional information on the District's real estate investments can be found in Note 7 of the Notes to the Basic Financial Statements.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Financial Position Summary (Continued):

The District's deferred outflows of resources increased \$11.9 million or 23.9 percent. This is due primarily to an increase of \$13.1 million cumulative differences between projected and actual earnings on the pension plan investments. The District contributed \$11.3 million more in pension contributions to the CalPERS and the Pension Benefits Trust over the prior year (from \$6.9 million in fiscal year 2016 and \$18.2 million in the current fiscal year). Additional information on the District's deferred outflows of resources relating to the pension plans can be found in Note 13 of the Notes to the Basic Financial Statements.

In addition, the deferred refunding charges of general obligation bonds and certificates of participation, which is the difference between the carrying value of refunded debt and the reacquisition price, increased \$1.6 million due to refunding a portion of the certificates of participation refunding series 2010 by the certificates of participation series 2016 during the current fiscal year. The increase of the deferred refunding charges was partially decreased by \$0.2 million amortization during the current fiscal year.

The deferred outflows of resources were partially decreased by \$13.8 million in the accumulated fair value of interest rate swaps, which decreased from a negative \$41.2 million to a negative \$27.4 million based on the fair value of the assets at the end of the current fiscal year.

The District's total liabilities increased \$214.2 million or 32.7 percent from \$655.2 million in the prior fiscal year to \$869.4 million in the current fiscal year. Accounts payable increased \$6.9 million primarily relating to payments due the District's third party sewer service provider (Orange County Sanitation District) and various other capital project vendors for the District's major capital projects.

During the current fiscal year, the District issued \$279.0 million of additional debt including \$103.4 million of series 2016 General Obligation Bonds and \$116.7 million of the Certificates of Participation series 2016. Associated with their issuance is a \$27.1 million premium from the General Obligation bonds and a \$31.8 million premium from the Certificates of Participation. The increase was partially offset by \$62.5 million in principal payments and \$6.7 million in amortization of premiums in the current fiscal year.

Also, in long-term liabilities the net pension liability increased by \$9.2 million, including \$10.2 million of additional pension liability and \$1.0 million of increase in pension plan investment assets. These increases in total liabilities were partially reduced by \$13.8 million in interest rate swaps liability as discussed above.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Financial Position Summary (Continued):

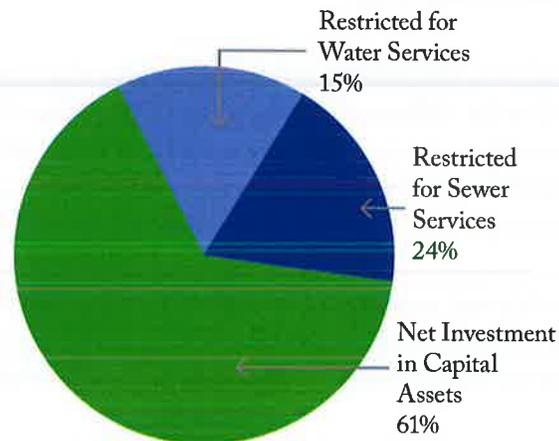
The District's deferred inflows of resources decreased \$0.8 million or 18.2 percent from \$4.4 million in the prior fiscal year to \$3.6 million in the current fiscal year. This is due primarily to a \$1.4 million cumulative differences between expected and actual plan participant experience such as changes in demographic and economic assumptions partially offset by the amortization of a change in the discount rate assumption of \$1.0 million. Additional information on the District's deferred inflows of resources can be found in Note 13 of the Notes to the Basic Financial Statements.

Net position at end of the current fiscal year increased from \$1,578.3 million in the prior fiscal year to \$1,772.0 million in the current fiscal year, an increase of \$193.7 million or 12.3 percent in the District's overall financial condition.

Net position consists of net investment in capital assets and restricted net position. Net investment in capital assets reflects capital assets, net of accumulated depreciation/amortization and the liabilities (such as debt) attributable to the acquisition, construction, or improvement of those assets. Net investment in capital assets was \$1,087.9 million or 61.0 percent of total net position, a decrease of \$90.6 million or 7.7 percent from the prior fiscal year. The decrease was due to the issuance of General Obligation Bonds, Certificates of Participation and notes payable issued to construct capital assets. During the current fiscal year, the District issued \$103.4 million of General Obligation Bonds and \$116.7 million of Certificates of Participation, including premiums of \$27.1 million and \$31.8 million, respectively. These were partially offset by \$62.5 million in principal payments on the total debt and \$6.7 million amortization of premiums in the current fiscal year. The change in net position was partially offset by an increase of \$116.7 million in net capital assets. Several major District capital projects contributed to the increase, including the MWRP Biosolids and Energy Recovery Facilities, which will reduce the District's overall sewage treatment costs as well as provide other resource recovery benefits. The District also purchased agricultural land in Riverside County, California which has first priority water rights on the Colorado River and are part of the District's continuing plan to enhance its water supply reliability. These projects account for approximately 47.0 percent of the increase.

Restricted net position for water services was \$264.3 million or 15.0 percent of total net position. Restricted net position for sewer services was \$419.8 million or 24.0 percent of total net position. Restricted net positions are externally restricted by legislation which imposes legally enforceable requirements that District assets be used only for the specific purposes for which it was formed.

**Net Position at June 30, 2017**



## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Activities and Changes in Net Position:

The Statement of Revenues, Expenses, and Changes in Net Position summarizes the District's operations during the current fiscal year. A Summary of the District's changes in net position for the fiscal years ended June 30, is included in Table 2 below:

	2017	2016	Increase/(Decrease)	
			Amount	Percentage
<b>Operating Revenues</b>				
Water sales and service charges	\$ 77.2	\$ 76.7	\$ 0.5	0.7%
Sewer sales and service charges	72.1	67.7	4.4	6.5%
Total operating revenues	149.3	144.4	4.9	3.4%
<b>Non-operating Revenues</b>				
Property taxes	51.3	46.3	5.0	10.8%
Interest income	2.8	1.2	1.6	133.3%
Increase (decrease) in fair value of investments	(1.6)	-	(1.6)	-100.0%
Real estate income	13.4	13.1	0.3	2.3%
Increase (decrease) in fair value of real estate investments	10.1	5.6	4.5	80.4%
Other income	7.1	7.8	(0.7)	-9.0%
Total non-operating revenues	83.1	74.0	9.1	12.3%
Total revenues	232.4	218.4	14.0	6.4%
<b>Operating Expenses</b>				
Water services expenses	71.2	69.3	1.9	2.7%
Sewer services expenses	51.8	48.1	3.7	7.7%
Depreciation	61.8	58.3	3.5	6.0%
Total operating expenses	184.8	175.7	9.1	5.2%
<b>Non-operating Expenses</b>				
Interest expense	18.8	15.4	3.4	22.1%
Real estate expense	4.4	4.4	-	0.0%
Other expense	1.9	2.8	(0.9)	-32.1%
Total non-operating expenses	25.1	22.6	2.5	11.1%
Total expenses	209.9	198.3	11.6	5.8%
Income/(loss) before capital contributions	22.5	20.1	2.4	11.9%
Capital contributions	41.9	53.3	(11.4)	-21.4%
Change in Net Position	64.4	73.4	(9.0)	-12.3%
Beginning Net Position	1,578.3	1,354.7	223.6	16.5%
Prior period adjustments <sup>(1)</sup>	129.3	150.2	(20.9)	-13.9%
<b>Ending Net Position</b>	<b>\$ 1,772.0</b>	<b>\$ 1,578.3</b>	<b>\$ 193.7</b>	<b>12.3%</b>

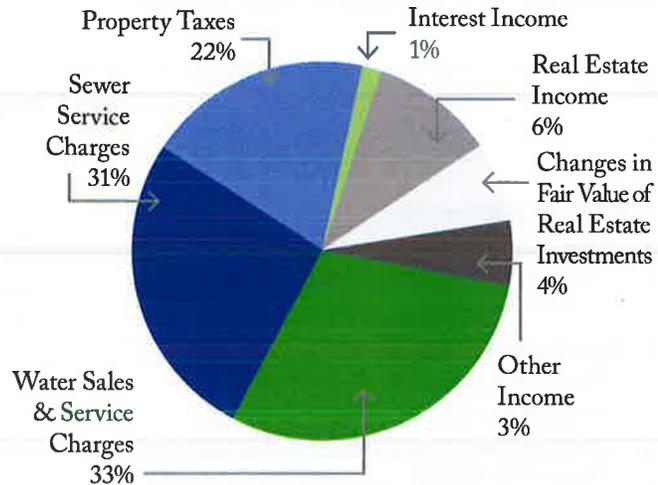
<sup>(1)</sup> These include two prior period adjustments. In fiscal years ended 2016, the prior period adjustment relates to the implementation of the new fair value accounting standards, GASB 72 as information relating to the prior year was not readily available. For 2017, the prior period adjustment relates to the reclassification of certain assets from capital assets to real estate investments. Additional information on the restatement of net position can be found in Note 18 of the Notes to the Basic Financial Statements.

## MANAGEMENT’S DISCUSSION AND ANALYSIS (Continued)

### Revenues:

As shown in Table 2, the District’s operating revenues total \$149.3 million or 64.2 percent of total revenues. Water sales contributed \$77.2 million or 51.7 percent to total operating revenues and sewer sales contribute \$72.1 million or 48.3 percent to total operating revenues. Operating revenues increased by \$4.9 million or 3.4 percent from the prior fiscal year. Overall, approximately 50 percent of the operating revenue increase is attributable to a Board approved rate increase which was primarily due to pass through charges from third party agencies. The remaining increase in operating revenue is due to customer growth in the District’s service areas due to increased construction activity. The chart below illustrates the sources of revenue for the fiscal year ended June 30, 2017.

Revenues for Fiscal Year Ended June 30, 2017  
(excluding change in fair market value of investments)



Non-operating revenues total \$83.1 million and account for 35.8 percent of total revenue for the fiscal year ended June 30, 2017. This is an increase of \$9.1 million or 12.3 percent from \$74.0 million in the prior fiscal year due primarily to:

- \$5.0 million increase in 1 percent and general property tax revenue associated with higher assessed valuations in the District’s service area.
- \$4.5 million increase in changes in fair value of real estate investments.

### Expenses:

As shown in Table 2, operating expenses total \$184.8 million, of which \$123.0 million relates to the cost of providing water and sewer services to the District’s customers. Water service operating costs are 92.2 percent and 90.4 percent of revenues in fiscal years 2017 and 2016, respectively. Sewer service operating costs are 71.9 percent and 71.0 percent of revenues in fiscal years 2017 and 2016, respectively. Water and sewer operating expenses, excluding depreciation, increased by \$5.6 million or 4.8 percent over the prior fiscal year.

Water expenses totaled \$71.2 million, an increase of \$1.9 million or 2.7 percent primarily due to:

- An increase of \$4.1 million in groundwater production of the District’s wells. Total water produced increased 2,326 acre feet to 49,252 acre feet in the current fiscal year and was 56 percent of the total water supply.
- An increase of \$2.2 million in the imported water purchases for both treated and untreated systems. Imported water purchases increased 3 percent over the prior year to 16,418 acre feet and were 19 percent of the total water supply. The majority of the increase is due to the purchase of water for start-up of the Baker Water Treatment Plant that was completed and became operational in January 2017.

## MANAGEMENT’S DISCUSSION AND ANALYSIS (Continued)

### Expenses (Continued):

- An increase of \$2.2 million in labor, benefits, and professional services and supplies for water treatment and maintenance.
- A decrease of \$4.1 million in expensed water projects related to the District’s capital program.
- A decrease of \$1.2 million in water conservation community outreach and education programs.
- Other net decreases of \$1.3 million.

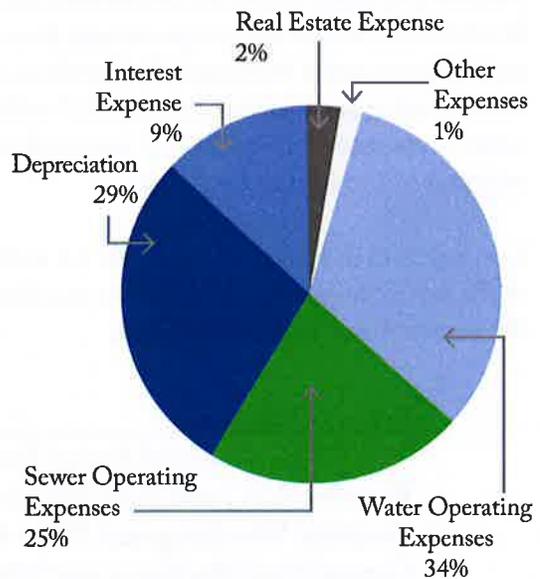
Sewer service expenses totaled \$51.8 million, an increase of \$3.7 million or 7.7 percent over the prior fiscal year. The increase is due primarily to:

- An increase of \$5.8 million in the cost of handling, treatment, and disposal of sewage solids residuals sent to the District’s third party provider (Orange County Sanitation District).
- An increase of \$1.4 million in labor, benefits, professional services, and supplies for sewage treatment and recycled system maintenance.
- A decrease of \$2.8 million in expensed sewer and recycled projects related to the District’s capital program.
- Other net decreases of \$0.7 million.

Depreciation expense totaled \$61.8 million, an increase of \$3.5 million or 6.0 percent over the prior fiscal year. The increase is the result of the completion of several capital projects. During the fiscal year ended June 30, 2017, \$146.6 million of assets were placed in service.

Non-operating expenses totaled \$25.1 million, an increase of \$2.5 million or 11.1 percent over the prior fiscal year. The increase is primarily due to interest expense on the 2016 bonds issued during the current fiscal year. Non-operating expenses consist primarily of \$18.8 million interest expense for the District’s debts and \$4.4 million real estate expense associated with the District’s real estate investment assets.

**Functional Expenses for Fiscal Year Ended June 30, 2017**



### Capital Contributions:

Capital contributions totaled \$41.9 million, a decrease of \$11.4 million or 21.4 percent over \$53.3 million in the prior fiscal year. Donated facilities from developers decreased from \$20.3 million in the prior fiscal year to \$12.6 million in the current fiscal year. The decrease was due to a high number of projects that were in design phase and active in construction and not ready to be donated to the District. The District also received \$25.6 million of connection fees from developers, a decrease of \$6.5 million from the prior year and \$3.7 million of grants from federal and state agencies during the fiscal year.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Capital Assets:

The District's investment in capital assets consists of the following as of June 30:

			<u>Increase/(Decrease)</u>	
	<u>2017</u>	<u>2016</u>	<u>Amount</u>	<u>Percentage</u>
Water assets	\$ 1,049.9	\$ 982.4	\$ 67.5	6.9%
Sewer assets	1,207.2	1,166.4	40.8	3.5%
Less: accumulated depreciation	(807.5)	(746.6)	(60.9)	8.2%
Land and water rights	123.8	93.2	30.6	32.8%
Construction in progress	274.9	236.2	38.7	16.4%
<b>Total</b>	<b>\$ 1,848.3</b>	<b>\$ 1,731.6</b>	<b>\$ 116.7</b>	<b>6.7%</b>

Capital assets, net of depreciation increased \$116.7 million or 6.7% from \$1,731.6 million in the prior fiscal year to \$1,848.3 million in the current fiscal year. Total projects transferred from Construction in Progress to Capital Assets and depreciated during the fiscal year ended June 30, 2017 were \$123.9 million. In addition, the District's proportionate share of the Orange County Sanitation District's jointly funded capital sewer assets increased \$22.7 million. During the year, the District reclassified \$6.1 million of land to real estate investments and \$8.7 million of project costs from Construction in Progress to real estate investments. The District's accumulated depreciation increased by \$61.8 million of depreciation expenses in the current fiscal year.

Construction in Progress added \$171.3 million during the current fiscal year. The following is a list of the top 8 capital projects expenditures that accounted for 61.4 percent of total additions incurred in the current fiscal year (in millions):

<u>Project Description</u>	<u>Amount</u>
MWRP Biosolids and Energy Recovery Facilities	\$ 45.4
Riverside, CA Land Purchases associated with Water Rights	35.8
Stockdale West Integrated Water Banking Project	8.2
General Plant Machinery and Vehicle	3.4
Oracle eBusiness Suite Software Upgrade	3.4
ILP North Conversion and Reservoir	3.2
Rosedale Drought Relief Water Banking Project	3.0
Meter and Main Pipelines	2.8
<b>Total</b>	<b>\$ 105.2</b>

Additional information on the District's capital assets can be found in Note 5 of the Notes to the Basic Financial Statements.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)

### Debt Administration:

As shown below in Table 4, as of June 30, 2017, the District had total debt outstanding of \$762.9 million, an increase of \$209.8 million or 37.9 percent from \$553.1 million in the prior fiscal year.

	2017	2016	Increase/(Decrease)	
			Amount	Percentage
General obligation bonds	\$ 608.1	\$ 491.2	\$ 116.9	23.8%
Certificates of participation	153.6	60.4	93.2	154.3%
Notes payable	1.2	1.5	(0.3)	-20.0%
<b>Total</b>	<b>\$ 762.9</b>	<b>\$ 553.1</b>	<b>\$ 209.8</b>	<b>37.9%</b>

During the current fiscal year, the District issued \$103.4 million in General Obligation Bonds and \$116.7 million of Certificates of Participation for the funding of certain capital improvements. In addition, the Certificates refunded callable portion of the outstanding balance of the 2010 Certificates of Participation. The issuance resulted in a \$27.1 million premium for the General Obligation Bonds and a \$31.8 million premium for the Certificates of Participation. These were partially offset by \$62.5 million of principal payments and \$6.7 million amortization of premium in the current fiscal year.

The District's rated debt obligations have received the following ratings from the three major rating agencies:

Fitch Ratings:	AAA
Moody's:	Aa1
Standard and Poor's:	AAA

Additional information on the District's long-term debt can be found in Note 9 of the Notes to the Basic Financial Statements.

### Contacting the District's Financial Management:

This financial report is designed to provide our citizens, taxpayers, customers, investors and creditors with a general review of the District's finances and to show the District's accountability for the money it receives. If you have questions about this report or need additional financial information, contact the Executive Director of Finance and Administration at the Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California 92618-7500.

## EXHIBIT "A"

**Irvine Ranch Water District**  
Statement of Net Position  
June 30, 2017  
(with comparative data as of June 30, 2016)  
(amounts expressed in thousands)

	2017	2016
<b>ASSETS</b>		
Current Assets:		
Cash and Investments (note 2)	\$ 354,350	\$ 213,863
Receivables:		
Customer accounts receivable	8,460	8,055
Interest receivable	840	502
Notes receivable, current portion	14	28
Other receivables	7,069	8,649
Total receivables	16,383	17,234
Other Current Assets:		
Inventories (note 4)	7,086	3,197
Prepaid items and deposits	1,200	1,532
Total other current assets	8,286	4,729
Total current assets	379,019	235,826
Noncurrent Assets:		
Capital Assets (note 5):		
Water assets	1,049,943	982,372
Sewer assets	1,207,169	1,166,362
Subtotal	2,257,112	2,148,734
Less: accumulated depreciation	(807,517)	(746,561)
Total capital assets being depreciated, net	1,449,595	1,402,173
Land and water rights	123,811	93,244
Construction in progress	274,898	236,174
Total capital assets, net	1,848,304	1,731,591
Other Noncurrent Assets:		
Investments - swap collateral (note 2)	2,439	13,109
Investment in installment sale agreement (note 8)	-	8,562
Notes receivable, net of current portion	70	140
Real estate investments (note 7)	353,585	199,003
Total other noncurrent assets	356,094	220,814
Total noncurrent assets	2,204,398	1,952,405
<b>TOTAL ASSETS</b>	<b>2,583,417</b>	<b>2,188,231</b>
<b>DEFERRED OUTFLOW OF RESOURCES</b>		
Deferred refunding charges	2,580	1,192
Accumulated decrease in fair value of swap agreements (note 3)	27,425	41,200
Pension contributions (note 13)	18,231	6,866
Pension actuarial changes (note 13)	13,413	407
<b>TOTAL DEFERRED OUTFLOW OF RESOURCES</b>	<b>61,649</b>	<b>49,665</b>

See accompanying notes to the basic financial statements.

## EXHIBIT "A"

**Irvine Ranch Water District**  
Statement of Net Position  
June 30, 2017  
(with comparative data as of June 30, 2016)  
(amounts expressed in thousands)  
(Continued)

	2017	2016
<b>LIABILITIES</b>		
Current Liabilities:		
Account payable and accrued expenses	40,289	33,399
Customer deposits and advance payments	3,114	5,091
Accrued interest:		
General obligation bonds	3,862	1,568
Other accrued interest payable	3,088	2,088
Current portion of long-term liabilities:		
General obligation bonds (note 9)	21,624	12,900
Certificates of participation (note 9)	3,351	7,496
Notes payable (note 9)	262	260
Other long term liabilities (note 9)	1,712	1,653
Unearned revenue (note 10)	565	525
Claims liability (note 17)	675	411
Total current liabilities	78,542	65,391
Long-Term Liabilities:		
General obligation bonds, net of current portion (note 9)	586,494	478,300
Certificates of participation, net of current portion (note 9)	150,275	52,891
Notes payable, net of current portion (note 9)	947	1,209
Other long term liabilities (note 9)	3,527	3,109
Unearned revenue, net of current portion (note 10)	6,522	7,323
Claims liability, net of current portion (note 17)	751	751
Net pension liability (note 13)	11,108	1,923
Net OPEB obligation (note 14)	3,819	3,079
Swap liability (note 3)	27,425	41,200
Total long-term liabilities	790,868	589,785
<b>TOTAL LIABILITIES</b>	<b>869,410</b>	<b>655,176</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>		
Pension actuarial changes (note 13)	3,642	4,409
<b>TOTAL DEFERRED INFLOWS OF RESOURCES</b>	<b>3,642</b>	<b>4,409</b>
<b>NET POSITION (note 12):</b>		
Net investment in capital assets	1,087,931	1,178,535
Restricted for water services	264,301	221,503
Restricted for sewer services	419,782	178,273
<b>TOTAL NET POSITION</b>	<b>\$ 1,772,014</b>	<b>\$ 1,578,311</b>

See accompanying notes to the basic financial statements.

## EXHIBIT "A"

**Irvine Ranch Water District**

Statement of Revenues, Expenses and Changes in Net Position  
 For the Fiscal Year Ended June 30, 2017  
 (with comparative data for the Fiscal Year Ended June 30, 2016)  
 (amounts expressed in thousands)

	2017	2016
<b>OPERATING REVENUES:</b>		
Water sales and service charges	\$ 77,252	\$ 76,692
Sewer sales and service charges	72,054	67,682
Total operating revenues	<u>149,306</u>	<u>144,374</u>
<b>OPERATING EXPENSES:</b>		
Water:		
Water services	55,296	57,499
General and administrative	15,906	11,827
Sewer:		
Sewer services	42,752	40,413
General and administrative	9,059	7,625
Depreciation	61,841	58,330
Total operating expenses	<u>184,854</u>	<u>175,694</u>
Operating income (loss)	<u>(35,548)</u>	<u>(31,320)</u>
<b>NONOPERATING REVENUES (EXPENSES):</b>		
Property taxes	51,321	46,303
Interest income	2,843	1,249
Increase (decrease) in fair value of investments	(1,624)	(32)
Real estate income	13,434	13,056
Increase (decrease) in fair value of real estate investments	10,084	5,597
Other income	7,117	7,837
Interest expense	(18,784)	(15,415)
Real estate expense	(4,358)	(4,363)
Other expenses	(1,997)	(2,800)
Total nonoperating revenues (expenses)	<u>58,036</u>	<u>51,432</u>
Income (loss) before capital contributions	22,488	20,112
<b>CAPITAL CONTRIBUTIONS:</b>		
Donated facilities	12,599	20,305
Connection fees	25,563	32,110
Other	3,751	863
Increase (decrease) in net position	<u>64,401</u>	<u>73,390</u>
<b>NET POSITION AT BEGINNING OF YEAR</b>	<b>1,578,311</b>	<b>1,354,663</b>
Prior period adjustments (note 18)	129,302	150,258
<b>NET POSITION AT END OF YEAR</b>	<b><u>\$ 1,772,014</u></b>	<b><u>\$ 1,578,311</u></b>

See accompanying notes to the basic financial statements.

## EXHIBIT "A"

**Irvine Ranch Water District**

## Statement of Cash Flows

For the Fiscal Year Ended June 30, 2017

(with comparative data for the Fiscal Year Ended June 30, 2016)

(amounts expressed in thousands)

	2017	2016
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Cash received from customers and users	\$ 156,305	\$ 137,941
Cash paid to suppliers of goods and services	(67,463)	(67,987)
Cash paid for employees services	(61,650)	(51,421)
Net cash provided by (used for) operating activities	<u>27,192</u>	<u>18,533</u>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:</b>		
Property tax receipts	51,321	48,746
Net cash provided by noncapital financing	<u>51,321</u>	<u>48,746</u>
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:</b>		
Acquisition and construction of capital assets	(175,475)	(105,474)
Proceeds from disposition of capital assets	116	-
Proceeds of long-term debt	279,041	-
Payment for early redemption	(48,059)	-
Principal payments on long-term liabilities	(14,225)	(19,378)
Interest and issuance costs on long-term liabilities	(29,449)	(19,321)
Developer connection fees and related receipts	29,314	32,973
Net cash provided by (used for) capital and related financing activities	<u>41,263</u>	<u>(111,200)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Investment earnings	2,505	910
Investment earnings in real estate	9,076	8,693
Proceeds from sale or maturity of investments	185,734	244,625
Purchases of investments	(305,311)	(201,358)
Issuance of notes receivable	-	67
Collections on notes receivable	84	(122)
Net cash provided by (used for) investing activities	<u>(107,912)</u>	<u>52,815</u>
Net increase (decrease) in cash and cash equivalents	11,864	8,894
<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR</b>	<u>58,517</u>	<u>49,623</u>
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR</b>	<u>\$ 70,381</u>	<u>\$ 58,517</u>

See accompanying notes to the basic financial statements.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Statement of Cash Flows  
 For the Fiscal Year Ended June 30, 2017  
 (with comparative data for the Fiscal Year Ended June 30, 2016)  
 (amounts expressed in thousands)  
 (Continued)

	2017	2016
Reconciliation of cash and cash equivalents to amounts reported on the Statement of Net Position:		
Cash and investments	\$ 354,350	\$ 213,863
Investments - swap collateral	2,439	13,109
Investment in installment sale agreement	-	8,562
Subtotal	356,789	235,534
Less long-term investments	(286,408)	(177,017)
Cash and cash equivalents at end of year	\$ 70,381	\$ 58,517
Reconciliation of operating income to net cash provided by (used for) operating activities:		
Operating income (loss)	\$ (35,548)	\$ (31,320)
Adjustments to reconcile operating income to net cash provided by (used for) operating activities:		
Other nonoperating income	7,117	7,959
Other nonoperating expenses	(1,997)	(2,800)
(Gain) loss on disposition of capital assets	141	3
Depreciation and amortization	61,840	58,330
(Increase) decrease in customer receivables	(405)	(1,767)
(Increase) decrease in installment sale receivable	8,562	(2,346)
(Increase) decrease in other receivables	1,580	(3,431)
(Increase) decrease in inventories	(3,889)	496
(Increase) decrease due from other agencies	-	-
(Increase) decrease in prepaid expenses and other assets	(10,908)	3,264
(Increase) decrease in net pension asset	-	1,567
(Increase) decrease in deferred outflows	(24,371)	(635)
Increase (decrease) in accounts payable and accrued expenses	18,130	(3,798)
Increase (decrease) in customer deposits and advance payments	(1,977)	1,515
Increase (decrease) in compensated absences	256	88
Increase (decrease) in claims payable	264	(34)
Increase (decrease) in unearned revenue	(761)	(526)
Increase (decrease) in net OPEB obligation	740	223
Increase (decrease) in net pension liability	9,185	1,923
Increase (decrease) in deferred inflows	(767)	(10,178)
Net cash provided by (used for) operating activities	\$ 27,192	\$ 18,533
Noncash investing, capital and financing activities:		
Contributions of capital assets from developers	\$ 12,599	\$ 20,305
Unrealized gain (loss) on investments	8,460	5,597
Total noncash investing, capital and financing activities	\$ 21,059	\$ 25,902

See accompanying notes to the basic financial statements.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Statement of Fiduciary Net Position  
 Fiduciary Fund - Pension Benefits Trust Fund  
 June 30, 2017  
 (with comparative data as of June 30, 2016)  
 (amounts expressed in thousands)

	2017	2016
<b>ASSETS</b>		
Cash and investments (note 2):		
Equities	\$ 44,699	\$ 28,600
Fixed income bonds	20,955	13,011
Money market	447	5,520
Total cash and investments	66,101	47,131
Interest receivable	9	16
<b>TOTAL ASSETS</b>	<b>66,110</b>	<b>47,147</b>
 <b>NET POSITION</b>		
Net position held in trust for pension benefits	\$ 66,110	\$ 47,147

See accompanying notes to the basic financial statements.

EXHIBIT "A"

**Irvine Ranch Water District**

Statement of Changes in Fiduciary Net Position

Fiduciary Fund - Pension Benefits Trust Fund

For the Fiscal Year Ended June 30, 2017

(with comparative data for the Fiscal Year Ended June 30, 2016)

(amounts expressed in thousands)

	2017	2016
<b>ADDITIONS</b>		
Contributions:		
Employer	\$ 12,781	\$ 1,940
Total contributions	<u>12,781</u>	<u>1,940</u>
Investment income:		
Dividends	1,252	826
Investments gain (loss)	216	(1,004)
Net increase (decrease) in the fair value of investments	<u>4,780</u>	<u>103</u>
Total investment earnings	<u>6,248</u>	<u>(75)</u>
Total additions	<u>19,029</u>	<u>1,865</u>
<b>DEDUCTIONS</b>		
Administrative expenses	<u>66</u>	<u>31</u>
Total additions	<u>66</u>	<u>31</u>
Increase (decrease) in net position	18,963	1,834
<b>NET POSITION AT BEGINNING OF YEAR</b>	<u>47,147</u>	<u>45,313</u>
<b>NET POSITION AT END OF YEAR</b>	<u>\$ 66,110</u>	<u>\$ 47,147</u>

See accompanying notes to the basic financial statements.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017

**(1) Summary of Significant Accounting Policies**

**(a) Reporting Entity**

The Irvine Ranch Water District (District) was formed in 1961 as a special district under Division 13 of the California Water Code (the Act). The District provides potable and recycled water service as well as sewage collection, treatment, and disposal to users within its boundaries.

The District is divided geographically into eight water and ten sewer improvement districts (IDs), as well as several planning areas (PAs) that function as informal improvement districts. Each improvement district is a sub-fund of the District and their primary purpose is to allocate costs and funding on an equitable basis for the construction of water, sewer, and recycled water infrastructure. Most improvement districts have authority to issue general obligation bonds to finance the construction of capital facilities that were identified and valued in a Plan of Works specific to the improvement district. Each improvement district with authority to issue general obligation bonds also has the authority to levy and collect connection fees and ad valorem taxes on the land within its legal boundaries sufficient to meet its general obligation bond indebtedness.

Connection fees which are paid by developers and property taxes which are paid by property owners vary by improvement district based upon, among other considerations, total capital costs, ratio of developed to undeveloped land, and development densities; however, water and sewer user fees are uniform throughout the District. Los Alisos had a separate user rate structure for water charges until July 1, 2017 when they were merged onto the District's uniform rates.

**Description of the Reporting Entity**

The financial statements of the District include the financial activities of the following sub-fund improvement districts and planning areas:

111/222	Area Excluded from IDs
112/212	Former El Toro Marine Base
113/213	Former Tustin Marine Base
125/225	Developed/Underlay
240	Newport Coast/Newport Ridge
252	Santiago Hills
153/253	Irvine Business District/Spectrum/Shady Canyon/Laguna Laurel/East Orange
154	Santiago Canyon(s)
256	Orange Park Acres
185/285	Los Alisos Area
188/288	Portola Hills Commercial
110/210	Overall District Boundary

## Irvine Ranch Water District

Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

### (1) Summary of Significant Accounting Policies (Continued)

#### (a) Reporting Entity (Continued)

**Blended Component Units** – Blended component units although legally separate entities, are, in substance, part of the District's operations since they have the same governing board. The District has both financial accountability and operational responsibility for the blended component units. The District has the following blended component units:

**The Irvine Ranch Water District Water Service Corporation** – In January 1997, the District formed a 501(c)(4) corporation for the purpose of financing and acquiring water, sewer and other public improvements. The Corporation was created to effect the merger of the Santa Ana Heights Water Company and the issuance of the 2002 Certificates of Participation, 2008 Refunding Certificates of Participation, 2010 Refunding Certificates of Participation, and 2016 Certificates of Participation. The Corporation's bylaws mandate that the members of the District's Board of Directors shall constitute the Corporation's five-member Board of Directors. The Irvine Ranch Water District Water Service Corporation does not issue separate financial statements.

**Bardeen Partners, Inc.** – In March 1991, the District formed a 501(c)(4) corporation for the purpose of accounting for the financial data and transactions for certain District real estate investments, including the investments in Wood Canyon Villas, Sycamore Canyon Apartments, and Irvine Technology Center. Bardeen Partners is governed by a Board of Directors consisting of the five members of the District's Board of Directors. Bardeen Partners does not issue separate financial statements.

**Irvine Ranch Water District Improvement Corporation** – In August 1986, the District formed a 501(c)(4) corporation for the purpose of financing water, sewer and other public improvements. The Corporation's only transactions are related to the debt service payments on the 1986 Certificates of Participation which were refunded by the Irvine Ranch Water District Service Corporation Certificates of Refunding Series 2010. The Corporation is governed by the five members of the Board of Directors of the District. The District accounts for the Corporation's activities in several Improvement Districts. The Irvine Ranch Water District Improvement Corporation does not issue separate financial statements. There is no current activity for the Corporation.

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(1) Summary of Significant Accounting Policies (Continued)**

**b) Basic Financial Statements**

The basic financial statements are comprised of the Statement of Net Position, the Statement of Revenues, Expenses and Changes in Net Position, the Statement of Cash Flows, the Statement of Fiduciary Net Position – Fiduciary Fund, the Statement of Changes in Fiduciary Net Position – Fiduciary Fund, and the Notes to the Basic Financial Statements.

**(c) Measurement Focus, Basis of Accounting and Financial Statement Presentation**

The District's financial activities are accounted for as an enterprise fund (proprietary fund type). A fund is an accounting entity with a self-balancing set of accounts established to record the financial position and results of operations of a specific governmental activity.

The activities of enterprise funds closely resemble those of ongoing businesses in which the purpose is to conserve and add to basic resources while meeting operating expenses from current revenues. Enterprise funds account for operations that provide services on a continuous basis and are substantially financed by revenues derived from user charges. In addition, the District accounts for the Irvine Ranch Water District Post-Employment Benefits Trust (Pension Benefits Trust) as a fiduciary fund. The Pension Benefits Trust fund is maintained to account for assets held in a trustee capacity. Both the enterprise fund and the Pension Benefits Trust fund utilize the accrual basis of accounting. Revenues are recognized when earned and expenses are recognized as they are incurred. Internal activity has been eliminated in the accompanying basic financial statements.

The District distinguishes operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with water and sewer operations. The principal operating revenues of the District are charges to customers for sales and services. Operating expenses include cost of sales and services, general and administrative expenses and depreciation of capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

Capital contributions consist of contributed capital assets, connection fees, grants and other charges that are legally restricted for capital expenditures by state law or by the Board action that established those charges.

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(1) Summary of Significant Accounting Policies (Continued)**

**(c) Measurement Focus, Basis of Accounting and Financial Statement Presentation (Continued)**

Net position of the District is classified into two components: (1) net investment in capital assets and (2) restricted net position. These classifications are defined as follows:

**Net Investment in capital assets** – This component of net position consists of capital assets, net of accumulated depreciation reduced by the outstanding balances of notes or borrowing that are attributable to the acquisition of the asset, construction, or improvement of those assets. If there are significant unspent related debt proceeds at year-end, the portion of the debt attributable to the unspent proceeds are not included in the calculation of net investment in capital assets.

**Restricted net position** – This component of net position consists of constraints placed on net position use through external constraints imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation.

When both restricted and unrestricted resources are available for use, the District uses unrestricted resources first, and then restricted resources as they are needed. For capital expenditures, legally available restricted bond proceeds are used first, then other restricted resources, and then unrestricted resources are used if needed.

**(d) Property Taxes**

The District is authorized under the Act to levy taxes on all taxable property (lands only) within its boundaries for the purposes of paying certain of its debt obligations, subject to certain limitations in the Act, the Revenue and Taxation Code and the California Constitution. The District also receives a portion of the County's 1% ad valorem property taxes from certain lands within its boundaries. Property tax revenue is recognized in the fiscal year in which the taxes are levied.

The property tax calendar is as follows:

Lien date:	January 1
Levy date:	July 1
Due date:	First installment – November 1 Second installment – February 1
Delinquent date:	First installment – December 10 Second installment – April 10

The assessment, levy and collection of property taxes are the responsibility of the County of Orange, and are remitted to the District periodically.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(1) Summary of Significant Accounting Policies (Continued)**

**(e) Cash and Cash Equivalents**

For the purposes of the statement of cash flows, cash equivalents are defined as short-term, highly liquid investments that are both readily convertible to known amounts of cash or so near to their maturity that they present insignificant risk of changes in value because of changes in interest rates, and have an original maturity date of 12 months or less.

**(f) District Investments**

Investments are reported in the accompanying Statement of Net Position at fair value, except for certain investment contracts that are reported at cost because they are not transferable and they have terms not affected by changes in market interest rates.

Changes in fair value that occur during the fiscal year are recognized as increase (decrease) in fair value of investments reported for that fiscal year. Interest income includes interest earnings on the District's investments.

**(g) Pension Benefits Trust Investments**

Investments of the Pension Benefits Trust are reported in the accompanying Statement of Fiduciary Net Position at fair value.

In the Statement of Changes in Fiduciary Net Position, changes in fair value that occur during the fiscal year are recognized as increase (decrease) in fair value of investments reported for that fiscal year. Interest income is recorded on the accrual basis. Dividends are recorded on the payment date.

**(h) Real Estate Investments**

Real estate investments consist of a wholly-owned apartment complex, three commercial office properties and two entitled land properties. The District is also a party to a real estate limited partnership in which the District has a 50% or less ownership interest and does not exercise control. All real estate investments are reported at fair value. Changes in fair value that occur during the fiscal year are recognized as increase (decrease) in fair value of real estate investments reported for that fiscal year.

**(i) Fair Value Measurements**

Certain assets and liabilities are required to be reported at fair value. The fair value framework provides a hierarchy that prioritizes the inputs to valuation techniques used to measure fair value.

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of fair value hierarchy are described as follows:

Level 1 - Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets.

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(1) Summary of Significant Accounting Policies (Continued)**

**(i) Fair Value Measurements (Continued)**

Level 2 - Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly and fair value is determined through the use of models or other valuation methodologies including:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in markets that are inactive;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement. These unobservable inputs reflect the District's own assumptions about the inputs market participants would use in pricing the asset or liability (including assumptions about risk). These unobservable inputs are developed based on the best information available in the circumstances and may include the District's own data.

**(j) Inventory and Prepaid Items**

Water inventory is stated at its purchase cost using the first in, first out method. Inventory is recorded when purchased, and expensed at the time the inventory is consumed. Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items.

**(k) Capital Assets and Depreciation**

Capital assets are valued at cost where historical records are available and at an estimated historical cost where no historical records exist. Donated assets are valued at their estimated acquisition value on the date received. The District capitalizes all assets with a historical cost of at least \$2,500 and a useful life of at least three years. The cost of normal maintenance and repairs that do not add to the value of the assets or materially extend asset lives are not capitalized.

Depreciation is computed utilizing the straight-line method over the following estimated useful lives:

Buildings and Structures	3 to 100 years
Transmissions and Distributions	10 to 75 years
Machinery and Equipment	3 to 50 years

**Irvine Ranch Water District**

Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(1) Summary of Significant Accounting Policies (Continued)****(l) Capitalized Interest**

Interest costs on related borrowings are capitalized during the construction period of major capital asset additions. The capitalized interest is recorded as part of the asset to which it is related and is depreciated over the estimated useful life of the related asset.

**(m) Compensated Absences**

The District's policy permits employees to accumulate earned but unused vacation and sick leave benefits up to certain limits. Earned vacations pay to a maximum of 320 hours (or more with written approval of the General Manager). Sick leave hours accrue at the rate of one day per month and employees may elect to receive cash for accumulated sick leave for up to 96 hours in excess of the first 80 hours accumulated. Fifty percent of accumulated sick leave up to a maximum of 960 hours may be paid upon termination of employment. All accumulated vacation and vested sick leave pay is recorded as expense at the time the benefit is earned.

**(n) Pensions**

For purposes of measuring the net pension liability, deferred outflows and inflows of resources relating to pensions and pension expense, information about the fiduciary net position of the District's California Public Employees' Retirement System (CalPERS) plan (Plan) and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by CalPERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, requires that the reported results must pertain to liability and asset information within certain defined timeframes. For this report, the following timeframes are used:

Valuation Date (VD)	June 30, 2015
Measurement Date (MD)	June 30, 2016
Measurement Period (MP)	July 1, 2015 to June 30, 2016

**(o) Deferred Outflows/Inflows of Resources**

In addition to assets, the Statement of Net Position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then. The District has the following items that qualify for reporting in this category:

- Deferred refunding charges reported in the statement of net position result from the difference in the carrying value of refunded debt and the reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt.

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(1) Summary of Significant Accounting Policies (Continued)**

**(o) Deferred Outflows/Inflows of Resources (Continued)**

- Accumulated decrease in fair value of swap agreements reported in the statement of net position results from changes in fair value of the fixed payer interest rate swaps.
- In accordance with GASB Statement No. 68, all cash contributions made to CalPERS and the Pension Benefits Trust during the current fiscal year are reclassified as deferred outflows of resources.
- In accordance with GASB Statement No. 68, the difference between the actual experience and expected plan participant experience is amortized. The unamortized amount of that difference is represented as deferred outflows of resources.
- In accordance with GASB Statement No. 68, the difference between the actual earnings on pension plan investments and projected earnings on pension plan investments is amortized. The unamortized amount of that difference is represented as deferred outflows of resources.

In addition to liabilities, the Statement of Net Position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The District has the following items that qualify for reporting in this category:

- In accordance with GASB Statement No. 68, the difference between the actual experience and expected plan participant experience is amortized. The unamortized amount of that difference is represented as deferred inflows of resources.
- In accordance with GASB Statement No. 68, the changes in actuarial assumptions, such as the discount rate, are amortized. The unamortized amount of that change is represented as deferred inflows of resources.

**(p) Use of Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

**(q) Comparative Financial Statements and Reclassifications**

The information included in the accompanying financial statements for the prior year has been presented for comparison purposes only and does not represent a complete presentation in accordance with generally accepted accounting principles. Certain amounts presented in the prior year financial statements have been reclassified in order to be consistent with the current year's presentation.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

(2) **Cash and Investments**

Cash and investments as of June 30, 2017 are classified in the accompanying financial statements as follows (in thousands):

<b>Statement of Net Position:</b>	
Cash and investments	\$ 354,350
Investments-swap collateral	2,439
Total Cash and Investments	<u>356,789</u>
<b>Fiduciary Fund - Pension Benefits Trust:</b>	
Cash and investments:	
Equities	44,699
Fixed income	20,955
Money market	447
	<u>66,101</u>
<b>Total Cash and Investments</b>	<b><u>\$ 422,890</u></b>

Cash and investments as of June 30, 2017 consist of the following (in thousands):

<b>District Cash and Investments:</b>	
Cash on hand	\$ 3
Deposits with financial institutions	(29,788)
Investments	386,574
Total Cash and Investments	<u>356,789</u>
<b>Fiduciary Fund - Pension Benefits Trust:</b>	
Cash and investments:	
Equities - mutual funds	44,699
Fixed income bonds - mutual funds	20,955
Money market - mutual funds	447
	<u>66,101</u>
<b>Total Cash and Investments</b>	<b><u>\$ 422,890</u></b>

Investments-swap collateral funds are held in separate trust accounts and earn the Federal Funds Effective Rate, which was 1.06% as of June 30, 2017.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(2) Cash and Investments (Continued)****District Authorized Investment Policy**

The following table identifies the investment types that are authorized for the District by the California Government Code, the California Water Code, and the District's investment policy, whichever is most restrictive. The table also identifies certain provisions that address interest rate risk and concentration of credit risk.

<b>Authorized Investment Type</b>	<b>Maximum Maturity<sup>(1)</sup></b>	<b>Maximum Percentage of Portfolio</b>	<b>Maximum Investment in One Issuer</b>
Local Agency Bonds	5 years	None	None
U.S. Treasury Obligations	5 years	None	None
U.S. Agency Securities	5 years	None	None
Bankers Acceptances	180 days	40%	30%
Commercial Paper	270 days	25%	10%
Negotiable Certificates of Deposit	5 years	30%	None
Repurchase Agreements	1 year	None	None
Reverse Repurchase Agreements	92 days	20% of base value	None
Medium-Term Notes	5 years	30%	None
Money Market Mutual Funds	N/A	20%	10%
Mortgage Pass-Through Securities	5 years	20%	None
Orange County Treasury Pool	N/A	None	None
Local Agency Investment Fund (LAIF)	N/A	None	None
Real Estate Investments	N/A	30% <sup>(2)</sup>	None

<sup>(1)</sup> Maximum maturity unless express authority has been granted otherwise by the Board of Directors pursuant to the California Government Code Section 53601.

<sup>(2)</sup> 30% of Replacement Fund, as authorized by the California Water Code.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

(2) **Cash and Investments (Continued)**

**District Investments Authorized by Debt Agreements**

Investment of debt proceeds held by the bond trustee are governed by provisions of the debt agreements, rather than the general provisions of the California Government Code or the District's investment policy. None of the District's bond trustees hold any debt proceeds or monies that are subject to investment under the debt agreements.

**Pension Benefits Trust (The Trust) Authorized Investment Strategy**

The Trust's investment policy authorizes investment of Trust assets in financial instruments in three broad categories: equity, fixed income, and real estate. These financial instruments can include, but are not limited to, corporate bonds, commercial paper, U.S. government securities, common and preferred stock, real estate investment trusts, and mutual funds. Investments may include derivatives, options and futures as portfolio protection strategies. The following is a summary of the Trust's investment policy.

The Trust is governed by a Retirement Board (the Board) which consists of two IRWD Board members and the General Manager. The Board shall designate one or more investment managers to manage the assets under their supervision subject to the laws of the State of California and Investment Guidelines established by the Board. The long-term asset allocation policy including the minimum-maximum asset allocation range for each asset class is as follows:

<u>Asset Classes</u>	<u>Minimum</u>	<u>Maximum</u>
Cash	0%	30%
Public Equity: Domestic & International	30%	80%
Private Equity	0%	5%
Fixed Income	10%	40%
Real Estate	0%	10%

The asset allocation policy will be pursued by the Trust on a long-term basis and be revised if necessary due to market conditions. The Board will monitor the current asset allocation policy against the long-term allocation and rebalance as it deems necessary.

Cash equivalent reserves shall consist of cash instruments having a quality rating of A-1, P-1 or higher, as established by Moody's or Standard & Poor's. Bankers' acceptances, certificates of deposit and savings accounts must be made of United States banks or financial institutions or United States branches of foreign banks, which are federally insured with unrestricted capital of at least \$50 million. Short-term corporate obligations must be rated A or better by Moody's or by Standard & Poor's.

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

(2) **Cash and Investments (Continued)**

**Pension Benefits Trust (The Trust) Authorized Investment Strategy (Continued)**

Equity investments are restricted to high quality, readily marketable securities of corporations that are actively traded on a major exchange. Not more than 5% of the total stock portfolio valued at market may be invested in the common stock of any one corporation. Ownership of the shares of one company shall not exceed 2% of those outstanding. Not more than 25% of stock valued at market may be held in any one industry category. The overall non-U.S. equity allocation should include a diverse global mix of at least 10 countries. The emerging markets exposure as defined by Morgan Stanley Capital International Inc. should be limited to 35% of the non-U.S. portion of the portfolio.

Fixed income securities of any one issuer shall not exceed 5% of the total bond portfolio, at time of purchase. The 5% limitation does not apply to issues of the U.S. Treasury or other Federal Agencies. The overall rating of the fixed income assets shall be at least "A", according to one of the three rating agencies (Fitch, Moody's or Standard & Poor's). In cases where the yield spread adequately compensates for additional risk, securities where two of the three rating agencies (Fitch, Moody's or Standard & Poor's) have assigned ratings of Baa3 or BBB- ratings, can be purchased up to a maximum of 20% of total market value of fixed income securities.

**Custodial Credit Risk**

Custodial credit risk for *deposits* is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for *investments* is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law (unless so waived by the governmental unit). The market value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure public agency deposits by pledging first trust deed mortgage notes having a value of 150% of the secured public deposits.

**Irvine Ranch Water District**

Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(2) Cash and Investments (Continued)****Disclosures Relating to Interest Rate Risk**

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. One of the ways that the District manages its exposure to interest rate risk is by purchasing a combination of shorter term and longer term investments and by timing cash flows from maturities so that a portion of the portfolio is maturing or coming near to maturity as necessary to provide the cash flow and liquidity needed for District operations.

Information about the sensitivity of the fair values of the District's and Pension Benefits Trust's investments to market interest rate fluctuations is provided by the following tables that shows the distribution of the investments by maturity (in thousands):

**District Cash and Investments:**

<b>Investment Type</b>	<b>Amount</b>	<b>Remaining Maturity</b>	
		<b>12 Months Or Less</b>	<b>13 to 36 Months</b>
Federal Agency Securities	\$ 308,742	\$ 84,860	\$ 223,882
Local Agency Investment Fund	70,381	70,381	-
US Treasury Note	5,012	5,012	-
Treasury Equivalents <sup>(1)</sup>	2,439	2,439	-
<b>Total</b>	<b>\$ 386,574</b>	<b>\$ 162,692</b>	<b>\$ 223,882</b>

**Fiduciary Fund - Pension Benefits Trust:**

<b>Investment Type</b>	<b>Amount</b>	<b>Remaining Maturity</b>			
		<b>12 Months Or Less</b>	<b>13 to 36 Months</b>	<b>37 Months Or More</b>	<b>Not Applicable</b>
Mutual Funds - Equities	\$ 44,699	\$ -	\$ -	\$ -	\$ 44,699
Mutual Funds - Fixed Income Bonds	20,955	1,873	3,019	16,063	-
Mutual Funds - Money Market	447	447	-	-	-
<b>Total</b>	<b>\$ 66,101</b>	<b>\$ 2,320</b>	<b>\$ 3,019</b>	<b>\$ 16,063</b>	<b>\$ 44,699</b>

<sup>(1)</sup> Treasury Equivalents represent invested swap collateral earning the Effective Federal Funds Rate, which was 1.06% as of June 30, 2017.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(2) Cash and Investments (Continued)****Disclosures Relating to Credit Risk**

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. Presented below is the actual rating as of year-end for each investment type (in thousands):

<b>District Cash and Investments:</b>	<b>Amount</b>	<b>Rating as of Year End</b>		
		<b>AAA</b>	<b>Between A- and AA+</b>	<b>Not Rated</b>
<b>Investment Type</b>				
Federal Agency Securities	\$ 308,742	\$ 19,924	\$ 278,822	\$ 9,996
Local Agency Investment Fund	70,381	-	-	70,381
Treasury Equivalents	5,012	5,012	-	-
Municipal Bonds - Installment Sale	2,439	-	2,439	-
Total	<u>\$ 386,574</u>	<u>\$ 24,936</u>	<u>\$ 281,261</u>	<u>\$ 80,377</u>

**Fiduciary Fund Pension Benefits Trust Fund:**

<b>Investment Type</b>	<b>Amount</b>
Mutual Funds - Equities	\$ 44,699 <sup>(1)</sup>
Mutual Funds - Fixed Income Bonds	20,955 <sup>(2)</sup>
Mutual Funds - Money Market	447 <sup>(3)</sup>
Total	<u>\$ 66,101</u>

<sup>(1)</sup> Equity Mutual Funds as of 6/30/2017 include three "index funds" and are each comprised of diversified portfolios of equity securities. Credit ratings are not provided for Equity Mutual Funds.

<sup>(2)</sup> Fixed Income Mutual Funds are comprised of four diversified portfolios of fixed income securities. As of 6/30/2017, 65.18% of the holdings were rated A-AAA, 31.52% of the holdings were rated B-BBB, and 3.30% of the holdings were rated below B or Not Rated.

<sup>(3)</sup> The Money Market Mutual Fund is not rated.

**Irvine Ranch Water District**

Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(2) Cash and Investments (Continued)****Disclosures Relating to Credit Risk (Continued)**

The District is a voluntary participant in the Local Agency Investment Fund (LAIF) that is regulated by the California Government Code under the oversight of the Treasurer of the State of California. The fair value of the District's investment in this pool is reported in the accompanying financial statements at amounts based upon the District's pro-rata share of the fair value provided by LAIF for the entire LAIF portfolio (in relation to the amortized cost of that portfolio). The balance available for withdrawal is based on the accounting records maintained by LAIF, which are recorded on an amortized cost basis.

**Concentration of Credit Risk**

The investment policy of the District contains no limitations on the amount that can be invested in any one issuer beyond that stipulated by the California Government Code. Investments in any one issuer (other than U.S. Treasury securities, mutual funds, and external investment pools) that represent 5% or more of total District investments are as follows (in thousands):

<u>Issuer</u>	<u>Investment Type</u>	<u>Amount</u>
FHLB	Federal Agency Securities	\$ 120,684
FHLMC	Federal Agency Securities	83,616
FFCB	Federal Agency Securities	54,726
FNMA	Federal Agency Securities	49,716
	Total	<u>\$ 308,742</u>

The long-term asset allocation policy of the Trust authorizes investment of assets in financial instruments in three broad categories: equity, fixed income, and real estate with a minimum-maximum asset allocation range for each asset class as approved by the Retirement Board.

**Fiduciary Fund - Pension Benefits Trust:**

<u>Fund Name</u>	<u>Amount</u>
Vanguard Institutional Index	\$ 31,190
Vanguard Extended Market Index	4,390
Vanguard Developed Markets Index	9,119
Metropolitan West Total Return Bond	9,010
Baird Core Plus Bond	6,862
Vanguard High-Yield Corporate	2,625
Vanguard Short-Term Corporate Bond Index	2,458
Fidelity Government Cash Reserve	447
Total	<u>\$ 66,101</u>

EXHIBIT "A"

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**Disclosures Relating to Fair Value Measurements**

The District categorizes its fair value investments within the fair value hierarchy established by generally accepted accounting principles. The District has the following fair value measurements as of June 30, 2017 (in thousands):

**District Cash and Investments:**

<u>Investment Type</u>	<u>Amount</u>	<u>Fair Value Measurements</u>	
		<u>Level 1</u>	<u>Level 2</u>
Federal Agency Securities	\$ 308,742	\$ -	\$ 308,742
US Treasury Note	5,012	5,012	-
Treasury Equivalents	2,439	2,439	-
Sub-total	316,193	7,451	308,742
Local Agency Investment Fund	70,381 <sup>(1)</sup>	-	-
Total	<u>\$ 386,574</u>	<u>\$ 7,451</u>	<u>\$ 308,742</u>

<sup>(1)</sup> Local Agency Investment Fund is not subject to the fair value measurements classification.

**Fiduciary Fund - Pension Benefits Trust:**

<u>Investment Type</u>	<u>Amount</u>	<u>Fair Value</u>
		<u>Measurements</u>
		<u>Level 1</u>
Mutual Funds - Equities	\$ 44,699	\$ 44,699
Mutual Funds - Fixed Income Bonds	20,995	20,995
Mutual Funds - Money Market	447	447
Total	<u>\$ 66,101</u>	<u>\$ 66,101</u>

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(3) Interest Rate Swap Agreements**

In September 2003, the District's Board of Directors approved a policy regarding the use of interest rate swap transactions. The policy provides that interest rate swap transactions will be designed to enhance the relationship between risk and return with respect to an investment or a program of investments entered into by the District; and/or to reduce the amount or duration of payment, rate, spread, or similar risk; and/or result in a lower cost of borrowing when used in combination with bonds or other indebtedness of the District. Pursuant to the policy, the Board of Directors authorizes general parameters for interest rate swap transactions while the Finance and Personnel Committee structures specific transactions within the Board-authorized parameters. The Treasurer, with the concurrence of the Chairman of the Finance and Personnel Committee, is authorized to enter into interest rate swap transactions that are within all authorized parameters.

The International Swaps and Derivatives Association, Inc. (ISDA) Master Agreement, including the schedule and credit support annex, is used as the form of contract with interest rate swap counterparties. The District is compliant with all Dodd-Frank Protocol provisions implemented during FY 2012-13 regarding swap advisor representation and transparency.

All outstanding interest rate swaps are pay-fixed, receive variable swaps ("fixed payer swaps"). As of June 30, 2017, the notional amount and fair value balance of the District's interest rate swaps is \$130.0 million and \$(27.4) million, respectively. For the year ended June 30, 2017, the increase in fair market value of the fixed payer interest rate swaps was \$13.8 million.

The fair value of the swap agreements at June 30, 2017 is calculated using a zero-coupon method (Level 2 inputs). This method calculates the future net settlement payments required by the swaps, assuming, for the LIBOR fixed payer swaps, that the current LIBOR forward rates implied by the LIBOR yield curves correctly anticipate future LIBOR spot interest rates. These payments are discounted using the spot rates implied by the current yield curves for hypothetical zero-coupon bonds due on the date of each future net settlement of the swaps.

The District's fixed payer swaps were executed in 2004, and became effective in 2006 and 2007. The purpose of the fixed payer swaps was to hedge a portion of the interest rate risk exposure associated with the District's 100% variable rate debt structure at the time the swaps were executed. The interest rate swap notional amounts and maturities are not specifically related to a particular District debt issue, however are considered a hedge of a pooled portion of the District's variable rate debt exposure. The following table displays the objective and terms of the District's interest rate swaps outstanding at June 30, 2017, along with the credit rating of the associated counterparty.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(3) Interest Rate Swap Agreements (Continued)**

Current Year Active Interest Rate Swaps (in thousands):

Type	Objective	Notional Amount	Effective Date	Maturity Date	Terms	Counterparty Rating
Fixed Payer	Hedge of changes in cash flows on pool of variable rate debt issues	\$ 20,000	6/04/06	6/04/19	Pay 6.200%; receive 1-Mo. LIBOR	A1/A+/A+
Fixed Payer	Hedge of changes in cash flows on pool of variable rate debt issues	20,000	6/04/06	6/04/19	Pay 6.200%; receive 1-Mo. LIBOR	A1/A+/A+
Fixed Payer	Hedge of changes in cash flows on pool of variable rate debt issues	30,000	6/17/06	6/17/19	Pay 6.140%; receive 1-Mo. LIBOR	A1/A+/A+
Fixed Payer	Hedge of changes in cash flows on pool of variable rate debt issues	30,000	3/10/07	3/10/29	Pay 5.687%; receive 1-Mo. LIBOR	A1/A+/A+
Fixed Payer	Hedge of changes in cash flows on pool of variable rate debt issues	30,000	3/10/07	3/10/29	Pay 5.687%; receive 1-Mo. LIBOR	A1/A+/A+

The ISDA agreements for the above referenced interest rate swaps include a provision that the counterparties shall be required to post collateral should the mark-to-market value of the total interest rate swap portfolio with the respective counterparty, including any current outstanding swap accruals, exceed a threshold of (\$15.0) million. The amount of the collateral posted shall be the amount of the mark-to-market value and outstanding swap accrual amounts in excess of (\$15.0) million. As of June 30, 2017, the mark-to-market value of the total interest rate swaps with Citibank N.A. as counterparty exceeded the threshold amount requiring a collateral deposit in the amount of \$2.4 million, and the mark-to-market value of the total interest rate swaps with Bank of America, N.A. as counterparty did not exceed the threshold amount. The collateral funds are held in separate trust accounts and earn interest at the Federal Funds Effective Rate (1.06% as of June 30, 2017). Swap collateral funds totaling \$2.4 million are included as non-current Investments-Swap Collateral on the Statement of Net Position as of June 30, 2017.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(3) Interest Rate Swap Agreements (Continued)**

*Credit risk:* The District is exposed to credit risk on interest rate swaps. To minimize its exposure to loss related to credit risk, the District's policy requires that the Finance and Personnel Committee evaluate and approve the counterparty creditworthiness of each counterparty prior to executing an ISDA Agreement, and all current swap agreements include collateral posting provisions. These terms require full collateralization of the fair value of interest rate swaps in asset positions (net of the effect of applicable netting arrangements) should the counterparty's credit rating fall below BBB+ as issued by Fitch Ratings and Standard & Poor's or Baa1 as issued by Moody's Investors Service. Collateral posted is to be in the form of U.S. Treasuries, or other approved securities, held by a third-party custodian.

The District has executed interest rate swap transactions with two counterparties. Their ratings are A1/A+/A+ (62% of net exposure to credit risk) and A1/A+/A+ (38% of net exposure to credit risk) as of June 30, 2017.

*Interest rate risk:* The District is exposed to interest rate risk on its interest rate swaps. On its fixed payer swaps, as LIBOR's swap index decreases, the District's net payment on the swap increases. Alternatively, on its fixed payer swaps, as LIBOR's swap index increases, the District's net payment on the swap decreases.

*Basis risk:* The District is exposed to basis risk on its fixed payer swaps because the variable-rate payments received by the District on these swaps are based on a rate or index other than interest rates the District pays on its variable-rate debt, which is remarketed daily or weekly.

*Termination risk:* The District or its counterparties may terminate an interest rate swap if the other party fails to perform under the terms of the contract. If at the time of termination, an interest rate swap is in a liability position, the District would be liable to the counterparty for a payment equal to the liability, subject to netting arrangements.

*Collateral requirements:* All of the District's interest rate swaps include provisions that require the District to post collateral in the event its credit rating falls below A as issued by Fitch Ratings and Standard & Poor's or A2 as issued by Moody's Investors Service.

The collateral posted is to be in the form of U.S. Treasuries or other approved securities in the amount of the fair value of interest rate swaps in liability positions net of the effect of applicable netting arrangements. If the District does not post collateral, the swaps may be terminated by the counterparty. The District's credit rating is Aa1/AAA/AAA; therefore, no additional collateral has been posted at June 30, 2017, other than the collateral posted as a result of the mark-to-market valuations at June 30, 2017.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(4) Inventories**

Inventories consist of available water in storage and materials and supplies in the District's warehouse facilities. As of June 30, 2017, the District had 1,084.6 acre-feet of water stored in the Irvine Lake at a cost of \$0.7 million. In addition, the District had 26,810 acre-feet of banked water in various water bank facilities at a cost of \$0.8 million. Inventories at June 30, 2017 consisted of the following (in thousands):

Water in storage	\$ 1,477
Materials and supplies	<u>5,609</u>
Total	<u>\$ 7,086</u>

**(5) Capital Assets**

Capital asset activity for the year ended June 30, 2017 is as follows (in thousands):

	<b>Balance at June 30, 2016</b>	<b>Additions</b>	<b>Deletions</b>	<b>Balance at June 30, 2017</b>
<b>Capital assets:</b>				
Land leasehold	\$ 4,860	\$ -	\$ -	\$ 4,860
Buildings and structures	713,050	22,706	-	735,756
Transmissions and distributions	1,158,621	80,189	(380)	1,238,430
Machinery and equipment	272,203	6,727	(864)	278,066
Sub-total	<u>2,148,734</u>	<u>109,622</u>	<u>(1,244)</u>	<u>2,257,112</u>
<b>Less: Accumulated depreciation:</b>				
Land leasehold	(1,068)	(97)	-	(1,165)
Buildings and structures	(255,854)	(16,628)	-	(272,482)
Transmissions and distributions	(361,091)	(33,522)	20	(394,593)
Machinery and equipment	(128,548)	(11,593)	864	(139,277)
Sub-total	<u>(746,561)</u>	<u>(61,840)</u>	<u>884</u>	<u>(807,517)</u>
Total depreciable capital assets, net	<u>1,402,173</u>	<u>47,782</u>	<u>(360)</u>	<u>1,449,595</u>
<b>Capital assets, non-depreciable:</b>				
Land and water rights	93,244	36,950	(6,383)	123,811
Construction in progress	236,174	171,313	(132,589)	274,898
Total capital assets, net	<u>\$ 1,731,591</u>	<u>\$ 256,045</u>	<u>\$ (139,332)</u>	<u>\$ 1,848,304</u>

Total projects transferred from Construction in Progress to Capital Assets and depreciated during the fiscal year ended June 30, 2017 were \$123.9 million. The District reclassified \$6.1 million of land and \$8.7 million of project costs from Construction in Progress to real estate investments. In addition, the District's proportionate share of the Orange County Sanitation District's jointly funded capital assets increased \$22.7 million.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(6) Capitalized Amounts**

Net interest costs and certain administrative and general expenses relating to assets under construction are charged to construction-in-progress until the assets are ready for their intended use. The amount of administrative and general expenses and net interest costs capitalized to construction-in-progress for the year ended June 30, 2017 is as follows (in thousands):

Administrative and general expenses, capitalized	\$ 9,021
Interest expenses, capitalized <sup>(1)</sup>	5,932
	<u>\$ 14,953</u>

<sup>(1)</sup> The total amount of interest cost incurred for the year ended June 30, 2017 (both the amounts expensed and the amounts capitalized) was \$24,716.

**(7) Real Estate Investments**

Real estate investments as of June 30, 2017 consist of the following (in thousands):

Real estate investments at fair value	\$ 353,254
Real estate assets at cost	331
Total	<u>\$ 353,585</u>

The District has the following fair value measurements for the real estate investments (Level 3 inputs) (in thousands):

Wood Canyon Villas, L.P.	\$ 28,934
Sycamore Canyon Apartments	147,508
230 Commerce Office Property	9,572
Waterworks Way Business Park	7,803
Sand Canyon Professional Center	10,820
Sand Canyon General Office	12,617
Lake Forest Serrano Summit	136,000
Total	<u>\$ 353,254</u>

Net real estate income as of June 30, 2017 is as follows (in thousands):

Real estate income	\$ 13,434
Increase (decrease) in fair value of real estate investments	10,084
Real estate expense	<u>(4,358)</u>
Net real estate income	<u>\$ 19,160</u>

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(7) Real Estate Investments (Continued)**

Included in real estate investments are two apartment properties, three commercial office buildings and two entitled land properties. The District, through Bardeen Partners, Inc., is the sole limited partner in Wood Canyon Villas, L.P. (Wood Canyon), and the sole owner of both Sycamore Canyon Apartments and a commercial office building (230 Commerce). Separate from Bardeen Partners, Inc., the District is the sole owner of two other commercial office buildings (Waterworks Way Business Park and Sand Canyon Professional Center) and two entitled land properties (Sand Canyon General Office and Lake Forest Serrano Summit).

The construction of Wood Canyon Villas, a 230-unit apartment complex, was completed in 1993. The complex is located in Orange County, California, and was 98% occupied at June 30, 2017. The Wood Canyon partnership agreement provides the District with a 9% cumulative preferred return on its unrecovered contribution accounts, as defined in the agreement (initially \$6.0 million). The property's fair value was determined using a present value of the partnership in 2017.

In 1992, the District acquired a 450-unit apartment property (original cost, \$34.1 million) in Orange County, California known as Sycamore Canyon Apartments. The property was 97% occupied at June 30, 2017. In addition, the Sycamore Canyon Apartments completed a renovation project in 2007 for a total cost of \$9.6 million. The property's fair value was determined using an appraisal valuation in 2016 and adjusted with a growth factor in 2017.

In 2003, the District completed construction of the 41,000 square foot for-lease 230 Commerce general office building located in Irvine, California. Land and construction costs for the project totaled \$5.6 million and the building was 88% occupied as of June 30, 2017. The property's fair value was determined using an appraisal valuation in 2016 and adjusted with a growth factor in 2017.

In November 2008, the District completed construction of a 37,200 square foot for-lease R&D office building located in Irvine, California known as the Waterworks Way Business Park. Construction of the building was a specific facilities requirement of the purchase agreement for land acquired for an adjacent District water treatment facility. Land and construction costs for the office project totaled \$9.0 million. As of June 30, 2017, the building was 100% occupied. The property's fair value was determined using an appraisal valuation in 2016 and adjusted with a growth factor in 2017.

**Irvine Ranch Water District**

Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(7) Real Estate Investments (Continued)**

In April 2012, the District completed construction of a 16,350 square foot for-lease medical office building located in Irvine, California known as the Sand Canyon Professional Center. Land and construction costs for the project totaled \$8.4 million and the building was 100% occupied as of June 30, 2017. The property's fair value was determined using an appraisal valuation in 2016 and adjusted with a growth factor in 2017.

The District has an entitled 5.8 acre general office site located in Irvine, California at the Sand Canyon Professional Center. Land and related entitlement costs totaled \$5.0 million as of June 30, 2017. The property's fair value was determined using an appraisal valuation in 2017.

The District has a 60-acre entitled and for-sale residential land site located in Lake Forest, California known as the Serrano Summit property. Land and related design/entitlement costs totaled \$9.8 million as of June 30, 2017. The property's fair value was determined using a quoted price provided by a third party in 2017.

**(8) Investment in Installment Sale Agreement**

In February 2014, the District and El Toro Water District (ETWD) entered into an Installment Sale Agreement (the ISA) pursuant to which the District agreed to fund ETWD's share of the costs of construction of, and the acquisition of capacity rights in, the Baker Water Treatment Plant project (the Baker WTP). Terms of the installment sale agreement provided for interest-only payments during construction of the Baker WTP, with principal and interest amortized over a 20-year period upon completion of construction. The amount outstanding under the ISA as of June 30, 2016 was \$8.6 million. In FY2017, the outstanding balance under the ISA was paid in full.

## EXHIBIT "A"

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(9) Long-Term Liabilities**

Long-term liability activity for the year ended June 30, 2017 is as follows (in thousands):

	Balance June 30, 2016	Additions	Deletions	Balance June 30, 2017	Due within One Year	Due in more than one Year
<b>General Obligation Bonds:</b>						
1993 C Consolidated	\$ 33,100	\$ -	\$ (1,600)	\$ 31,500	\$ 1,600	\$ 29,900
1995 Consolidated	12,100	-	(2,200)	9,900	9,900	-
2008A Refunding	52,500	-	(1,500)	51,000	1,500	49,500
2009A Consolidated	65,000	-	(2,500)	62,500	2,500	60,000
2009B Consolidated	65,000	-	(2,500)	62,500	2,500	60,000
2010B BABS	175,000	-	-	175,000	-	175,000
2011A-1 Refunding	53,100	-	(1,560)	51,540	1,620	49,920
2011A-2 Refunding	35,400	-	(1,040)	34,360	1,080	33,280
2016 Consolidated	-	103,400	-	103,400	-	103,400
Unamortized Premium	-	27,111	(693)	26,418	924	25,494
Sub-total	<b>491,200</b>	<b>130,511</b>	<b>(13,593)</b>	<b>608,118</b>	<b>21,624</b>	<b>586,494</b>
<b>Certificates of Participation:</b>						
2010 Refunding Certificates	54,735	-	(49,345)	5,390	1,615	3,775
2016 Certificates	-	116,745	-	116,745	-	116,745
Unamortized Premium	5,652	31,785	(5,946)	31,491	1,736	29,755
Sub-total	<b>60,387</b>	<b>148,530</b>	<b>(55,291)</b>	<b>153,626</b>	<b>3,351</b>	<b>150,275</b>
<b>Notes Payable</b>	<b>1,469</b>	<b>-</b>	<b>(260)</b>	<b>1,209</b>	<b>262</b>	<b>947</b>
<b>Other Long-Term Liabilities:</b>						
Compensated Absences	3,760	4,153	(3,897)	4,016	1,607	2,409
Other Long-Term Liabilities	1,002	4,105	(3,884)	1,223	105	1,118
Sub-total	<b>4,762</b>	<b>8,258</b>	<b>(7,781)</b>	<b>5,239</b>	<b>1,712</b>	<b>3,527</b>
<b>Total Long-Term Liabilities</b>	<b>\$ 557,818</b>	<b>\$ 287,299</b>	<b>\$ (76,925)</b>	<b>\$ 768,192</b>	<b>\$ 26,949</b>	<b>\$ 741,243</b>

EXHIBIT "A"

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(9) Long-Term Liabilities (Continued)**

The following schedule summarizes the major terms of outstanding long-term debt (in thousands):

	<b>Date of Issue</b>	<b>Original Issue</b>	<b>Revenue Sources</b>	<b>Final Maturity Date</b>	<b>Interest Rates</b>
<b>General Obligation Bonds:</b>					
1993 Consolidated	May 1, 1993	\$ 38,300	(1)(3)	April 1, 2033	Variable
1995 Consolidated	December 1, 1995	40,000	(1)(3)	July 1, 2017	Variable
2008A Refunding	April 1, 2008	60,215	(1)(3)	July 1, 2035	Variable
2009A Consolidated	June 4, 2009	75,000	(1)(3)	October 1, 2041	Variable
2009B Consolidated	June 4, 2009	75,000	(1)(3)	October 1, 2041	Variable
2010B BABS	December 16, 2010	175,000	1)(2)(3)	May 1, 2040	6.6%
2011A-1 Refunding	April 15, 2011	60,545	(1)(3)(3)	October 1, 2037	Variable
2011A-2 Refunding	April 15, 2011	40,370	(1)(3)(3)	October 1, 2037	Variable
2016 Consolidated	October 12, 2016	103,400	(1)(2)(3)	February 1, 2046	5.00% -5.25%
<b>Certificates of Participation:</b>					
2010 Certificates	February 23, 2010	85,145	(2)	March 1, 2020	3.80%
2016 Certificates	September 1, 2016	116,745	(2)	March 1, 2046	5.00%

<sup>(1)</sup> Ad valorem assessments or, in lieu of assessments, in the District's discretion, charges for water or sewer service.

<sup>(2)</sup> Available water, sewer, and recycled water revenues.

<sup>(3)</sup> Proceeds from the sale of property.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(9) Long-Term Liabilities (Continued)****General Obligation Bonds**

The General Obligation Bonds were issued to fund property, water, sewer and recycled water facilities.

The annual debt service requirements for the General Obligation Bonds, including principal and interest payments (based on variable interest rates at June 30, 2017 ranging from 0.36% to 0.79% and the fixed rate for the 2010B BABs issue and 2016 Consolidated issue) are as follows (in thousands):

Fiscal Year	Principal	Interest	Hedging Investments, Net	BAB Federal Subsidy	Total
2018	\$ 20,700	\$ 19,013	\$ 6,762	\$ (3,776)	\$ 42,699
2019	10,900	18,868	6,762	(3,776)	32,754
2020	11,100	18,791	2,964	(3,776)	29,079
2021	11,300	18,714	2,964	(3,776)	29,202
2022	14,155	18,635	2,964	(3,776)	31,978
2023-2027	85,130	83,782	14,818	(18,686)	165,044
2028-2032	106,640	75,079	5,927	(17,121)	170,525
2033-2037	157,225	58,826	-	(13,427)	202,624
2038-2042	138,265	22,304	-	(3,562)	157,007
2043-2046	26,285	3,538	-	-	29,823
Subtotal	581,700	337,550	43,161	(71,676)	890,735
Plus: Unamortized premium	26,418	-	-	-	26,418
Total	\$ 608,118	\$ 337,550	\$ 43,161	\$ (71,676)	\$ 917,153

The above table incorporates the net receipts/payments of the hedging instruments that are associated with the variable rate debt issue(s). The amounts assume that current interest rates on variable rate bonds and the current reference rates of the hedging instruments will remain the same for their term. As these rates vary, interest payments on variable rate bonds and net receipts/payments on the hedging instruments will vary. Additionally, the above table includes the most recent BABs subsidy reduction of 6.9% under the Congressionally-mandated sequestration which began in FY 2012-13. Refer to Note 3 for additional information regarding the hedging instruments associated with the debt of the District.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(9) Long-Term Liabilities (Continued)****Certificates of Participation**

In February 2010, the Irvine Ranch Water District Service Corporation issued \$85.1 million of Certificates of Participation Refunding Series 2010 (the Series 2010 Certificates) to refinance the cost of certain capital improvements by refunding the outstanding principal amount of the Certificates of Participation Series 1986 and Series 2008. In September 2016, the Irvine Ranch Water District Service Corporation issued \$116.7 million of Certificates of Participation Series 2016 (the Series 2016 Certificates) to finance the cost of certain capital improvements and to refund a portion of the outstanding Series 2010 Certificates. Although the advance refunding resulted in the recognition of an accounting loss of \$1.6 million for the year ended June 30, 2017, the District in effect obtained an economic gain (difference between the present value of the debt service payments on the old and new debt) of \$6.3 million. The annual debt service requirements for the Certificates of Participation, including principal and interest payments, are as follows (in thousands):

Fiscal Year	Principal	Interest	Total
2018	\$ 1,615	\$ 6,107	\$ 7,722
2019	1,795	6,026	7,821
2020	1,980	5,936	7,916
2021	3,420	5,837	9,257
2022	3,675	5,666	9,341
2023-2027	22,845	25,291	48,136
2028-2032	32,145	18,701	50,846
2033-2037	15,415	12,199	27,614
2038-2042	19,665	7,940	27,605
2043-2046	19,580	2,508	22,088
Subtotal	122,135	96,211	218,346
Plus: Unamortized premium	31,491	-	31,491
Total	<u>\$ 153,626</u>	<u>\$ 96,211</u>	<u>\$ 249,837</u>

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(9) Long-Term Liabilities (Continued)****Notes Payable**

The District has one outstanding loan from the State of California to fund reclaimed water projects. The balance on the 2000 loan was \$0.6 million at June 30, 2017. The annual interest rate is 0.00%; however, the loan agreement required the District to prepay interest of \$0.6 million, which is amortized over the life of the loan. The loan is payable annually in fixed installments of \$0.2 million through 2020.

The District also has one outstanding loan, which was assumed as a result of its consolidation with the Santiago County Water District. The original loan amount was \$1.3 million. The loan is payable semi-annually with interest at 2.32%. The loan matures in July 2025. The balance of the loan at June 30, 2017 was \$0.6 million.

Amounts required to amortize notes payable at June 30, 2017 are as follows (in thousands):

Fiscal Year	Principal	Interest	Total
2018	\$ 262	\$ 46	\$ 308
2019	263	45	308
2020	265	43	308
2021	72	9	81
2022	74	8	82
2023-2026	273	13	286
Total	<u>\$ 1,209</u>	<u>\$ 164</u>	<u>\$ 1,373</u>

**(10) Unearned Revenue**

Unearned revenue at June 30, 2017 consisted of the following (in thousands):

Unearned revenue, current portion	\$ 565
Unearned revenue, net of current portion	<u>6,522</u>
Total	<u>\$ 7,087</u>

EXHIBIT "A"

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(10) Unearned Revenue (Continued)**

On November 10, 2008, the Board approved the South Orange County – Irvine Ranch Water District Interconnection Projects Participation Agreement (Agreement). The Agreement was effective in November 2008 between the District, City of San Clemente (CSC), Laguna Beach County Water District (LBCWD), Moulton Niguel Water District (MNWD), Santa Margarita Water District (SMWD), South Coast Water District (SCWD), Municipal Water District of Orange County (MWDOC), and Orange County Water District (OCWD). The purpose of the Agreement is to allow the South County water agencies (CSC, LBCWD, MNWD, SMWD, and SCWD) to reserve capacity in the District system and reimburse the District for various new intertie facilities which provide that up to 25 cfs of water supply per month may be made available during a water supply disruption. The total cost of the agreement was paid in full by each party in the fiscal year ended June 30, 2009. The amount of unearned revenue related to the South County Water Agencies is amortized over 20 years, the term of the Agreement. The amount of amortization for the fiscal year ended June 30, 2017 was \$0.5 million.

**(11) Letters of Credit**

The District has letters of credit securing the payment of principal and interest on certain General Obligation Bonds. The letters of credit are issued in favor of the trustees and enable the trustees to make drawings against the letters of credit for payment of principal and interest amounts.

The terms of the letters of credit, as of June 30, 2017 are summarized as follows (in thousands):

<u>Letter of Credit</u>	<u>Trustee</u>	<u>Amount</u>	<u>Expiration Date</u>
Bank of America:			
2009 Series B Consolidated	U.S. Bank	\$ 63,199	July 15, 2019
Sumitomo Mitsui:			
1995 Consolidated <sup>(1)</sup>	Bank of New York Mellon	10,046	July 14, 2017
2008 Series A Refunding	Bank of New York Mellon	51,755	July 21, 2021
U.S. Bank:			
1993 Consolidated	Bank of New York Mellon	31,925	November 7, 2018
2009 Series A Consolidated	U.S. Bank	63,199	December 22, 2020

<sup>(1)</sup> 1995 Consolidated Bonds were fully redeemed on July 1, 2017.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(12) Net Position**

Net position at June 30, 2017 consisted of the following (in thousands):

Net investment in capital assets:	
Property, plant and equipment, net	\$ 1,848,304
Less:	
Outstanding debt issued to construct capital assets:	
General obligation bonds	(608,118)
Certificates of participation	(153,626)
Notes payable	(1,209)
Deferred refunding charges	<u>2,580</u>
Total net investment in capital assets	<u>1,087,931</u>
Restricted net position:	
Restricted for water services	264,301
Restricted for sewer services	<u>419,782</u>
Total restricted net position	<u>684,083</u>
Total net position	<u>\$ 1,772,014</u>

**(13) Defined Benefit Pension Plan**

**Plan Descriptions**

All qualified employees are eligible to participate in the District's agent multiple-employer public employee defined benefit pension plan which is administrated by the California Public Employees' Retirement System (CalPERS). CalPERS acts as a common investment and administrative agent for participating public entities within the State of California. Benefit provisions and all other requirements are established by State statute and the District's Board of Directors. CalPERS issues publicly available reports that include a full description of the pension plans regarding benefit provisions, assumptions and membership information that can be found on the CalPERS website at [www.calpers.ca.gov](http://www.calpers.ca.gov).

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(13) Defined Benefit Pension Plan (Continued)****Benefits Provided**

CalPERS provides service retirement and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full time employment. The Plan's provisions and benefits in effect at June 30, 2017, are summarized as follows:

<b>Hire Date</b>	<b>Prior to October 1, 2012</b>	<b>On or after October 1, 2012 to December 31, 2012</b>	<b>On or after January 1, 2013</b>
Benefit Formula	2.5% @ 55	2.0% @ 60	2.0% @ 62
Benefit Vesting Schedule	5 Years of Service	5 Years of Service	5 Years of Service
Benefit Payments	Monthly for Life	Monthly for Life	Monthly for Life
Minimum Retirement Age	50	50	52
Monthly Benefits, as a % of eligible compensation	2.0% to 2.5%	1.092% to 2.418%	1.000% to 2.500%
Required employee contribution Rate	8.00%	7.00%	5.25%
Required employer contribution Rate	18.331%	18.331%	18.331%

**Employees Covered**

As of June 30, 2015, the following employees were covered by the benefit terms for the Plan:

Inactive Employees or Beneficiaries Currently Receiving Benefits	253
Inactive Employees Entitled to But not Yet Receiving Benefits	173
Active Employees	339
<b>Total</b>	<b><u>765</u></b>

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(13) Defined Benefit Pension Plan (Continued)****Contributions**

Section 20814(c) of the California Public Employees' Retirement Law (PERL) requires that the employer contribution rates for all public employers be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. The total plan contributions are determined through the CalPERS annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees.

**Actuarial Methods and Assumptions Used to Determine Total Pension Liability**

As of June 30, 2017, the total pension liability was determined using the following actuarial methods and assumptions:

Actuarial Cost Method	Entry Age Normal in accordance with the requirements of GASB Statement No. 68
Asset Valuation Method	Market Value of Assets
Actuarial Assumptions:	
Discount Rate	7.65%
Inflation	2.75%
Salary Increases	Varies by Entry Age and Service
Investment Rate of Return	7.65% Net of Pension Plan Investment and Administrative Expenses; includes Inflation
Mortality Rate Table <sup>(1)</sup>	Derived using CalPERS' Membership Data for all Funds
Post Retirement Benefit Increase	Contract COLA up to 2.75% until Power Protection Allowance Floor on Purchasing Power applies, 2.75% thereafter

<sup>(1)</sup>The mortality table used was developed based on CalPERS' specific data. The table includes 20 years of mortality improvements using Society of Actuaries Scale BB.

All other actuarial assumptions used in the June 30, 2015 valuation were based on the results of an actuarial experience study for the period from 1997 to 2011, including updates to salary increase, mortality and retirement rates. The Experience Study report can be obtained at the CalPERS' website under Forms and Publications.

**Irvine Ranch Water District**

Notes to the Basic Financial Statements

For the Fiscal Year Ended June 30, 2017

(Continued)

**(13) Defined Benefit Pension Plan (Continued)****Change in Assumptions**

There were no changes of assumptions.

**Discount Rate**

The discount rate used to measure the total pension liability was 7.65 percent. To determine whether the municipal bond rate should be used in the calculation of a discount rate for each plan, CalPERS stress tested plans that would most likely result in a discount rate that would be different from the actuarially assumed discount rate. Based on the testing, none of the tested plans run out of assets. Therefore, the current 7.65 percent discount rate is appropriate and the use of the municipal bond rate calculation is not deemed necessary. The long-term expected discount rate of 7.65 percent is applied to all plans in the Public Employees Retirement Fund (PERF). The stress test results are presented in a detailed report called "GASB Crossover Testing Report" that can be obtained at the CalPERS' website under the GASB 68 section.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class.

In determining the long-term expected rate of return, CalPERS took into account both short-term and long-term market return expectations as well as the expected pension fund cash flows. Such cash flows were developed assuming that both members and employers will make their required contributions on time and as scheduled in all future years. Using historical returns of all the funds' asset classes, expected compound (geometric) returns were calculated over the short-term (first 10 years) and the long-term (11-60 years) using a building-block approach. Using the expected nominal returns for both short-term and long-term, the present value of benefits was calculated for each fund. The expected rate of return was set by calculating the single equivalent expected return that arrived at the same present value of benefits for cash flows as the one calculated using both short-term and long-term returns. The expected rate of return was then set equivalent to the single equivalent rate calculated above and rounded down to the nearest one quarter of one percent.

**Irvine Ranch Water District**

Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(13) Defined Benefit Pension Plan (Continued)**

The table below reflects long-term expected real rate of return by asset class. The rate of return was calculated using the capital market assumptions applied to determine the discount rate and asset allocation. These rates of return are net of administrative expenses.

<b>Asset Class</b>	<b>New Strategic Allocation</b>	<b>Real Return Years 1 – 10<sup>(1)</sup></b>	<b>Real Return Years 11+<sup>(2)</sup></b>
Global Equity	51.0%	5.25%	5.71%
Global Fixed Income	20.0%	0.99%	2.43%
Inflation Sensitive	6.0%	0.45%	3.36%
Private Equity	10.0%	6.83%	6.95%
Real Estate	10.0%	4.50%	5.13%
Infrastructure and Forestland	2.0%	4.50%	5.09%
Liquidity	1.0%	(0.55)%	(1.05)%
<b>Total</b>	<b>100%</b>		

<sup>(1)</sup> An expected inflation of 2.5% used for this period

<sup>(2)</sup> An expected inflation of 3.0% used for this period

The District recognizes that defined benefit plans and the related future pension obligations pose significant issues for many government agencies. The District has taken a proactive approach to address the issue and in 2013, established a Pension Benefits Trust to substantially fund its PERS unfunded liability. The Pension Benefits Trust provides the District with an alternative to PERS that allows for investment by a professional fund management team selected and monitored by the District. The Pension Benefits Trust holds the funding contributions for the District pending future remittance to the PERS pension trust fund which will pay all retiree benefit payments to employees associated with the plan. Future contributions will be transferred from the Pension Benefits Trust to PERS at the District's discretion. As of June 30, 2016 ( the valuation date), the fair market value of the assets in the Pension Benefits Trust was approximately \$47.1 million. The following table reflects long-term expected real rate of return by asset class of the Pension Benefits Trust investments. The same method and assumptions used by CalPERS were also applied to the following table.

<b>Asset Class</b>	<b>Strategic Allocation</b>	<b>Real Return Years 1 – 10<sup>(1)</sup></b>	<b>Real Return Years 11+<sup>(2)</sup></b>
Global Equity	61.0%	5.25%	5.71%
Global Fixed Income	28.0%	0.99%	2.43%
Liquidity	12.0%	(0.55)%	(1.05)%
<b>Total</b>	<b>100%</b>		

<sup>(1)</sup> An expected inflation of 2.5% used for this period

<sup>(2)</sup> An expected inflation of 3.0% used for this period

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(13) Defined Benefit Pension Plan (Continued)****Pension Plan Fiduciary Net Position**

The plan fiduciary net position (assets) disclosed in the GASB report may differ from the plan assets reported in the actuarial valuation report due to several reasons. First, CalPERS must keep reserves for deficiencies and fiduciary self-insurance. These amounts are excluded for rate setting purposes in the funding actuarial valuation report while required to be included for GASB reporting purposes. In addition, differences may result from early CAFR closing and final reconciled reserves.

**Changes in the Net Pension Liability**

The changes in the net pension liability for the Plan were as follows (in thousands):

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability/(Asset)
Balance at June 30, 2016	\$ 227,796	\$ 225,873	\$ 1,923
Changes	10,213	1,028	9,185
Balance at June 30, 2017	\$ 238,009	\$ 226,901	\$ 11,108

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following presents the net pension liability of the Plan (in thousands), calculated using the discount rate of 7.65 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage-point lower (6.65 percent) or 1 percentage-point higher (8.65 percent) than the current rate:

	Discount Rate - 1% (6.65%)	Current Discount Rate (7.65%)	Discount Rate + 1% (8.65%)
Plan's Net Pension Liability/(Asset)	\$ 43,643	\$ 11,108	(\$15,823)

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(13) Defined Benefit Pension Plan (Continued)**

**Subsequent Events**

The discount rate used to measure the total pension liability will be reduced from 7.65 percent for the fiscal year ended June 30, 2107 to 7.15 percent for the fiscal year ending June 30, 2018.

**Recognition of Gains and Losses**

Under GASB 68, gains and losses related to changes in total pension liability and fiduciary net position are recognized in pension expense systematically over time.

The first amortized amounts are recognized in pension expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to pensions and are to be recognized in future pension expense.

The amortization period differs depending on the source of the gain or loss:

Difference between Projected and Actual Earnings	5 year straight-line amortization
All Other Amounts	Straight-line amortization over the expected average remaining service lifetime (EARSL) of all members that are provided with benefits (active, inactive, and retired) as of the beginning of the measurement period

The EARSL for the Plan for the fiscal year ended June 30, 2017 was 4.4 years, which was obtained by dividing the total service years of 3,338 (the sum of remaining service lifetimes of the active employees) by 765 (the total number of participants: active, inactive, and retired). Note that inactive employees and retirees have remaining service lifetimes equal to 0. Also note that total future service is based on the members' probability of decrementing due to an event other than receiving a cash refund.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(13) Defined Benefit Pension Plan (Continued)****Pension Expense and Deferred Outflows and Deferred Inflows of Resources Related to Pensions**

For the fiscal year ended June 30, 2017, the District recognized pension expense of \$2.3 million. At June 30, 2017, the District reported deferred outflows and deferred inflows of resources related to pensions from the following sources (in thousands):

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
Pension Contributions made Subsequent to the Measurement Date	\$ 18,231	\$ -
Differences between Expected and Actual Experiences	283	1,435
Changes in Assumptions (Discount Rate)	-	2,207
Net Difference between Projected and Actual Earnings on Pension Plan Investments	13,130	-
<b>Total</b>	<b>\$ 31,644</b>	<b>\$ 3,642</b>

The amount above is net of deferred inflows of resources recognized as pension expense / (income) in the fiscal year ended June 30, 2017.

\$18.2 million reported as deferred outflows of resources related to employer contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the fiscal year ending June 30, 2018. \$9.8 million net of deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as follows (in thousands):

<b>Fiscal Year</b>	<b>Amount</b>
2018	\$ 807
2019	807
2020	5,039
2021	3,118

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(13) Defined Benefit Pension Plan (Continued)****Funding of CalPERS Plan**

The following Schedule of Funding Progress shows the recent history of the plan assets (including the Pension Benefits Trust), total liability, their relationship, and the relationship of the unfunded liability to payroll.

Fiscal Year	Total Liability	Plan Assets	Net Liability/ (Asset)	Funded Ratio	Annual Covered Payroll
6/30/2015	\$219,410	\$220,977	(\$1,567)	100.7%	\$26,264
6/30/2016	227,796	225,873	1,923	99.2%	27,596
6/30/2017	238,009	226,901	11,108	95.3%	28,802

**(14) Other Post-Employment Benefits**

The District administers three other post-employment benefits (OPEB) plans which are subject to changes based on the discretion of the Board:

- **PEMHCA:** The District provides an agent multiple-employer defined benefit healthcare plan to retirees through the California Public Employee Retirement System (CalPERS) under the California Public Employees Medical and Hospital Care Act (PEMHCA), commonly referred to as PERS Health. Employees are eligible for this lifetime benefit if they retire from the District and are eligible to begin drawing a PERS pension. Participation in PEMHCA is financed in part by the District through a contribution of \$128 per month per participating retiree.
- **Retiree Health Cost Benefits:** The District also administers a single-employer defined benefit health cost reimbursement plan, which provides medical benefits to covered employees and their eligible dependents. The duration of the benefit is based on employees' years of service as follows: 36 months of benefits for employees with 10-14 years of service; 48 months of benefits for employees with 15-19 years of service; and 60 months of benefits for employees with at least 20 years of service. Employees are eligible for this benefit if they retire from the District on or after age 55 with at least 10 years of service. The District reimburses retirees for eligible healthcare costs of up to \$300 per month (for retirees with at least 10 years of service at the District), to a maximum of \$600 per month after 25 years of service.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(14) Other Post-Employment Benefits (Continued)**

- **Retiree Death Benefit Only Plan:** The District administers a single-employer defined benefit plan. Employees hired on or before December 31, 2008 and who retire from the District on or after age 55 with at least 10 years of service at the District are eligible for term life insurance with a face amount equal to 100% of their final annual salary at the time of retirement. Employees hired after December 31, 2008 are not currently eligible for this plan.

Membership of the plans consisted of the following at June 30, 2016, the date of latest actuarial valuation:

	PEMHCA	Retiree Health Costs Reimbursement	Retiree Death Benefit Only
Retirees and beneficiaries receiving benefits	78	47	132
Terminated plan members entitled to but not yet receiving benefits	74	-	-
Active plan members	336	336	186
<b>Total</b>	<b>488</b>	<b>383</b>	<b>318</b>

The District reports the financial activity of the three plans in its basic financial statements. No separate benefit plan report is issued.

**Annual OPEB Cost and Net OPEB Obligation**

The required contributions for the District's various other post-employment benefits are based on projected pay-as-you-go financing requirements, with an additional amount to prefund benefits as approved annually by the District's Board of Directors.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(14) Other Post Employment Benefits (Continued)**

The District's annual OPEB expense is based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) as a level dollar open period not to exceed 30 years. The following table shows the components of the District's annual OPEB cost for the fiscal year ended June 30, 2017, the amount actually contributed for each OPEB benefit, and the changes in the District's net OPEB obligation (in thousands):

	PEMHCA	Retiree Health Costs Reimbursement	Retiree Death Benefit Only	Total
Annual OPEB cost (expense):				
Annual required contribution	\$ 969	\$ 315	\$ 112	\$ 1,396
Interest on net OPEB obligation	71	18	27	116
Adjustment to annual required contribution	(106)	(26)	(40)	(172)
Annual OPEB cost (expense)	934	307	99	1,340
Contribution made	(304)	(286)	(10)	(600)
Increase (Decrease) in net OPEB obligation	630	21	89	740
Net OPEB obligation beginning of year	1,892	467	720	3,079
<b>Net OPEB obligation end of year</b>	<b>\$ 2,522</b>	<b>\$ 488</b>	<b>\$ 809</b>	<b>\$ 3,819</b>

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(14) Other Post Employment Benefits (Continued)****Annual OPEB Cost and Net OPEB Obligation (Continued)**

The District's annual OPEB cost, the percentage of annual OPEB cost contributed to the plans, and the net OPEB obligation for the fiscal year ended June 30, 2017 and the two preceding years were as follows (in thousands):

*Schedule of Employer Contributions*

<b>Plan</b>	<b>Fiscal Year Ended</b>	<b>Annual OPEB Cost</b>	<b>Percentage Contributed</b>	<b>Net OPEB Obligation</b>
PEMHCA	6/30/2015	\$ 359	29.48%	\$ 1,657
	6/30/2016	354	33.57%	1,892
	6/30/2017	934	32.55%	2,522
Retiree Health Costs Reimbursement	6/30/2015	306	107.04%	466
	6/30/2016	307	99.60%	467
	6/30/2017	307	93.16%	488
Retiree Death Benefit Only	6/30/2015	14	102.87%	733
	6/30/2016	14	197.69%	720
	6/30/2017	99	10.10%	809
Total - All Plans	6/30/2015	679	62.67%	2,856
	6/30/2016	675	70.89%	3,079
	6/30/2017	1,340	44.78%	3,819

**Funded Status and Progress**

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events in the future. Examples include assumptions about employee turnover, retirement, mortality, and economic assumptions regarding healthcare inflation and interest rates. Amounts determined regarding the funded status of the plan and the annual required contributions of the District are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

**Irvine Ranch Water District**

Notes to the Basic Financial Statements

For the Fiscal Year Ended June 30, 2017

(Continued)

**(14) Other Post Employment Benefits (Continued)****Funded Status and Progress (Continued)**

The Schedule of Funding Progress below shows the recent history of the actuarial value of assets, actuarial accrued liability, their relationship, and the relationship of the unfunded accrued liability to payroll (in thousands).

<b>Plan</b>	<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b-a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a % of Covered Payroll ((b-a)/c)</b>
PEMHCA	1/1/2012	\$ -	\$ 3,202	\$ 3,202	0.00%	\$ 24,836	12.9%
	7/1/2014	-	3,773	3,773	0.00%	27,290	13.8%
	6/30/2016	-	9,122	9,122	0.00%	28,636	31.9%
Retiree Health Costs							
Retiree Health Costs Reimbursement	7/1/2012	-	3,009	3,009	0.00%	24,836	12.1%
	7/1/2014	-	3,044	3,044	0.00%	27,290	11.2%
	6/30/2016	-	3,118	3,118	0.00%	28,636	10.9%
Retiree Death Benefit Only							
Retiree Death Benefit Only	7/1/2012	-	439	439	0.00%	24,836	1.8%
	7/1/2014	-	456	456	0.00%	27,290	1.7%
	6/30/2016	-	1,503	1,503	0.00%	28,636	5.2%

**Actuarial Methods and Assumptions**

The actuarial methods and assumptions used include techniques designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial assets, consistent with the long-term perspective of the calculations. The actuarial cost method used for determining the benefit obligations is the Entry Age Normal Cost Method. The actuarial assumptions included a 3.75% investment rate of return, which is the assumed rate of the expected long-term investment returns on plan assets calculated based on the funded level of the plan at the valuation date, and an annual healthcare cost of actual premiums for FY2016 and 2017, reduced by decrements of 0.6% per year to an ultimate rate of 4.75% after the fifty year. The actuarial assumptions included a 2.75% inflation rate. The UAAL is being amortized as a level dollar open period over 30 years. It is assumed the District's payroll will increase 3% per year.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(15) Deferred Compensation Plans**

**Retirement for Part-Time Employees**

The District provides retirement benefits for all of its part-time employees through a defined contribution plan, in lieu of providing social security benefits. In a defined contribution plan, benefits depend solely on amounts contributed to the plan plus investment earnings. The plan is administered as part of the District's Section 457 plan. All part-time and seasonal employees are eligible to participate from the date of employment. Federal legislation requires contributions of at least 7.5% to a retirement plan. For the year ended June 30, 2017, the District's payroll covered by the plan was \$157,104. The District made no employee contributions. Employees contributed \$11,688 (7.5% of current covered payroll) for the year ended June 30, 2017.

**Deferred Compensation**

All regular, full-time District employees are eligible to participate in the District's deferred compensation program pursuant to Section 457 of the Internal Revenue Code (Plan) whereby they can voluntarily contribute a portion of their earnings into a tax-deferred fund administered by the District and invested through a third party provider. Pursuant to the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA), effective January 1, 2002, employees may contribute the lesser of 100% of includible compensation or the maximum dollar amount allowable under Internal Revenue Code Section 457 in effect for the year. The dollar amount currently in effect for calendar year 2017 is \$18,000.

Effective January 1, 2008, for employees with one year or more of service, the District provides 100% matching, up to an annual maximum of 3% of the employee's base salary. Such employer contribution amounts are deposited into a money purchase plan pursuant to Section 401(a) of the Internal Revenue Code. Effective July 1, 2015, Managers, Supervisors, and Confidential employees who have completed two years of regular, full-time service with the District, are eligible for an additional District contribution. Beginning with the first month following an employee's second anniversary date, the District will deposit to the employee's 401 (a) Plan account on a per-pay period basis an amount equal to 1% of the employee's base salary. During the fiscal year ended June 30, 2017, the District contributed \$874,555 to employee accounts under the 401(a) plan.

The assets in both plans are held in trust for the exclusive benefit of the participants and their beneficiaries, and are therefore not reported in the basic financial statements of the District.

**Irvine Ranch Water District**  
 Notes to the Basic Financial Statements  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

**(16) Commitments and Contingencies**

**Orange County Sanitation District (OCSD)**

The District, with OCSD, negotiated an agreement as of July 1, 1985, which has been amended from time to time. The District agreed to annually fund payment of the District's proportionate share of OCSD's joint capital outlay revolving fund (CORF) budget requirements and certain capital improvements, calculated on an annual flow basis using the four highest months of actual flows, during the term of the agreement.

The capital assets associated with this agreement are co-owned by the two agencies and provide an operational benefit to both agencies. The District's ownership of capital assets payments to OCSD for the fiscal year ended June 30, 2017 totaled \$19.8 million. In addition, the District's CORF payments to OCSD for the fiscal year ended June 30, 2017 totaled \$2.9 million. The District's share of the jointly funded capital assets and CORF is included in capital assets in the District's basic financial statements.

In April 2010, the District and OCSD agreed to extend the agreement, providing for treatment and disposal by OCSD of District solids and the temporary lease of capacity in OCSD's solids treatment and disposal facilities through December 31, 2018, with a retroactive component for the lease of capacity back to July 1, 2008. The capacity lease for the fiscal year ended June 30, 2017, estimated at \$4.5 million, is included in Sewer Services as an operating expense.

The accompanying basic financial statements reflect management's best estimate of balances pertaining to this agreement based upon information provided by OCSD. Periodically this information is subjected to further review by the performance of agreed upon procedures when the records for such review have been made available to the District. Adjustments pertaining to the accounting estimates associated with this agreement are recognized as the information for such adjustments becomes available.

As of June 30, 2017, the District had a net payable of \$11.6 million to OCSD which is reflected as an account payable and accrued expenses liability in the District's basic financial statements.

**Legal Actions**

The District is a defendant in various legal actions arising out of the conduct of the District's operations. Management believes that, based on current knowledge, the outcome of these matters will not have a material adverse effect on the District's financial position.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(16) Commitments and Contingencies (Continued)**

**Complaint against OCWD**

The Orange County Water District (OCWD) is the agency responsible for managing the Orange County groundwater basin. OCWD annually establishes the District's basin production percentage (BPP), which is the amount of groundwater, as a percentage of total water demands, that groundwater producers can pump from the Orange County groundwater basin without incurring additional assessments. Currently, OCWD calculates total water demands without considering recycled water sales. The District sells significant quantities of recycled water to its customers. Because OCWD does not consider recycled water as a supplemental source of water in calculating the District's total water demands, OCWD considers the District's total water demands to be lower than they would be if recycled water were accounted for by OCWD. As a result, the amount of groundwater that the District can pump from the Orange County groundwater basin without incurring additional assessments is lower than it would be if recycled water were so considered.

In June 2016, the District filed a complaint (the Complaint) against OCWD in the Superior Court for the State of California, County of Orange, alleging various causes of action concerning, among other things, OCWD's practices and methodologies are unlawful. In August 2016, OCWD filed an answer to the Complaint denying all substantive allegations. In June 2017, the District filed a second amended Complaint, which alleged two additional causes of action, including one claim for monetary relief against Orange County Water District. The City of Anaheim, three local water agencies and one private water company that produce groundwater from the Orange County groundwater basin have joined the lawsuit and filed amended cross-complaints against the District. The discovery process has commenced with respect to the litigation. No trial date has been set. If the Complaint is successful, the District may recover past assessments and would be able to pump additional amounts of groundwater without incurring additional assessments thereby reducing the groundwater pumping charges that the District pays to OCWD.

**(17) Risk Management**

The District is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions, and natural disasters for which the District carries commercial insurance.

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(17) Risk Management (Continued)**

Property, Boiler and Machinery insurance is provided by the California State Association of Counties Excess Insurance Authority (CSAC-EIA). Property insurance includes flood insurance for all properties, and earthquake insurance for the District's real estate investment properties. General and excess liability coverage and workers compensation insurance are provided through participation in the CSAC-EIA. Pollution and legal liability coverage for the Irvine Desalter Project is provided by a policy with Illinois Union Insurance Company.

Liabilities are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated. Liabilities include an amount for claims that have been incurred but not reported (IBNRs). The result of the process to estimate the claims liability is not an exact amount as it depends on many complex factors, such as inflation, changes in legal doctrines, and damage awards. Accordingly, claims are reevaluated periodically to consider the effects of inflation, recent claim settlement trends (including frequency and amount of payouts), and other economic and social factors. The estimate of the claims liability also includes amounts for incremental claim adjustment expenses related to specific claims and other claim adjustment expenses regardless of whether allocated to specific claims. Estimated recoveries, for example from salvage or subrogation, are another component of the claims liability estimate. Excess coverage insurance policies cover individual general liability claims in excess of \$100,000, property claims in excess of \$25,000 and workers compensation claims in excess of \$125,000. Settlements have not exceeded excess coverage for each of the past three fiscal years.

Changes in the reported liability resulted from the following (in thousands):

Fiscal Year	Liability Beginning of Year	Claims and Changes in Estimates	Claim Payments	Liability End of Year	Due within One Year	Due in more than One Year
2016	\$ 1,196	\$ 2	\$ (36)	\$ 1,162	\$ 411	\$ 751
2017	1,162	285	(21)	1,426	675	751

**Irvine Ranch Water District**  
Notes to the Basic Financial Statements  
For the Fiscal Year Ended June 30, 2017  
(Continued)

**(18) Restatement of Net Position**

During the fiscal year ended June 30, 2017, the District recorded the following prior period adjustments (in thousands):

Net position at beginning of year	\$1,578,311
Prior period adjustments:	
Implementation of GASB 72	<u>129,302</u>
Net position at beginning of year, as restated	<u>\$1,707,613</u>

In June 2016, the District implemented GASB 72, *Fair Value Measurement and Application* resulting in recording the District's real estate investments at fair value as a prior period adjustment. While GASB 72 was implemented during the fiscal year ended June 30, 2016, the District subsequently identified two other real estate assets that were subject to reporting at fair value. Two properties, the Sand Canyon General Office and Serrano Summit properties were non-income producing real estate and classified as Capital Assets in 2016. Their intended future use was determined to be a Real Estate Investment. Accordingly, their fair market values as of July 1, 2016 have been included above as a prior period adjustment in fiscal year ended June 30, 2017.

**(19) Subsequent Events****Irvine Ranch Water District General Obligation Bonds, Consolidated Series 1995**

On July 1, 2017, the District redeemed and paid in full the outstanding balance of \$9.9 million of the Irvine Ranch Water District General Obligation Bonds, Consolidated Series 1995 pursuant to Section 3.03 of the Indenture of Trust, dated as of December 1, 1995.

**Serrano Summit Real Estate Investment**

On September 1, 2017, the District sold the Serrano Summit real estate investment for \$136.0 million. Terms of the sale included a 40% down payment, with the balance secured by a note and deed of trust on the property, and due in 24 months (or upon sale of the first home if sooner) at a 4.0% interest rate.

## EXHIBIT "A"

**Irvine Ranch Water District**  
 Required Supplementary Information  
 For the Fiscal Year Ended June 30, 2017

(1) **Schedule of Changes in the Net Pension Liability and Related Ratio (in thousands)** <sup>(1)</sup>

	Measurement Date: June 30,		
	2014	2015	2016
<b>Total Pension Liability</b>			
Service Cost	\$ 3,942	\$ 4,005	\$ 4,066
Interest	15,436	16,343	17,092
Changes of Benefit Terms	-	(4,127)	-
Changes of Assumptions	-	530	(1,857)
Benefit Payments, Including Refunds of Employee Contributions	(7,631)	(8,365)	(9,089)
Net Change in Total Pension Liability	11,747	8,386	10,212
Total Pension Liability – Beginning	207,663	219,410	227,796
<b>Total Pension Liability – Ending (a)</b>	<b>\$ 219,410</b>	<b>\$ 227,796</b>	<b>\$ 238,008</b>
<b>Plan Fiduciary Net Position</b>			
Contributions – Employer	\$ 6,566	\$ 6,638	\$ 6,866
Contributions – Employee	2,712	2,170	2,519
Investment Income	32,452	4,734	853
Expense	(331)	(281)	(122)
Benefit Payments, Including Refunds of Employee Contributions	(7,631)	(8,365)	(9,089)
Net Change in Fiduciary Net Position	33,768	4,896	1,027
Plan Fiduciary Net Position – Beginning	187,209	220,977	225,873
<b>Plan Fiduciary Net Position – Ending (b)</b>	<b>\$ 220,977</b>	<b>\$ 225,873</b>	<b>\$ 226,900</b>
<b>Plan Net Pension Liability – Ending (a) - (b)</b>	<b>\$ (1,567)</b>	<b>\$ 1,923</b>	<b>\$ 11,108</b>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	100.71%	99.16%	95.33%
Covered-Employee Payroll	\$ 26,264	\$ 27,596	\$ 28,802
Plan Net Pension Liability as a Percentage of Covered-Employee Payroll	-5.97%	6.97%	38.57%

<sup>(1)</sup> Historical information is required only for measurement periods from which GASB 68 is applicable. Fiscal Year 2015 was the first year of GASB 68 implementation.

**Notes to Schedule of Changes in the Net Pension Liability and Related Ratio**

**Benefit Changes:** The figures above do not include any liability impact that may have resulted from plan changes which occurred after June 30, 2015. This applies for voluntary benefit changes as well as any offers of Two Years Additional Service Credit.

**Changes of Assumptions:** In 2016, there were no changes. In 2015, the discount rate was changed from 7.5 percent (net of administrative expense) to 7.65 percent. In 2014, the discount rate was 7.5 percent.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Required Supplementary Information  
 For the Fiscal Year Ended June 30, 2017  
 (Continued)

(2) **Schedule of Contributions (in thousands)** <sup>(1)</sup>

	2015	2016	2017
Covered-Employee Payroll	\$ 4,524	\$ 4,926	\$ 5,450
Contributions in Relation to the Actuarially Determined Contribution	(6,638)	(6,866)	(18,231)
Contribution Deficiency (Excess)	\$ (2,114)	\$ (1,940)	\$ (12,781)
Covered-Employee Payroll	\$ 27,596	\$ 28,802	\$ 29,277
Contributions as a Percentage of Covered-Employee Payroll	24.05%	23.84%	62.27%

<sup>(1)</sup> Historical information is required only for measurement periods from which GASB 68 is applicable. Fiscal Year 2015 was the first year of GASB 68 implementation.

**Notes to Schedule of Contributions**

The actuarial methods and assumptions used to set the actuarially determined contributions for the fiscal year ended June 30, 2017 were from the June 30, 2014 public agency valuations.

Actuarial Cost Method	Entry Age Normal
Amortization Method/Period	Level Percent of Payroll
Asset Valuation Method	Actuarial value of Assets
Inflation	2.75%
Salary Increases	Varies by Entry Age and Service
Payroll Growth	3.00%
Investment Rate of Return	7.50% Net of Pension Plan Investment and Administrative Expenses; includes Inflation
Retirement Age	The probabilities of Retirement are based on the 2010 CalPERS Experience Study for the period from 1997 to 2007.
Mortality	The probabilities of mortality are based on the 2010 CalPERS Experience Study for the period from 1997 to 2007. Pre-retirement and Post-retirement mortality rates include 5 years of projected mortality improvement using Scale AA published by the Society of Actuaries.

EXHIBIT "A"

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# STATISTICAL SECTION

EXHIBIT "A"

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STATISTICAL  
SECTION

# Statistical Section

Irvine Ranch Water District  
Fiscal Year Ended June 30, 2017

## EXHIBIT "A"

This section of the Irvine Ranch Water District's Comprehensive Annual Financial Report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the District's overall financial health.

**Financial Trends Schedules** – These schedules contain trend information to help the reader understand how the District's financial performance and well-being have changed over time.

- Net Position
- Changes in Net Position

**Revenue Capacity Schedules** – These schedules contain information to help the reader assess the factors affecting the District's ability to generate its property and sales taxes.

- Water Sold by Type of Customer
- Water Rates
- Largest Water Customers
- Sewer Rates
- Largest Sewer Customers
- Ad Valorem Property Tax Rates

**Debt Capacity Schedules** – These schedules present information to help the reader assess the affordability of the District's current levels of outstanding debt and the District's ability to issue additional debt in the future.

- Assessed Valuation and Estimated Actual Value of Taxable Property and 1% Property Tax Revenue
- Direct and Overlapping Property Tax Rates
- Principal Property Taxpayers
- Property Tax Collections/Delinquency
- Outstanding Debt by Type
- Outstanding General Obligation Bonds by Improvement District
- Ratio of General Obligation Debt to Assessed Values
- Ratio of Annual Debt Service Expenditures to Total General Expenditures
- Debt Service Coverage

## EXHIBIT "A"

**Demographic and Economic Information** – These schedules offer demographic and economic indicators to help the reader understand the environment within which the District's financial activities take place and to help make comparisons over time and with other governments.

- Principal Employers
- Demographic and Economic Statistics

**Operating Information** – These schedules contain information about the District's operations and resources to help the reader understand how the District's financial information relates to the services the District provides and the activities it performs.

- Operating Indicators by Function – Water and Sewer Service Connections
- Operating Indicators by Function – New Service Connections
- Operating Indicators by Function – Average Monthly Usage
- Source of Supply and Demand in Acre Feet
- Capital Asset Statistics
- Full-Time Employees

## EXHIBIT "A"

**Irvine Ranch Water District**

## Net Position

For the Past Ten Fiscal Years

(in millions)

	<b>Fiscal Year</b>				
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Assets</b>					
Current & other assets	\$ 1,103.8	\$ 1,224.1	\$ 1,172.3	\$ 1,300.0	\$ 1,167.0
Capital assets	1,346.1	1,423.1	1,396.6	1,430.3	1,508.8
Total assets	<u>2,449.9</u>	<u>2,647.2</u>	<u>2,568.9</u>	<u>2,730.3</u>	<u>2,675.8</u>
<b>Deferred Outflow of Resources</b>					
Deferred refunding charges	-	-	-	-	-
Accumulated decrease in fair value of swaps agreements	-	-	37.4	32.7	53.0
Pension contributions	-	-	-	-	-
Pension actuarial	-	-	-	-	-
Total deferred outflow of resources	<u>-</u>	<u>-</u>	<u>37.4</u>	<u>32.7</u>	<u>53.0</u>
<b>Liabilities</b>					
Current and other liabilities	96.5	99.4	67.3	97.7	99.0
Long-term liabilities	1,074.7	1,190.8	1,204.3	1,323.7	1,281.8
Total liabilities	<u>1,171.2</u>	<u>1,290.2</u>	<u>1,271.6</u>	<u>1,421.4</u>	<u>1,380.8</u>
<b>Deferred Inflows of Resources</b>					
Pension actuarial	-	-	-	-	-
<b>Net Position</b>					
Net investment in capital assets	977.7	994.3	929.5	900.6	943.1
Restricted for water services	253.8	271.7	249.8	213.6	179.3
Restricted for sewer services	47.2	91.0	155.4	227.4	225.6
Total net position	<u>\$ 1,278.7</u>	<u>\$ 1,357.0</u>	<u>\$ 1,334.7</u>	<u>\$ 1,341.6</u>	<u>\$1,348.0</u>

## EXHIBIT "A"

**Irvine Ranch Water District**

Net Position  
For the Past Ten Fiscal Years  
(in millions)  
(Continued)

	<b>Fiscal Year</b>				
	<b>2013<sup>(1)</sup></b>	<b>2014<sup>(1)</sup></b>	<b>2015<sup>(2)</sup></b>	<b>2016<sup>(3)</sup></b>	<b>2017<sup>(4)</sup></b>
<b>Assets</b>					
Current & other assets	\$ 1,128.2	\$ 462.7	\$ 332.9	\$ 456.6	\$ 735.1
Capital assets	1,506.1	1,567.5	1,647.4	1,731.6	1,848.3
Total assets	<u>2,634.3</u>	<u>2,030.2</u>	<u>1,980.3</u>	<u>2,188.2</u>	<u>2,583.4</u>
<b>Deferred Outflow of Resources</b>					
Deferred refunding charges	9.8	1.6	1.4	1.2	2.6
Accumulated decrease in fair value of swaps agreements	37.5	36.1	35.3	41.2	27.4
Pension contributions	-	-	6.6	6.9	18.2
Pension actuarial	-	-	-	0.4	13.4
Total deferred outflow of resources	<u>47.3</u>	<u>37.7</u>	<u>43.3</u>	<u>49.7</u>	<u>61.6</u>
<b>Liabilities</b>					
Current and other liabilities	672.7	54.9	51.5	65.4	78.5
Long-term liabilities	647.7	623.4	602.8	589.8	790.9
Total liabilities	<u>1,320.4</u>	<u>678.3</u>	<u>654.3</u>	<u>655.2</u>	<u>869.4</u>
<b>Deferred Inflows of Resources</b>					
Pension actuarial	-	-	14.6	4.4	3.6
<b>Net Position</b>					
Net investment in capital assets	918.1	981.3	1,074.6	1,178.5	1,087.9
Restricted for water services	185.4	165.1	148.6	221.5	264.3
Restricted for sewer services	257.7	243.2	131.5	178.3	419.8
Total net position	<u>\$ 1,361.2</u>	<u>\$ 1,389.6</u>	<u>\$ 1,354.7</u>	<u>\$ 1,578.3</u>	<u>\$ 1,772.0</u>

**Source:** Irvine Ranch Water District Basic Financial Statements

**Notes:**

- (1) The District implemented GASB Statement No. 65 for the fiscal year ended June 30, 2014 and restated the financial statements for the fiscal year ended June 30, 2013.
- (2) The District implemented GASB Statement Nos. 68 and 71 for the fiscal year ended June 30, 2015. The District did not restate the prior years' financial statements because the data for the prior years was not readily available.
- (3) The District implemented GASB Statement No. 72 for the fiscal year ended June 30, 2016. The District did not restate the prior years' financial statements because the data for the prior years was not readily available.
- (4) The prior period adjustment for the fiscal year ended June 30, 2017 was related to the reclassification of certain assets from capital assets to real estate investments. The District did not restate the prior years' financial statements because the data for the prior years was not readily available.

## EXHIBIT "A"

**Irvine Ranch Water District**

Changes in Net Position  
For the Past Ten Fiscal Years  
(in thousands)

	<b>Fiscal Year</b>				
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Operating Revenues</b>					
Water sales and service charges	\$ 48,516	\$ 50,940	\$ 51,268	\$ 54,796	\$ 57,558
Sewer sales and service charges	39,811	41,157	45,344	45,375	49,234
Total operating revenues	88,327	92,097	96,612	100,171	106,792
<b>Operating Expenses</b>					
Water					
Water services	39,029	42,273	43,591	45,961	44,883
General and administrative	11,257	12,536	13,349	12,327	12,305
Sewer					
Sewer services	27,211	28,696	30,992	33,382	33,086
General and administrative	7,259	7,712	6,651	6,569	7,792
Depreciation	31,595	34,699	39,444	43,592	41,378
Total operating expenses	116,351	125,916	134,027	141,831	139,444
Operating income (loss)	(28,024)	(33,819)	(37,415)	(41,660)	(32,652)
<b>Nonoperating Revenues (Expenses)</b>					
Property taxes	34,245	36,240	38,392	38,679	38,062
Investment income	10,674	4,365	2,191	2,599	3,132
Increase (decrease) in fair value of investments	26,976	9,837	(7,782)	(20,172)	(23,586)
JPA investment income	59,854	57,676	55,726	53,708	51,530
Real estate income	10,478	10,792	9,701	9,719	11,039
Increase (decrease) in fair value of real estate investments	-	-	-	-	-
Other income	11,130	9,918	10,706	7,987	6,141
Interest expense	(8,515)	(6,061)	(9,962)	(14,174)	(16,924)
JPA interest expense	(56,616)	(54,686)	(51,530)	(41,264)	(39,603)
Real estate expense	(5,149)	(5,698)	(6,186)	(6,004)	(6,016)
Other expenses	(2,288)	(1,535)	(1,286)	(989)	(10,713)
Total nonoperating revenue (expenses)	80,789	60,848	39,970	30,089	13,062
Income (loss) before capital contributions	52,765	27,029	2,555	(11,571)	(19,590)
Contributed capital assets	29,319	32,517	17,963	18,506	25,948
Increase (decrease) in net position	82,084	59,546	20,518	6,935	6,358
Net position at beginning of year	1,195,761	1,278,703	1,357,046	1,334,666	1,341,601
SCWD Retained Earnings at 6/30/06	-	-	-	-	-
OPA Net Assets at 6/1/08	858	-	-	-	-
Prior period adjustments	-	18,797	(42,898)	-	-
Net position at end of year	\$1,278,703	\$1,357,046	\$1,334,666	\$1,341,601	\$1,347,959

## EXHIBIT "A"

**Irvine Ranch Water District**

Changes in Net Position  
For the Past Ten Fiscal Years  
(in thousands)  
(Continued)

	<b>Fiscal Year</b>				
	<b>2013</b>	<b>2014</b>	<b>2015<sup>(1)</sup></b>	<b>2016<sup>(2)</sup></b>	<b>2017<sup>(3)</sup></b>
<b>Operating Revenues</b>					
Water sales and service charges	\$ 62,565	\$ 66,321	\$ 70,110	\$ 76,692	\$ 77,252
Sewer sales and service charges	53,085	58,109	62,808	67,682	72,054
Total operating revenues	<u>115,650</u>	<u>124,430</u>	<u>132,918</u>	<u>144,374</u>	<u>149,306</u>
<b>Operating Expenses</b>					
Water					
Water services	51,163	57,624	57,978	57,499	55,296
General and administrative	14,619	13,660	9,319	11,827	15,906
Sewer					
Sewer services	38,189	37,715	54,575	40,413	42,752
General and administrative	8,048	8,612	5,826	7,625	9,059
Depreciation	47,539	46,809	51,015	58,330	61,841
Total operating expenses	<u>159,558</u>	<u>164,420</u>	<u>178,713</u>	<u>175,694</u>	<u>184,854</u>
Operating income (loss)	<u>(43,908)</u>	<u>(39,990)</u>	<u>(45,795)</u>	<u>(31,320)</u>	<u>(35,548)</u>
<b>Nonoperating Revenues (Expenses)</b>					
Property taxes	41,068	42,751	42,431	46,303	51,321
Investment income	224	1,079	1,214	1,249	2,843
Increase (decrease) in fair value of investments	(29,180)	(16,177)	(28)	(32)	(1,624)
JPA investment income	49,178	29,522	-	-	-
Real estate income	10,789	11,899	12,518	13,056	13,434
Increase (decrease) in fair value of real estate investments	-	-	-	5,597	10,084
Other income	8,323	10,974	7,899	7,837	7,117
Interest expense	(16,770)	(15,836)	(13,903)	(15,415)	(18,784)
JPA interest expense	(28,884)	(17,166)	-	-	-
Real estate expense	(6,047)	(6,139)	(6,251)	(4,363)	(4,358)
Other expenses	(6,110)	(7,163)	(9,752)	(2,800)	(1,997)
Total nonoperating revenue (expenses)	<u>22,591</u>	<u>33,744</u>	<u>34,128</u>	<u>51,432</u>	<u>58,036</u>
Income (loss) before capital contributions	<u>(21,317)</u>	<u>(6,246)</u>	<u>(11,667)</u>	<u>20,112</u>	<u>22,488</u>
Contributed capital assets	34,535	34,684	42,540	53,278	41,913
Increase (decrease) in net position	<u>13,218</u>	<u>28,438</u>	<u>30,873</u>	<u>73,390</u>	<u>64,401</u>
Net position at beginning of year	1,347,959	1,361,177	1,389,615	1,354,663	1,578,311
SCWD Retained Earnings at 6/30/06	-	-	-	-	-
OPA Net Assets at 6/1/08	-	-	-	-	-
Prior period adjustments	-	-	(65,825)	150,258	129,302
Net position at end of year	<u>\$1,361,177</u>	<u>\$1,389,615</u>	<u>\$1,354,663</u>	<u>\$1,578,311</u>	<u>\$1,772,014</u>

Source: Irvine Ranch Water District Basic Financial Statements

Notes:

- <sup>(1)</sup> The District implemented GASB Statement Nos. 68 and 71 for the fiscal year ended June 30, 2015. The District did not restate the prior years' financial statements because the data for the prior years was not readily available.
- <sup>(2)</sup> The District implemented GASB Statement No 72 for the fiscal years ended June 30, 2016 and 2017. The District did not restate the prior years' financial statements because the data for the prior years was not readily available.
- <sup>(3)</sup> The prior period adjustment for the fiscal year ended June 30, 2017 was related to the reclassification of certain assets from capital assets to real estate investments. The District did not restate the prior years' financial statements because the data for the prior years was not readily available.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Water Sold By Type of Customer (in Acre Feet)  
 For the Past Ten Fiscal Years

	<b>Fiscal Year</b>				
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Residential	33,771	34,189	31,721	31,127	32,262
Commercial	8,710	8,382	7,586	7,632	8,021
Industrial	5,353	5,009	4,711	4,733	4,713
Public Authority	2,588	2,571	2,293	2,305	2,373
Construction & Temporary	513	133	127	174	275
Landscape	6,039	5,789	4,712	4,252	4,741
Agricultural	7,031	7,015	5,234	3,208	2,433
Recycled - Landscape/Agricultural	24,564	24,415	20,951	20,147	25,011
<b>Total</b>	<b>88,569</b>	<b>87,503</b>	<b>77,335</b>	<b>73,578</b>	<b>79,829</b>

EXHIBIT "A"

**Irvine Ranch Water District**  
 Water Sold By Type of Customer (in Acre Feet)  
 For the Past Ten Fiscal Years  
 (Continued)

	<b>Fiscal Year</b>				
	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Residential	33,166	34,068	32,375	28,573	30,384
Commercial	8,353	8,803	8,391	8,377	8,179
Industrial	4,783	4,891	6,233	5,118	5,084
Public Authority	2,458	2,458	2,583	2,234	2,282
Construction & Temporary	378	739	863	1,230	874
Landscape	5,316	5,671	5,327	3,843	4,126
Agricultural	2,749	3,277	2,547	2,216	1,856
Recycled - Landscape/Agricultural	28,259	30,021	32,139	26,386	26,374
<b>Total</b>	<b>85,462</b>	<b>89,928</b>	<b>90,458</b>	<b>77,977</b>	<b>79,159</b>

Source: Irvine Ranch Water District

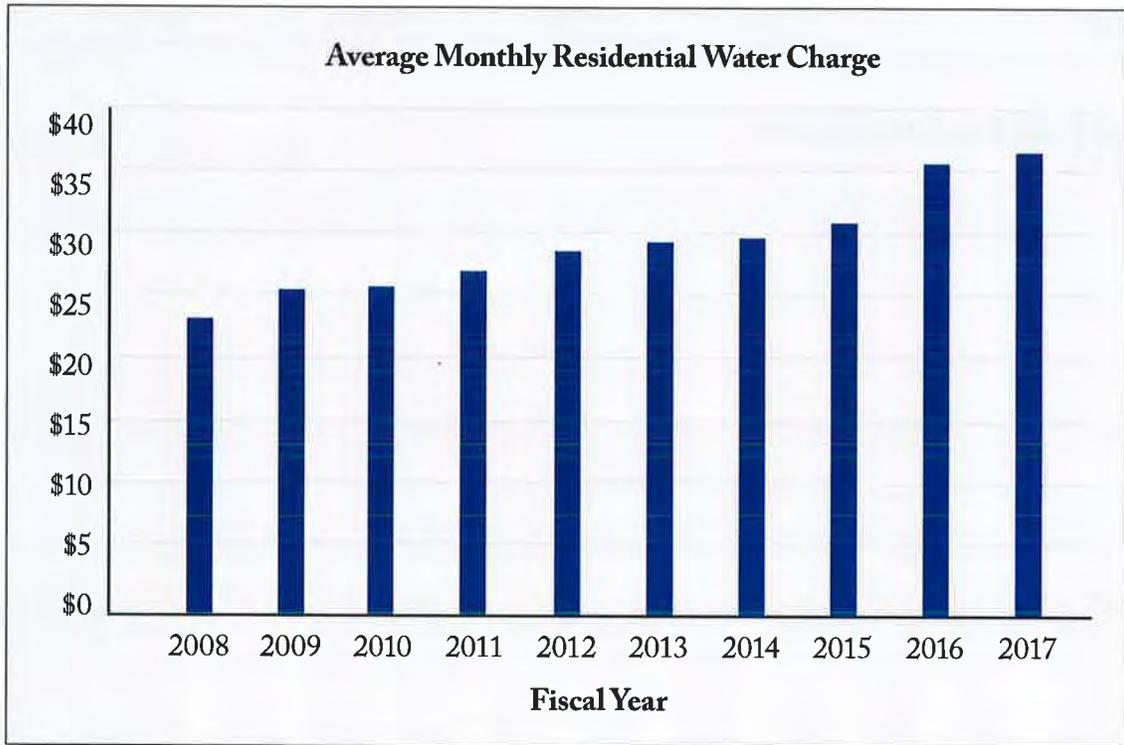
EXHIBIT "A"

**Irvine Ranch Water District**

Water Rates<sup>(1)</sup>

For the Past Ten Fiscal Years

<b>Fiscal Year</b>	<b>Fixed Service Charge</b>	<b>Commodity Rate (per ccf)</b>	<b>Average Monthly Residential Charge</b>
2008	\$ 7.50	\$ 0.98	\$ 23.86
2009	7.50	1.07	25.48
2010	7.75	1.15	26.53
2011	8.00	1.21	27.38
2012	8.75	1.22	28.23
2013	9.30	1.24	28.98
2014	9.85	1.27	29.83
2015	10.50	1.34	30.94
2016	10.30	1.62	35.38
2017	10.30	1.65	36.48



Source: Irvine Ranch Water District

Note:

<sup>(1)</sup>Water rates are for the Irvine Ranch rate area which comprises approximately 85 percent of the total District. The water charge to the average residential customer is based upon an average of 18 ccf per month. The first 8 ccf are at the District's low volume rate, which is \$0.36 less than the commodity base rate. The fixed monthly service charge includes components to add enhancement and replacement funds to assist with the District's aging infrastructure.

EXHIBIT "A"

**Irvine Ranch Water District**

Largest Water Customers  
Current Year and Nine Years Ago

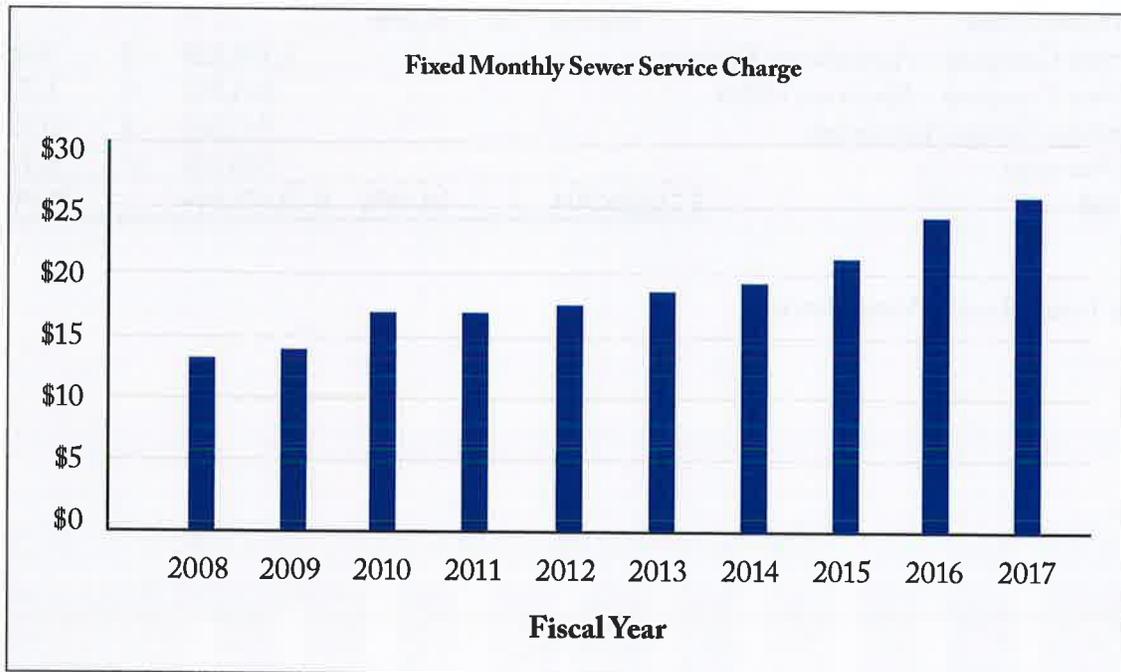
Customer Name	2017			2008		
	Total Paid	Rank	Percentage of Water Sales Revenues	Total Paid	Rank	Percentage of Water Sales Revenues
TIC-Irvine Apartment Communities	\$ 6,535,207	1	8.46%	\$ 2,995,261	1	6.09%
University of California - Irvine	1,254,292	2	1.62%	1,387,182	4	2.86%
Jazz Semiconductor	1,038,607	3	1.34%	620,618	6	1.28%
B Braun Medical Inc	881,230	4	1.14%	433,068	9	0.89%
ERP Operating LP	289,019	5	0.37%			
Allergan Sales, LLC	285,953	6	0.37%			
City of Irvine	272,348	7	0.35%	1,814,014	2	3.74%
Irvine Unified School District	201,987	8	0.26%	457,604	7	0.94%
Royalty Carpet Mills	200,149	9	0.26%			
City of Lake Forest	198,112	10	0.26%			
The Irvine Company - Agricultural Division				1,535,229	3	3.16%
The Irvine Company - Spectrum Office				664,985	5	1.37%
Woodbridge Village Association				447,909	8	0.92%
Hines Nurseries				360,074	10	0.74%
<b>Total</b>	<b>\$ 11,156,904</b>		<b>14.44%</b>	<b>\$ 10,675,944</b>		<b>21.99%</b>

Source: Irvine Ranch Water District

EXHIBIT "A"

**Irvine Ranch Water District**  
 Sewer Rates<sup>(1)</sup>  
 For the Past Ten Fiscal Years

<b>Fiscal Year</b>	<b>Fixed Monthly Service Charge</b>
2008	\$ 13.65
2009	\$ 13.80
2010	\$ 16.60
2011	\$ 16.65
2012	\$ 16.90
2013	\$ 17.20
2014	\$ 18.40
2015	\$ 20.50
2016	\$ 24.05
2017	\$ 25.75



Source: Irvine Ranch Water District

Note:

<sup>(1)</sup> Fixed monthly service charge for fiscal year 2006 is for the Irvine Ranch rate area only (excluding Los Alisos). For fiscal years 2007 and later, rates are uniform for all areas. The fixed monthly service charge includes components to add enhancement and replacement funds to assist with the District's aging infrastructure.

EXHIBIT "A"

**Irvine Ranch Water District**

Largest Sewer Customers  
Current Year and Nine Years Ago

Customer Name	2017			2008		
	Total Paid	Rank	Percentage of Sewer Sales Revenues	Total Paid	Rank	Percentage of Sewer Sales Revenues
TIC-Irvine Apartment Communities	\$ 11,639,943	1	16.15%	\$ 2,485,284	1	6.24%
City of Irvine	2,199,417	2	3.05%			
University of California - Irvine	1,976,675	3	2.74%	778,728	2	1.96%
B Braun Medical Inc	701,781	4	0.97%	277,107	4	0.70%
Irvine Unified School District	612,537	5	0.85%			
Royal Carpet Mills	353,891	6	0.49%	279,729	3	0.70%
ERP Operating LP	570,833	7	0.79%	158,560	8	0.40%
Woodbridge Village Assn	332,527	8	0.46%			
Allergan Sales, LLC	322,695	9	0.45%	186,539	6	0.47%
Orange County Produce	321,035	10	0.45%			
Maruchan, Inc				193,207	5	0.49%
The Irvine Company - Spectrum Office				170,527	7	0.43%
Airport Complex				132,653	9	0.33%
Maguire Properties				98,184	10	0.25%
<b>Total</b>	<b>\$19,031,333</b>		<b>26.41%</b>	<b>\$4,760,518</b>		<b>11.97%</b>

Source: Irvine Ranch Water District

EXHIBIT "A"

**Irvine Ranch Water District**  
 Ad Valorem Property Tax Rates<sup>(2)</sup>  
 For the Past Ten Fiscal Years

Improvement District	Fiscal Year									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
112	N/A	N/A	\$0.07920	\$0.07920	\$0.03168	\$0.03168	\$0.03168	\$0.03000	\$0.03000	\$0.03000
113 <sup>(1)</sup>	\$ 0.01920	\$ 0.01920	0.01980	0.01980	0.05940	0.05940	0.05940	0.03000	0.03000	0.04000
120	0.01298	0.01298	0.01311	0.00001	N/A	N/A	N/A	N/A	N/A	N/A
121	0.00001	0.00001	0.00001	0.01311	0.01311	0.01311	0.01311	N/A	N/A	N/A
125	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01300	0.01300	0.01300
130	0.00500	0.00500	0.00680	0.00680	0.00680	0.00680	0.00680	N/A	N/A	N/A
135	0.00842	0.00842	0.00842	0.00842	0.00421	0.00421	0.00421	N/A	N/A	N/A
140	0.00001	0.00001	0.00001	0.00001	0.01000	0.01000	0.01000	N/A	N/A	N/A
150	0.00780	0.00780	0.00990	0.00990	0.01980	0.01980	0.01980	N/A	N/A	N/A
153	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00001	0.00001	0.00001
160	0.01648	0.01648	0.01758	0.00001	N/A	N/A	N/A	N/A	N/A	N/A
161	0.00001	0.00001	0.00001	0.01758	0.01758	0.01758	0.01758	N/A	N/A	N/A
182	0.01300	0.01300	0.01350	0.01350	0.02700	0.02700	0.02700	N/A	N/A	N/A
184	0.00001	0.00001	0.00001	0.00001	0.01350	0.01350	0.01350	N/A	N/A	N/A
185	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00001	0.00001	0.00001
186	0.02700	0.02700	0.03191	0.03191	0.04787	0.04787	0.04787	N/A	N/A	N/A
188	0.02700	0.02700	0.03590	0.03590	0.21540	0.21540	0.21540	0.21540	0.21540	0.21540
190	0.00500	0.00500	N/A							
210	0.00001	0.00001	0.00001	0.00001	N/A	N/A	N/A	N/A	N/A	N/A
212	N/A	N/A	0.12420	0.12420	0.07452	0.07452	0.07452	0.04500	0.04500	0.04500
213 <sup>(1)</sup>	0.14093	0.14093	0.14533	0.14533	0.08720	0.08720	0.08720	0.03800	0.03800	0.05900
220	0.01400	0.01400	0.01800	0.00001	N/A	N/A	N/A	N/A	N/A	N/A
221	0.00001	0.00001	0.00001	0.01800	0.01700	0.01700	0.01700	N/A	N/A	N/A
225	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01500	0.01500	0.01500
230	0.02000	0.02000	0.02200	0.02200	0.02200	0.02200	0.02200	N/A	N/A	N/A
235	0.00532	0.00532	0.00532	0.00532	0.00266	0.00266	0.00266	N/A	N/A	N/A
240	0.02699	0.02699	0.03140	0.03140	0.02140	0.02140	0.02140	0.01500	0.01500	0.01500
250	0.03200	0.03200	0.03600	0.03600	0.03600	0.03600	0.03600	N/A	N/A	N/A
252	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	N/A	N/A	N/A
253	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00001	0.00001	0.00001
260	0.02330	0.02330	0.02830	0.00001	N/A	N/A	N/A	N/A	N/A	N/A
261	0.00001	0.00001	0.00001	0.02830	0.02830	0.02830	0.02830	N/A	N/A	N/A
282	0.01400	0.01400	0.01890	0.01890	0.01890	0.01890	0.01890	N/A	N/A	N/A
284	0.02699	0.02699	0.03239	0.03239	0.03239	0.03239	0.03239	N/A	N/A	N/A
285	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00001	0.00001	0.00001
286	N/A	N/A	N/A	0.00001	0.00201	0.00201	0.00201	N/A	N/A	N/A
288	N/A	N/A	N/A	0.00001	0.01000	0.01000	0.01000	0.01000	0.01000	0.01000
290	0.02000	0.02000	N/A							

Source: Irvine Ranch Water District

Notes:

<sup>(1)</sup> Improvement Districts 113 and 213 encompass the former Tustin Marine Base.

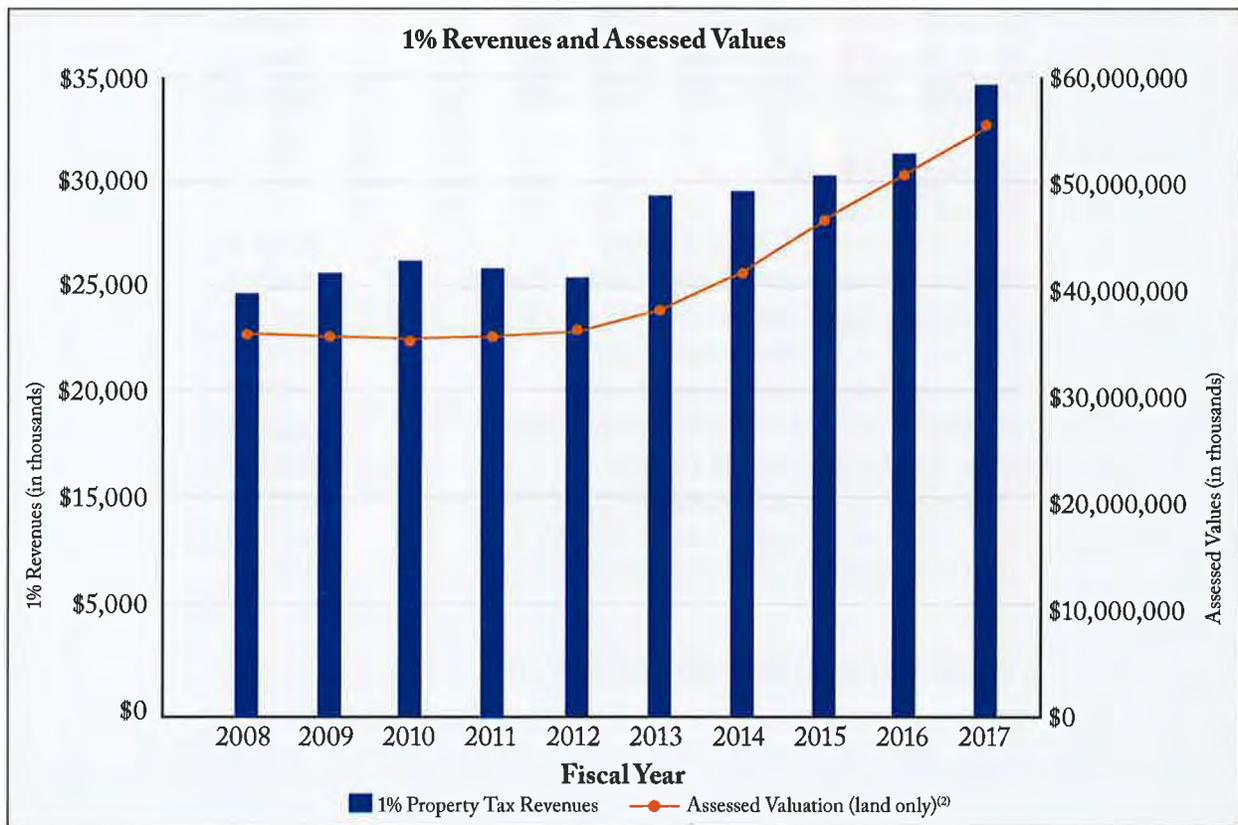
<sup>(2)</sup> The ad valorem property tax rates for the consolidated improvement district are effective July 1, 2014

EXHIBIT "A"

**Irvine Ranch Water District**

Assessed Valuation and Estimated Actual Value of Taxable Property and 1% Property Tax Revenue  
For the Past Ten Fiscal Years  
(in thousands)

Fiscal Year	Assessed Valuation (land only) <sup>(1)</sup>	1 % Property Tax Revenue
2008	\$ 35,540,296	\$ 24,730
2009	35,298,830	26,283
2010	34,818,153	27,150 <sup>(2)</sup>
2011	35,008,276	26,989
2012	35,661,242	26,478
2013	37,809,660	29,265
2014	42,205,844	29,445
2015	47,059,437	30,924
2016	51,340,888	32,427
2017	56,028,731	34,761



Source: Orange County Auditor-Controller and Orange County Tax Collector.

Notes:

- (1) Estimated market values for the land-only Assessed Values are not available.
- (2) Of this amount, the State of California borrowed \$2.0 million, which was repaid in June 2013.

*In 1978, the voters of the State of California passed Proposition 13 which limited property taxes to a total maximum rate of 1% based upon the assessed value of the property being taxed. Each year, the assessed value of property may be increased by an "inflation factor" (limited to a maximum increase of 2%). With few exceptions, property is only reassessed at the time that it is sold to a new owner. At that point, the new assessed value is reassessed at the purchase price of the property sold.*

EXHIBIT "A"

**Irvine Ranch Water District**  
Direct and Overlapping Property Tax Rates  
Fiscal Year Ended June 30, 2017

**Direct Rate:**

Irvine Ranch Water District I.D. No. 112	\$0.03000
Irvine Ranch Water District I.D. No. 113	0.04000
Irvine Ranch Water District I.D. No. 125	0.01300
Irvine Ranch Water District I.D. No. 153	0.00001
Irvine Ranch Water District I.D. No. 185	0.00001
Irvine Ranch Water District I.D. No. 188	0.21540
Irvine Ranch Water District I.D. No. 212	0.04500
Irvine Ranch Water District I.D. No. 213	0.05900
Irvine Ranch Water District I.D. No. 225	0.01500
Irvine Ranch Water District I.D. No. 240	0.01500
Irvine Ranch Water District I.D. No. 252	0.00001
Irvine Ranch Water District I.D. No. 253	0.00001
Irvine Ranch Water District I.D. No. 285	0.00001
Irvine Ranch Water District I.D. No. 288	0.01000

**Overlapping Rates:**

**School Districts:**

Coast Community College District	0.03116
Rancho Santiago Community College District	0.02999
Rancho Santiago Community College District SFID 1	0.01946
Laguna Beach Unified School District	0.01371
Newport Mesa Unified School District	0.02979
Saddleback Valley Unified School District	0.02688
Santa Ana Unified School District	0.06377
Tustin Unified School District SFID 2002-1	0.02571
Tustin Unified School District SFID 2008-1	0.03042
Tustin Unified School District SFID 2012-1	0.01388

Source: California Municipal Statistics, Inc.

EXHIBIT "A"

**Irvine Ranch Water District**

Principal Property Taxpayers  
Fiscal Year Ended June 30, 2017

<b>Property Owner's Name</b>	<b>Type of Business</b>	<b>Assessed Valuation of Property, including Land &amp; Improvements</b>	<b>Percentage of Total City Taxable Assessed Value</b>
The Irvine Company	Developer/Real Estate	\$ 4,573,435,711	7.51%
KB Homes Coastal Inc	Homebuilder	1,196,677,353	1.96%
Irvine Apartment Communities	Real Estate	707,238,089	1.16%
Allergan	Pharmaceutical (R&D/Marketing)	487,347,875	0.80%
Heritage Fields El Toro	Real Estate Developer	474,553,221	0.78%
B Braun Medical Inc.	Bio-Medical Manufacturing	398,642,431	0.65%
Jamboree Center LLC	Developer/Real Estate	388,317,635	0.64%
Cox Communication CA	Technology	311,042,195	0.51%
Park Place Michelson LLC	Real Estate	307,290,993	0.50%
LBA IV-PPI LLC	Real Estate Investment and Management	300,867,165	0.49%
		<b>\$ 9,145,412,668</b>	<b>15.00%</b>

Source: City of Irvine Comprehensive Annual Financial Report (Fiscal Year Ended June 30, 2016)

Data was not yet available for FY2016/17 from the City of Irvine.

The City of Irvine is only a part of the IRWD service area.

EXHIBIT "A"

**Irvine Ranch Water District**

Property Tax Collections/Delinquency  
For the Past Ten Fiscal Years

Fiscal Year	Levied During Fiscal Year		Collected During Fiscal Year	
	1 Percent <sup>(1)</sup>	General <sup>(2)</sup>	1 Percent	General <sup>(3)</sup>
2008	\$ 23,963,000	\$ 7,626,979	\$ 22,859,667	\$ 10,242,088
2009	25,486,200	11,694,868	25,910,366	9,873,983
2010	24,166,600	10,503,249	23,636,793	10,802,992
2011	26,493,900	10,323,198	25,892,653	11,180,391
2012	26,749,900	10,558,510	25,953,788	11,716,056
2013	26,749,900	10,733,998	29,265,283	11,802,915
2014	26,749,900	11,374,556	27,606,048	12,463,175
2015	29,000,000	9,203,641	28,668,756	9,585,904
2016	31,900,000	11,133,538	31,115,506	10,879,713
2017	33,500,000	11,679,081	33,318,168	12,822,313
Total	\$ 274,759,400	\$ 104,831,618	\$ 274,227,028	\$ 111,369,530

EXHIBIT "A"

**Irvine Ranch Water District**

Property Tax Collections/Delinquency

For the Past Ten Fiscal Years

(Continued)

Fiscal Year	Percentage Collected		Amount of Levy Collected in Subsequent Periods	
	1 Percent	General	1 Percent	General
2008	95.40%	134.29%	\$ 887,709	\$ 496,260
2009	101.66%	84.43%	477,134	281,774
2010	97.81%	102.85%	1,493,752	634,095
2011	97.73%	108.30%	1,153,265	753,309
2012	97.02%	110.96%	733,450	118,691
2013	109.40%	109.96%	989,396	438,947
2014	103.20%	109.57%	1,148,873	988,796
2015	98.86%	104.15%	2,275,461	4,888
2016	97.54%	97.72%	1,192,700	884,301
2017	99.46%	109.79%	1,230,854	1,443,272
Total			\$ 1,582,594	\$ 6,044,333

Source: County of Orange Tax Ledger

Notes:

- (1) The estimated levy for one percent revenue is generated internally and it is based on prior year receipts and developer growth projections.
- (2) The estimated levy for G.O. tax receipts is based on the county's assessed value projection multiplied by the tax rate assessed within each improvement district.
- (3) The General column for Collected tax receipts includes an unbudgeted utility tax revenue from improvement districts 190/290 that adds approximately \$400K per year.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Outstanding Debt by Type<sup>(1)</sup>  
 For the Past Ten Fiscal Years

<b>Fiscal Year</b>	<b>Total Service Connections<sup>(2)</sup></b>	<b>General Obligation Bonds<sup>(3)</sup></b>	<b>GO Debt per Connection</b>	<b>Certificates of Participation</b>	<b>COPS Debt per Connection</b>
2008	185,359	\$ 280,947,000	\$ 1,516	\$ 106,934,000	\$ 577
2009	186,856	415,699,000	2,225	103,100,000	552
2010	188,049	399,152,800	2,123	92,005,200	489
2011	191,474	562,051,000	2,935	88,043,000	460
2012	193,381	548,549,000	2,837	83,616,000	432
2013	196,596	534,343,000	2,718	78,698,000	400
2014	200,559	515,900,000	2,572	73,565,000	367
2015	204,475	503,800,000	2,464	67,293,000	329
2016	212,364	491,200,000	2,313	60,387,000	284
2017	217,212	608,118,000	2,800	153,626,000	707

EXHIBIT "A"

**Irvine Ranch Water District**

Outstanding Debt by Type<sup>(1)</sup>

For the Past Ten Fiscal Years

(Continued)

<b>Fiscal Year</b>	<b>JPA Revenue Bonds</b>	<b>JPA Debt per Connection</b>	<b>Notes Payable</b>	<b>Notes Payable per Connection</b>	<b>Total Debt</b>	<b>Total Debt per Connection</b>
2008	\$ 724,962,000	\$ 3,911	\$ 5,549,000	\$ 30	\$ 1,118,392,000	\$ 6,034
2009	698,566,000	3,739	5,007,000	27	1,222,372,000	6,542
2010	690,263,700	3,671	4,553,000	24	1,185,974,700	6,307
2011	676,415,000	3,533	2,747,000	14	1,329,256,000	6,942
2012	638,521,000	3,302	2,494,000	13	1,273,180,000	6,584
2013	610,568,000	3,106	2,240,000	11	1,225,849,000	6,235
2014	-	-	1,984,000	10	591,449,000	2,949
2015	-	-	1,728,000	8	572,821,000	2,801
2016	-	-	1,469,000	7	553,056,000	2,604
2017	-	-	1,209,000	6	762,953,000	3,512

Source: Irvine Ranch Water District

Notes:

- <sup>(1)</sup> More detail about the District's long-term liabilities can be found at Note 9 to the Basic Financial Statements.
- <sup>(2)</sup> Per Capita income information for the Irvine Ranch Water District is not readily available. Accordingly, the District presents this schedule by total service connections.
- <sup>(3)</sup> Includes unamortized discount / deferred loss on refunding for the fiscal year 2005 through the fiscal year 2013.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Outstanding General Obligation Bonds by Improvement District  
 As of June 30, 2017

Improvement District	General Obligation Bonds Authorized	General Obligation Bonds Issued	Remaining Unissued General Obligation Bonds Authorized	Amount Outstanding as of June 30, 2017
112	\$ 28,512,300	\$ 8,111,000	\$ 20,401,300	\$ 7,658,000
113	25,769,500	16,300,000	9,469,500	14,870,000
125	735,246,000	429,729,000	305,517,000	194,719,000
153	237,300,000	7,601,000	229,699,000	7,601,000
154	4,839,000	-	4,839,000	-
185	13,500,000	1,493,000	12,007,000	1,493,000
188	8,174,000	4,590,000	3,584,000	1,603,000
<b>Total</b>	<b>\$ 1,053,340,800</b>	<b>\$ 467,824,000</b>	<b>\$ 585,516,800</b>	<b>\$ 277,944,000</b>
210	\$ 2,000,000	\$ 2,000,000	\$ -	\$ -
212	108,711,800	26,013,000	82,698,800	24,801,000
213	87,647,500	28,565,000	59,082,500	24,950,000
225	856,643,000	493,304,000	363,339,000	268,655,000
240	117,273,000	49,722,000	67,551,000	21,271,000
253	122,283,000	11,877,000	110,406,000	11,877,000
285	21,300,000	1,809,000	19,491,000	1,809,000
288	8,977,000	443,000	8,534,000	393,000
<b>Total</b>	<b>\$ 1,324,835,300</b>	<b>\$ 613,733,000</b>	<b>\$ 711,102,300</b>	<b>\$ 353,756,000</b>
	<b>\$ 2,378,176,100</b>	<b>\$ 1,081,557,000</b>	<b>\$ 1,296,619,100</b>	<b>\$ 581,700,000</b>

Source: Irvine Ranch Water District

EXHIBIT "A"

**Irvine Ranch Water District**  
 Ratio of General Obligation Debt to Assessed Values<sup>(1)</sup>  
 For the Past Ten Fiscal Years

Fiscal Year	Assessed Valuation	General Obligation Debt Outstanding	General Obligation Debt to Assessed Valuation	Fiscal Year	Assessed Valuation	General Obligation Debt Outstanding	General Obligation Debt to Assessed Valuation
<b>Improvement District 112</b>				<b>Improvement District 212</b>			
2008	n/a	n/a	n/a	2008	n/a	n/a	n/a
2009	\$ 500,354,220	\$ 2,745,000	0.00548611	2009	\$ 500,354,220	\$ 7,305,000	0.01459966
2010	521,318,307	2,745,000	0.00526550	2010	521,318,307	7,305,000	0.01401255
2011	539,618,060	5,745,000	0.01064642	2011	539,618,060	15,705,000	0.02910392
2012	504,820,526	5,745,000	0.01138028	2012	504,820,526	15,705,000	0.03111007
2013	511,871,892	5,653,500	0.01104476	2013	511,871,892	15,461,500	0.03020580
2014	780,606,904	5,562,000	0.00712523	2014	780,606,904	15,218,000	0.01949509
2015	1,333,029,836	5,470,000	0.00410343	2015	1,333,029,836	14,974,000	0.01123306
2016	1,850,638,433	5,378,000	0.00290602	2016	1,850,638,433	14,731,000	0.00795996
2017	2,077,681,111	7,658,000	0.00368584	2017	2,077,681,111	24,801,000	0.01193687
<b>Improvement District 113</b>				<b>Improvement District 213</b>			
2008	\$ 691,298,772	\$ 1,505,375	0.00217760	2008	\$ 691,298,772	\$ 11,139,775	0.01611427
2009	609,156,504	4,505,375	0.00739609	2009	609,156,504	7,544,775	0.02880175
2010	651,917,180	4,505,375	0.00691096	2010	651,917,180	17,544,775	0.02691258
2011	553,458,157	9,770,000	0.01765264	2011	553,458,157	17,283,000	0.03122729
2012	536,369,090	15,794,500	0.02944707	2012	536,369,090	23,418,645	0.04366144
2013	562,239,093	15,541,750	0.02764260	2013	562,239,093	22,828,480	0.04060280
2014	674,596,339	14,150,000	0.02097551	2014	674,596,339	22,074,000	0.03272179
2015	827,524,085	13,900,000	0.01679709	2015	827,524,085	21,488,000	0.02596662
2016	885,391,548	13,638,000	0.01540335	2016	885,391,548	20,839,000	0.02353648
2017	1,031,821,023	14,870,000	0.01441141	2017	1,031,821,023	24,950,000	0.02418055
<b>Improvement District 125</b>				<b>Improvement District 225</b>			
2008	n/a	n/a	n/a	2008	n/a	n/a	n/a
2009	n/a	n/a	n/a	2009	n/a	n/a	n/a
2010	n/a	n/a	n/a	2010	n/a	n/a	n/a
2011	n/a	n/a	n/a	2011	n/a	n/a	n/a
2012	n/a	n/a	n/a	2012	n/a	n/a	n/a
2013	n/a	n/a	n/a	2013	n/a	n/a	n/a
2014	\$29,578,638,615	\$ 192,075,000	0.00649371	2014	\$24,757,488,949	\$240,995,000	0.00973423
2015	32,752,414,757	187,604,000	0.00572794	2015	27,557,606,802	235,865,000	0.00855898
2016	35,506,392,050	182,932,000	0.00515209	2016	29,945,134,379	230,535,000	0.00769858
2017	38,802,873,378	194,719,000	0.00501816	2017	32,838,922,602	268,655,000	0.00818099

EXHIBIT "A"

**Irvine Ranch Water District**  
 Ratio of General Obligation Debt to Assessed Values<sup>(1)</sup>  
 For the Past Ten Fiscal Years  
 (continued)

<b>Fiscal Year</b>	<b>Assessed Valuation</b>	<b>General Obligation Debt Outstanding</b>	<b>General Obligation Debt to Assessed Valuation</b>	<b>Fiscal Year</b>	<b>Assessed Valuation</b>	<b>General Obligation Debt Outstanding</b>	<b>General Obligation Debt to Assessed Valuation</b>
				<b>Improvement District 240</b>			
				2008	\$4,642,366,023	\$29,182,814	0.00628619
				2009	4,936,249,533	32,326,608	0.00654882
				2010	4,871,225,527	30,885,287	0.00634035
				2011	4,903,741,743	29,527,697	0.00602146
				2012	4,973,007,663	28,081,173	0.00564672
				2013	5,343,804,951	26,441,526	0.00494807
				2014	5,609,174,229	24,078,000	0.00429261
				2015	6,031,968,996	22,767,000	0.00377439
				2016	6,449,202,772	21,431,000	0.00332305
				2017	7,000,292,817	21,271,000	0.00303859
				<b>Improvement District 153</b>			
2008	\$ 36,114,444	n/a	n/a	2008	\$ 36,114,444	n/a	n/a
2009	36,903,662	n/a	n/a	2009	36,903,662	n/a	n/a
2010	36,997,523	n/a	n/a	2010	36,997,523	n/a	n/a
2011	7,971,152	n/a	n/a	2011	7,971,152	n/a	n/a
2012	8,114,060	n/a	n/a	2012	8,114,060	n/a	n/a
2013	8,475,848	n/a	n/a	2013	8,475,848	n/a	n/a
2014	8,687,744	n/a	n/a	2014	228,692,347	n/a	n/a
2015	666,622,225	n/a	n/a	2015	666,622,225	n/a	n/a
2016	1,287,363,937	n/a	n/a	2016	1,287,363,937	n/a	n/a
2017	2,893,148,966	\$7,601,000	0.00262724	2017	2,893,148,966	\$11,877,000	0.00410522
				<b>Improvement District 154</b>			
2008	\$ 7,531,850	n/a	n/a				
2009	10,209,169	n/a	n/a				
2010	8,831,144	n/a	n/a				
2011	8,904,175	n/a	n/a				
2012	9,127,678	n/a	n/a				
2013	9,334,512	n/a	n/a				
2014	9,111,103	n/a	n/a				
2015	9,289,351	n/a	n/a				
2016	9,266,433	n/a	n/a				
2017	9,376,883	n/a	n/a				

EXHIBIT "A"

**Irvine Ranch Water District**  
 Ratio of General Obligation Debt to Assessed Values<sup>(1)</sup>  
 For the Past Ten Fiscal Years  
 (continued)

Fiscal Year	Assessed Valuation	General Obligation Debt Outstanding	General Obligation Debt to Assessed Valuation	Fiscal Year	Assessed Valuation	General Obligation Debt Outstanding	General Obligation Debt to Assessed Valuation
<b>Improvement District 185</b>				<b>Improvement District 285</b>			
2008	n/a	n/a	n/a	2008	n/a	n/a	n/a
2009	n/a	n/a	n/a	2009	n/a	n/a	n/a
2010	n/a	n/a	n/a	2010	n/a	n/a	n/a
2011	n/a	n/a	n/a	2011	n/a	n/a	n/a
2012	n/a	n/a	n/a	2012	n/a	n/a	n/a
2013	n/a	n/a	n/a	2013	n/a	n/a	n/a
2014	\$ 85,119,097	n/a	n/a	2014	\$ 85,119,097	n/a	n/a
2015	209,634,682	n/a	n/a	2015	209,634,682	n/a	n/a
2016	586,316,903	n/a	n/a	2016	586,316,903	n/a	n/a
2017	836,640,799	\$ 1,493,000	0.00178452	2017	836,640,799	\$1,809,000	0.00216222
<b>Improvement District 188</b>				<b>Improvement District 288</b>			
2008	\$ 12,410,613	\$ 1,231,073	0.09919518	2008	\$ 12,410,613	n/a	n/a
2009	12,806,315	1,235,205	0.09645280	2009	12,806,315	\$ 300,000	0.02342594
2010	14,613,156	1,050,082	0.07185867	2010	14,613,156	300,000	0.02052945
2011	13,887,854	2,155,702	0.15522211	2011	13,887,854	300,000	0.02160161
2012	14,165,606	1,942,809	0.13714973	2012	14,165,606	300,000	0.02117806
2013	14,448,912	1,714,661	0.11867060	2013	14,448,912	290,000	0.02007072
2014	14,446,476	1,468,000	0.10161648	2014	14,446,476	280,000	0.01938189
2015	14,735,113	1,462,000	0.09921879	2015	14,735,113	270,000	0.01832358
2016	185,851,827	1,456,000	0.00783420	2014	185,851,827	260,000	0.00139896
2017	196,953,990	1,603,000	0.00813896	2015	196,953,990	393,000	0.00199539

Source: Irvine Ranch Water District

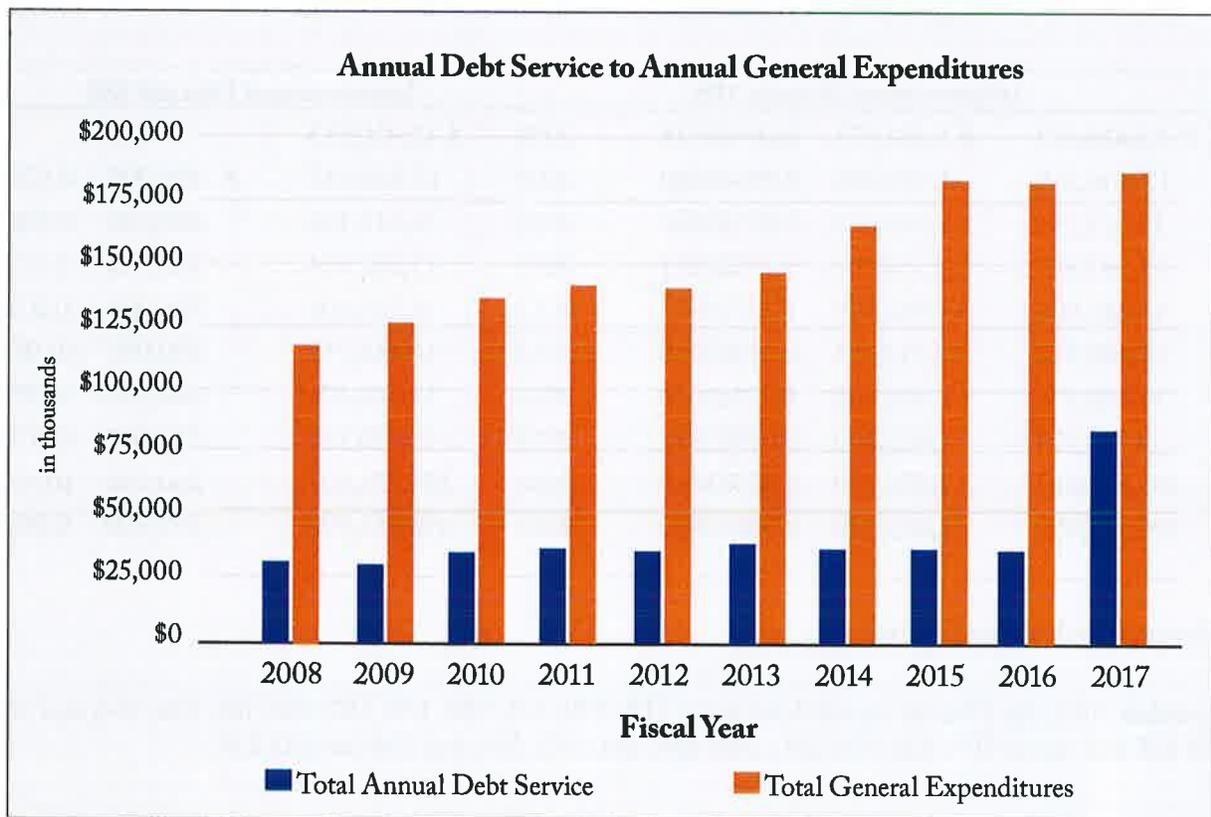
Note:

<sup>(1)</sup> In December 2013, the District consolidated water ID's 120, 121, 130, 140, 150, 160, 161, 182, 184, and 186 into ID 125 and sewer ID's 220, 221, 230, 250, 260, 261, 282, 284, and 286 into ID 225.

EXHIBIT "A"

**Irvine Ranch Water District**  
 Ratio of Annual Debt Service Expenditures to Total General Expenditures  
 For the Past Ten Fiscal Years  
 (in thousands)

Fiscal Year	Total Annual Debt Service	Total General Expenditures	Ratio of Total Annual Debt Service to Total General Expenditures
2008	\$ 28,374	\$ 116,351	24.4%
2009	27,326	125,916	21.7%
2010	29,044	134,021	21.7%
2011	34,842	141,831	24.6%
2012	33,437	139,444	24.0%
2013	37,734	159,558	23.6%
2014	34,009	164,420	20.7%
2015	29,921	178,713	16.7%
2016	34,560	175,694	19.7%
2017	81,029	184,854	43.8%



Source: Irvine Ranch Water District

## EXHIBIT "A"

**Irvine Ranch Water District**  
Debt Service Coverage (in thousands)  
For the Past Ten Fiscal Years

	2008	2009	2010	2011	2012
<b>Revenues</b>					
Water sales and service charges	\$ 48,516	\$ 50,940	\$ 51,268	\$ 54,796	\$ 57,558
Sewer sales and service charges	39,811	41,157	45,344	45,375	49,234
Developer Connection fees	6,411	4,535	5,818	10,572	9,030
Net real estate income	7,171	7,010	5,624	5,649	6,736
Interest income	9,859	4,365	2,191	2,599	1,739
Net earnings on JPA	3,238	2,990	4,196	12,444	11,927
Available 1% property tax revenue	4,869	17,007	19,346	22,396	23,165
Other	11,130	9,918	10,706	7,987	6,141
<b>Total Revenues</b>	<b>131,005</b>	<b>137,922</b>	<b>144,493</b>	<b>161,818</b>	<b>165,530</b>
<b>Expenses</b>					
Water supply services	39,029	42,273	43,591	45,961	44,883
Sewer services	27,211	28,696	30,992	33,382	33,086
Administrative and general	18,516	20,248	20,000	18,896	20,097
Other	2,288	1,535	1,286	989	10,713
<b>Total Expenses</b>	<b>87,044</b>	<b>92,752</b>	<b>95,869</b>	<b>99,228</b>	<b>108,779</b>
<b>Net Revenues</b>	<b>\$ 43,961</b>	<b>\$ 45,170</b>	<b>\$ 48,624</b>	<b>\$ 62,590</b>	<b>\$ 56,751</b>
Applicable <i>Ad Valorem</i> Assessments Available for GO Double-Barrel Bonds	\$ -	\$ -	\$ -	\$ -	\$ 5,823
<b>Parity Obligations</b>					
Certificates of Participation	\$ 3,564	\$ 2,798	\$ 3,119	\$ 7,680	\$ 8,016
1997 State Loan #3	227	227	-	226	226
Series 2010B Bonds	-	-	-	4,080	7,533
Series 2011-A Index Tender Notes	-	-	-	35	2,284
2016 General Obligation	-	-	-	-	-
<b>Total Parity Obligations Debt Service</b>	<b>3,791</b>	<b>3,025</b>	<b>3,119</b>	<b>12,021</b>	<b>18,059</b>
<b>Remaining Revenues</b>	<b>\$ 40,170</b>	<b>\$ 42,145</b>	<b>\$ 45,505</b>	<b>\$ 50,569</b>	<b>\$ 44,515</b>
<b>Parity Obligation Coverage</b>	<b>11.6 x</b>	<b>14.9 x</b>	<b>15.6 x</b>	<b>5.2 x</b>	<b>3.5 x</b>
<b>Subordinate Obligations</b>					
Fixed Payer Swap Payments	\$ 2,115	\$ 5,694	\$ 7,391	\$ 7,734	\$ 7,734
State Loans and SCWD Debt	559	481	381	253	308
<b>Total Subordinate Obligations</b>	<b>2,674</b>	<b>6,175</b>	<b>7,772</b>	<b>7,987</b>	<b>8,042</b>
<b>Remaining Revenues</b>	<b>\$ 37,496</b>	<b>\$ 35,970</b>	<b>\$ 37,733</b>	<b>\$ 42,582</b>	<b>\$ 36,473</b>
<b>Non-Double-Barrel GO Bonds</b>					
<b>Revenues Pledged to Non-Double-Barrel GO Bonds</b>					
1% Property tax revenues (Pledged to Secured Bonds)	\$ 19,861	\$ 9,276	\$ 7,804	\$ 4,593	\$ 3,313
Pro-rata Share <i>Ad valorem</i> Assessments for Non-Double-Barrel GO Bonds	9,515	9,959	11,244	11,690	5,761
<b>Sub-total Pledged Revenues</b>	<b>66,872</b>	<b>55,205</b>	<b>56,781</b>	<b>58,865</b>	<b>45,547</b>
<b>Additional Funds Available for Non-Double-Barrel GO Bonds</b>					
Remaining 1% Property Tax Revenues	2,395	15,454	19,346	22,396	23,165
Additional Net Revenues	35,101	20,516	18,387	20,186	13,308
<b>Total with Additional Pledged Revenues</b>	<b>\$ 66,872</b>	<b>\$ 55,205</b>	<b>\$ 56,781</b>	<b>\$ 58,865</b>	<b>\$ 45,547</b>
<b>Debt Service</b>					
Non-Double-Barrel GO Bond Debt Service	\$ 29,376	\$ 19,235	\$ 21,179	\$ 16,899	\$ 16,899
GO Bond Coverage	2.3 x	2.9 x	2.7 x	3.5 x	2.7 x
<b>Remaining Revenues</b>	<b>\$ 37,496</b>	<b>\$ 35,970</b>	<b>\$ 35,602</b>	<b>\$ 41,966</b>	<b>\$ 28,648</b>
<b>Total Debt Coverage</b>	<b>2.0 x</b>	<b>2.3 x</b>	<b>2.1 x</b>	<b>2.1 x</b>	<b>1.7 x</b>

## EXHIBIT "A"

**Irvine Ranch Water District**  
Debt Service Coverage (in thousands)  
For the Past Ten Fiscal Years (Continued)

	2013	2014	2015	2016	2017
<b>Revenues</b>					
Water sales and service charges	\$ 62,565	\$ 66,321	\$ 70,110	\$ 76,692	\$ 77,252
Sewer sales and service charges	53,085	58,109	62,808	67,682	72,054
Developer Connection fees	17,314	22,429	29,183	32,109	25,563
Net real estate income	6,566	7,760	8,191	8,693	9,076
Interest income	1,549	1,671	1,515	1,585	3,210
Net earnings on JPA	20,294	12,356	-	-	-
Available 1% property tax revenue	25,796	28,532	29,770	31,645	34,247
Other	8,323	10,974	7,899	7,836	7,117
<b>Total Revenues</b>	<b>195,492</b>	<b>208,152</b>	<b>209,476</b>	<b>226,242</b>	<b>228,519</b>
<b>Expenses</b>					
Water supply services	51,163	57,624	57,978	57,499	55,296
Sewer services	38,189	37,715	54,575	40,413	42,752
Administrative and general	22,667	22,272	15,145	19,451	24,964
Other	6,110	7,163	9,752	2,800	1,997
<b>Total Expenses</b>	<b>118,129</b>	<b>124,774</b>	<b>137,450</b>	<b>120,163</b>	<b>125,009</b>
<b>Net Revenues</b>	<b>\$ 77,363</b>	<b>\$ 83,378</b>	<b>\$ 72,026</b>	<b>\$106,079</b>	<b>\$103,510</b>
Applicable <i>Ad Valorem</i> Assessments Available for GO Double-Barrel Bonds	\$ 5,838	\$ 6,409	\$ 4,839	\$ 6,036	\$ 8,605
<b>Parity Obligations</b>					
Certificates of Participation	\$ 8,388	\$ 8,753	\$ 9,098	\$ 9,487	\$ 11,675
1997 State Loan #3	226	227	227	227	194
Series 2010B Bonds	7,519	7,825	7,829	7,823	7,813
Series 2011-A Index Tender Notes	2,306	2,360	2,455	2,927	2,967
2016 General Obligation	-	-	-	-	1,605
<b>Total Parity Obligations Debt Service</b>	<b>18,439</b>	<b>19,165</b>	<b>19,609</b>	<b>20,464</b>	<b>24,254</b>
Remaining Revenues	\$ 64,762	\$ 70,622	\$ 57,256	\$ 91,651	\$ 87,861
<b>Parity Obligation Coverage</b>	<b>4.5 x</b>	<b>4.7 x</b>	<b>3.9 x</b>	<b>5.5 x</b>	<b>4.6 x</b>
<b>Subordinate Obligations</b>					
Fixed Payer Swap Payments	\$ 7,452	\$ 7,475	\$ 7,734	\$ 7,712	\$ 6,798
State Loans and SCWD Debt	308	308	308	308	133
<b>Total Subordinate Obligations</b>	<b>7,760</b>	<b>7,783</b>	<b>8,042</b>	<b>8,020</b>	<b>6,931</b>
Remaining Revenues	\$ 57,002	\$ 62,839	\$ 49,214	\$ 83,631	\$ 80,930
<b>Non-Double-Barrel GO Bonds</b>					
<b>Revenues Pledged to Non-Double-Barrel GO Bonds</b>					
1% Property tax revenues (Pledged to Secured Bonds)	\$ 3,470	\$ 3,013	\$ 3,358	\$ 3,226	\$ 3,128
Pro-rata Share <i>Ad valorem</i> Assessments for Non-Double-Barrel GO Bonds	5,965	4,797	4,463	5,396	5,341
<b>Sub-total Pledged Revenues</b>	<b>66,437</b>	<b>70,649</b>	<b>57,035</b>	<b>92,253</b>	<b>89,399</b>
<b>Additional Funds Available for Non-Double-Barrel GO Bonds</b>					
Remaining 1% Property Tax Revenues	25,796	28,532	29,770	31,645	34,247
Additional Net Revenues	25,248	34,307	19,444	51,986	46,683
<b>Total with Additional Pledged Revenues</b>	<b>\$ 66,437</b>	<b>\$ 70,649</b>	<b>\$ 57,035</b>	<b>\$ 92,253</b>	<b>\$ 89,399</b>
<b>Debt Service</b>					
Non-Double-Barrel GO Bond Debt Service	\$ 17,129	\$ 10,968	\$ 12,840	\$ 11,173	\$ 12,385
GO Bond Coverage	3.9 x	6.4 x	4.4 x	8.3 x	7.2 x
Remaining Revenues	\$ 49,308	\$ 59,681	\$ 44,195	\$ 81,080	\$ 77,014
<b>Total Debt Coverage</b>	<b>2.1 x</b>	<b>2.6 x</b>	<b>2.1 x</b>	<b>3.0 x</b>	<b>2.8 x</b>

Source: Irvine Ranch Water District

EXHIBIT "A"

**Irvine Ranch Water District**

Principal Employers

Fiscal Year Ended June 30, 2017

<u>Name of Company</u>	<u>Number of Employees</u>	<u>Products</u>	<u>Percentage of Employment</u>
University of California, Irvine	20,386	Educational	16.08%
Edwards Lifesciences LLC	2,987	Surgical Appliances and Supplies	2.36%
Irvine Unified School District	2,749	Educational	2.17%
Blizzard Entertainment Inc.	2,622	Technology	2.07%
Broadcom	1,900	Technology	1.50%
Parker Hannifin Corporation	1,700	Aircraft Parts	1.34%
Nationstar Mortgage	1,556	Mortgage	1.23%
Glidewell Laboratories	1,538	Dental Appliances	1.21%
24 Hour Fitness	1,426	Fitness Center	1.12%
Thales Avionics	1,424	Aerospace	1.12%
			30.20%

Source: City of Irvine Comprehensive Annual Financial Report (Fiscal Year Ended June 30, 2016)

Data was not yet available for FY2016/17 from the City of Irvine.

The City of Irvine is only a part of the IRWD service area.

EXHIBIT "A"

**Irvine Ranch Water District**

Demographic & Economic Statistics  
For the Past Ten Fiscal Years

<b>Fiscal Year</b>	<b>IRWD Population</b>	<b>City of Irvine Population</b>	<b>City of Irvine Median Family Income</b>	<b>Total Personal Income</b>	<b>County of Orange Unemployment Rate</b>
2008	330,000	207,646	\$98,923	\$8,601,736	5.3%
2009	330,000	212,541	91,101	8,723,320	8.3%
2010	331,500	217,686	94,903	8,090,372	9.5%
2011	330,000	219,156	93,258	8,484,794	9.2%
2012	334,000	223,729	90,939	8,886,628	7.9%
2013	340,000	231,117	92,599	8,174,011	6.1%
2014	370,000	242,651	92,663	9,595,168	5.0%
2015	370,000	250,384	90,585	10,595,508	4.2%
2016	390,000	258,386	91,999	10,946,242	3.6%
2017	390,000	258,386	N/A <sup>(1)</sup>	N/A <sup>(1)</sup>	3.2%

Source: City of Irvine Comprehensive Annual Financial Report (Fiscal Year Ended June 30, 2016) and County of Orange website

Data for the entire Irvine Ranch Water District service area is not readily available.

The City of Irvine is only a part of the IRWD service area.

Note:

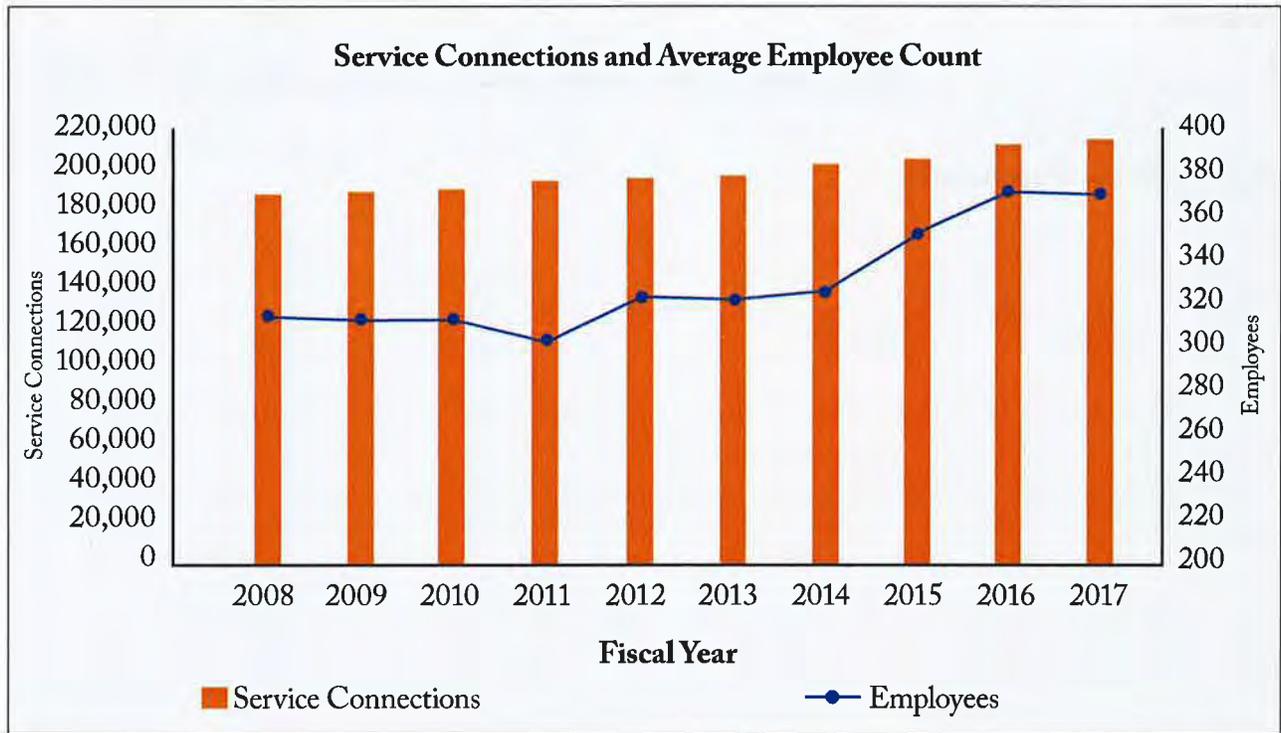
<sup>(1)</sup> Median Family Income and Total Personal Income for FY 2017 has not yet been published by the City of Irvine.

EXHIBIT "A"

**Irvine Ranch Water District**

Operating Indicators by Function  
Water and Sewer Service Connections  
For the Past Ten Fiscal Years

Fiscal Year	Potable Water	Non-Potable Water	Sewer & Recycled Water	Total Service Connections	Average Employee Population	Service Connections per Employee
2008	95,386	198	89,775	185,359	313	592
2009	96,110	201	90,545	186,856	310	603
2010	96,797	226	91,252	188,275	310	607
2011	98,453	184	92,837	191,474	305	628
2012	99,377	88	93,828	193,293	319	606
2013	101,020	88	95,488	196,596	316	622
2014	102,990	87	97,482	200,559	324	619
2015	104,994	84	99,397	204,475	350	584
2016	108,952	84	103,328	212,364	370	574
2017	111,376	84	105,752	217,212	366	593



Source: Irvine Ranch Water District

EXHIBIT "A"

**Irvine Ranch Water District**

Operating Indicators by Function  
New Service Connections  
For the Past Ten Fiscal Years

	<b>Fiscal Year</b>									
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Water</b>										
Residential	1,439	552	631	1,469	862	1,520	1,848	2,127	3,783	2,319
Commercial/Industrial/ Public Authority	330	149	19	98	18	27	40	(126)	96	56
Fire Protection	173	86	43	40	37	55	50	29	25	39
Construction & Temporary	(101)	(60)	(6)	39	3	31	36	4	40	10
Landscape Irrigation	(80)	13	33	(21)	(89)	8	(4)	(30)	13	0
Agricultural	(1)	(13)	(8)	(11)	(3)	2	(1)	(3)	1	0
<b>Sewer</b>										
Residential	891	527	613	1,462	861	1,521	1,829	2,127	3,783	2,319
Commercial/Industrial/ Public Authority	357	156	21	37	21	29	41	(319)	119	52
Landscape Irrigation	207	84	63	85	102	112	127	113	25	53
Agricultural	4	3	10	1	7	(2)	(3)	(6)	4	0
<b>Total</b>	<b>3,219</b>	<b>1,497</b>	<b>1,419</b>	<b>3,199</b>	<b>1,819</b>	<b>3,303</b>	<b>3,963</b>	<b>3,916</b>	<b>7,889</b>	<b>4,848</b>

Source: Irvine Ranch Water District

EXHIBIT "A"

**Irvine Ranch Water District**

Operating Indicators by Function  
Average Monthly Usage (in CCF)  
For the Past Ten Fiscal Years

	<b>Fiscal Year</b>									
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Water</b>										
Residential	11	10	10	9	9	9	9	12	11	11
Commercial	69	63	57	56	61	63	66	57	60	57
Industrial	226	211	200	201	201	204	192	267	222	232
Public Authority	359	347	300	295	296	306	305	378	287	260
Construction & Temporary	122	39	52	79	106	181	241	398	285	148
Treated - Landscape Irrigation	122	116	95	85	94	105	182	110	74	82
Treated - Agricultural	1,294	1,116	663	925	835	733	575	646	327	402
Untreated Agricultural	6,405	7,495	6,925	4,714	4,768	5,799	6,314	8,504	8,047	6,315
	<b>8,608</b>	<b>9,397</b>	<b>8,302</b>	<b>6,364</b>	<b>6,370</b>	<b>7,400</b>	<b>7,884</b>	<b>10,372</b>	<b>9,313</b>	<b>7,507</b>
<b>Recycled water</b>										
Landscape Irrigation	191	182	152	134	152	169	182	192	186	170
Agricultural	1,792	2,418	1,874	2,247	3,768	4,145	3,882	4,992	3,891	3,197
<b>Total</b>	<b>1,983</b>	<b>2,600</b>	<b>2,026</b>	<b>2,381</b>	<b>3,920</b>	<b>4,314</b>	<b>4,064</b>	<b>5,184</b>	<b>4,077</b>	<b>3,367</b>

Source: Irvine Ranch Water District

EXHIBIT "A"

**Irvine Ranch Water District**  
Source of Supply and Water Deliveries / Sales in Acre Feet  
For the Past Ten Fiscal Years

Fiscal Year	Source of Supply (in Acre Feet)			Total Supply
	Local	Imported	Recycled	
2008	45,379 <sup>(1)</sup>	36,656	16,110 <sup>(2)</sup>	98,145
2009	45,537	29,965	22,676	98,178
2010	45,980	24,744	20,912	91,636
2011	41,274 <sup>(3)</sup>	30,260	21,030	92,564
2012	39,409	26,155	20,602	86,166
2013	49,967 <sup>(4)</sup>	20,151	22,983	93,101
2014	55,015 <sup>(4)</sup>	22,508	21,038	98,561
2015	54,057	18,628	22,866	95,551
2016	46,926	11,853	23,206	81,985
2017	49,252	16,418	22,006	87,676

Fiscal Year	Water Deliveries / Sales (in Acre Feet)		
	Potable and Untreated	Recycled	Total Demand
2008	64,423	27,033	91,456
2009	63,431	26,258	89,689
2010	56,634	22,830	79,464 <sup>(5)</sup>
2011	53,642	22,250	75,892
2012	54,818	25,011	79,829
2013	57,203	28,259	85,462 <sup>(6)</sup>
2014	59,907	30,021	89,928 <sup>(6)</sup>
2015	58,319	32,139	90,458 <sup>(6)</sup>
2016	51,098	26,879	77,977 <sup>(7)</sup>
2017	51,299	27,860	79,159

Source: Irvine Ranch Water District

Notes:

- <sup>(1)</sup> The OPA well went down in FY 2008 and was rebuilt, coming online in FY 2011.
- <sup>(2)</sup> The MWRP capacity was expanded and production increased in FY 2008 with total capacity identified in FY 2012.
- <sup>(3)</sup> IDP wells went down in FY 2011 and will come back on line in FY 2015.
- <sup>(4)</sup> Wells 21 & 22 came on line during FY 2013 and was at full capacity in FY 2014.
- <sup>(5)</sup> Significant rainfall in December produced a much lower overall demand.
- <sup>(6)</sup> Extremely dry conditions led to a considerable increase in demands.
- <sup>(7)</sup> State mandated reduction in usage resulted in a significant decrease in overall demand.

EXHIBIT "A"

**Irvine Ranch Water District**

Capital Asset Statistics  
For the Past Ten Fiscal Years

	<b>Fiscal Year</b>									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Potable System</b>										
Miles of Water Line <sup>(1)</sup>	1,132	1,134	1,169	1,460	1,490	1,516	1,597	1,622	1,760	1,810
Number of Storage Tanks <sup>(3)</sup>	37	37	37	37	37	36	36	36	36	36
Maximum Storage Capacity (Acre Feet)	456	456	456	456	456	456	456	456	456	456
Number of Pumping Plants	38	43	43	43	43	37	38	39	39	39
Number of Wells	24	24	24	24	24	26	26	27	27	27
Well Production Capacity (cfs)	117	117	117	117	117	124	124	128	128	118
Water Banking Storage (Acre Feet)	-	50,000	107,600	109,600	109,600	109,600	109,600	109,600	126,000	126,000
Potable Treatment Plants	2	2	2	2	2	3	3	3	3	4
<b>Non-Potable and Recycled Systems</b>										
Miles of Recycled Line <sup>(1)</sup>	399	400	407	468	478	488	503	509	525	540
Number of Storage Tanks <sup>(2)</sup>	11	11	11	11	11	12	12	12	12	11
Number of Open Reservoirs <sup>(2)</sup>	4	4	4	4	4	5	5	5	5	5
Maximum Storage Capacity (Acre Feet) <sup>(4)</sup>	23,703	23,703	23,703	23,703	23,703	24,155	24,155	24,155	24,155	24,155
Number of Pumping Plants	19	19	19	19	19	20	19	20	20	20
Number of Wells <sup>(5)</sup>	5	5	5	5	5	5	5	5	5	5
Well Production Capacity (cfs)	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
<b>Sewer System</b>										
Miles of Sewer Line	899	901	940	950	962	971	1,009	1019	1,070	1,081
Number of Lift Stations <sup>(6)</sup>	19	19	18	18	16	14	14	14	14	23
Treatment Plants	2	2	2	2	2	2	2	2	2	2
Treatment Capacity (mgd) (Tertiary)	23.5	23.5	23.5	23.5	23.5	23.5	33.5	33.5	33.5	33.5

Source: Irvine Ranch Water District

Notes:

<sup>(1)</sup> Miles of Line include laterals.

<sup>(2)</sup> IRWD began reporting storage tanks and open reservoirs separately in 2006. Previously for purposes of these statistics, both have been combined under "storage tanks".

<sup>(3)</sup> Total number of tanks excludes IRWD's storage capacity with East Orange County Water District. However, this capacity is accounted for in the maximum storage capacity estimate (456 AF).

<sup>(4)</sup> Excludes Serrano Water District's capacity in Irvine Lake, which equals 25% of total capacity.

<sup>(5)</sup> Accounts for active production wells only (Excludes SGU Injection Well).

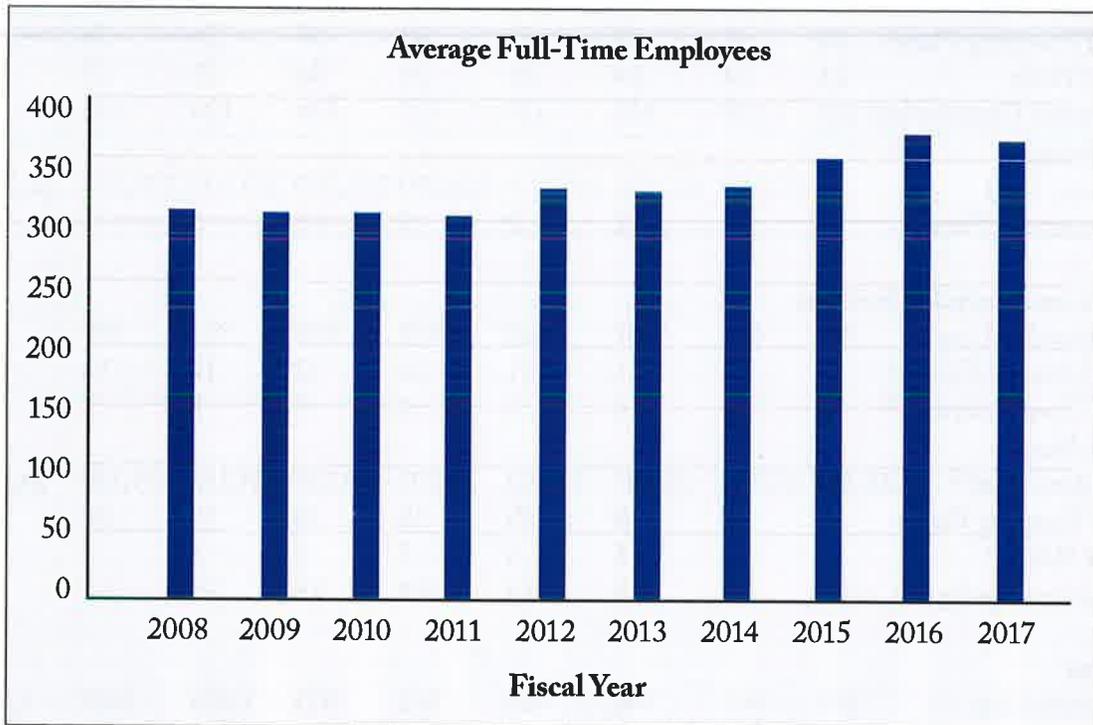
<sup>(6)</sup> Excludes private lift stations for IRWD facilities.

EXHIBIT "A"

**Irvine Ranch Water District**

Full-Time Employees  
For the Past Ten Fiscal Years

	<b>Fiscal Year</b>									
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Average Full-Time Employees	313	310	310	305	319	316	324	350	370	366



Source: Irvine Ranch Water District

## Exhibit “B”



**Davis Farr LLP**  
2301 Dupont Drive | Suite 200 | Irvine, CA 92612  
Main: 949.474.2020 | Fax: 949.263.5520

Board of Directors  
Irvine Ranch Water District  
Irvine, California

### **Communication with Those Charged with Governance at the Conclusion of the Audit**

We have audited the financial statements of Irvine Ranch Water District (the “District”) for the year ended June 30, 2017. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated May 1, 2017. Professional standards also require that we communicate to you the following information related to our audit.

### **Significant Audit Findings**

#### ***Qualitative Aspects of Accounting Practices***

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Irvine Ranch Water District are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during fiscal year 2017. We noted no transactions entered into by Irvine Ranch Water District during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management’s knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected.

Examples of significant judgments and estimates reflected in the District’s financial statements include:

- Judgments involving the useful lives and depreciation methodology to use for capital assets.
- Judgments concerning which capital project expenditures should be capitalized and depreciated versus expensed in the financial statements and judgments concerning which projects should be placed in service.
- Judgements regarding the fair value of real estate investments.
- Judgments regarding the fair value of interest rate swap agreements.

### ***Difficulties Encountered in Performing the Audit***

We encountered no significant difficulties in dealing with management in performing and completing our audit.

### ***Corrected and Uncorrected Misstatements***

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. As a result of our audit, management recorded a prior period adjustment to reflect the retroactive application GASB Statement No. 72 on certain real estate investments previously classified as capital assets.

### ***Disagreements with Management***

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

### ***Management Representations***

We have requested certain representations from management that are included in the management representation letter dated November 22, 2017.

### ***Management Consultations with Other Independent Accountants***

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to Irvine Ranch Water District's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

### ***Other Audit Findings or Issues***

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as Irvine Ranch Water District's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

### ***Other Matters***

We applied certain limited procedures to *Management's Discussion and Analysis*, *Schedule of Changes in the Net Pension Liability and Related Ratio*, and *Schedule of Contributions*, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the

basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were not engaged to report on the Introduction and Statistical Section, which accompany the financial statements but are not RSI. We did not audit or perform other procedures on this other information and we do not express an opinion or provide any assurance on it.

**Restriction on Use**

This information is intended solely for the use of Board of Directors and management of Irvine Ranch Water District and is not intended to be, and should not be, used by anyone other than these specified parties.

A handwritten signature in blue ink that reads "David L. W. P." in a cursive style.

Irvine, California  
November 22, 2017

## Exhibit “C”



**Davis Farr LLP**  
2301 Dupont Drive | Suite 200 | Irvine, CA 92612  
Main: 949.474.2020 | Fax: 949.263.5520

Finance Personnel Committee  
Irvine Ranch Water District  
Irvine, California

### **Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards**

#### **Independent Auditor’s Report**

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States the financial statements of Irvine Ranch Water District (the “District”) as of and for the year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise the District’s basic financial statements, and have issued our report thereon dated November 22, 2017.

#### **Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the District’s internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District’s internal control. Accordingly, we do not express an opinion on the effectiveness of the District’s internal control.

*A deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity’s financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

## **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the District's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

## **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

A handwritten signature in blue ink that reads "David Sun CP". The signature is written in a cursive style.

Irvine, California  
November 22, 2017

December 11, 2017

Prepared by: A. Murphy/M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *[Signature]*

## CONSENT CALENDAR

### MICHELSON WATER RECYCLING PLANT SECURITY FENCING BID REJECTION

#### SUMMARY:

The purpose of the Michelson Water Recycling Plant Security Fencing project is to construct security fencing and gates at the District's Michelson facility. At the bid opening on November 14, 2017, four bids were received and Pacific Hydrotech Corporation was the apparent low bidder with a bid of \$443,550. Given that the project cost estimate was \$168,750, staff underestimated the construction costs of the modular fencing and the motorized gate improvements at Gate 14 and recommends that the Board reject all of the bids received for the Michelson Water Recycling Plant Security Fencing project and authorize staff to re-bid the project after revising the project documents.

#### BACKGROUND:

In April 2015, the District's consultant, TelSec, Inc. completed a security assessment of District facilities and identified the open nature of the 45-acre Michelson Water Recycling Plant campus as a significant security risk. The assessment recommended alternatives to mitigate security risks to the Michelson campus, which includes the water recycling plant, the biosolids facilities, maintenance buildings and equipment, the water quality laboratory, warehousing, supply and equipment storage, and administrative offices that also serve as IRWD's primary Emergency Operations Center. This project would construct a security fencing system along the entrance drive to the Operations Center between Gate 1, which is the current primary vehicle access point for staff and visitors, and the flagpole area. The system would separate the parking areas for visitors and staff, as well as direct visitors to use the main entrance doors to the Operations Center. The improvements include: 1) approximately 850 feet of tubular steel fencing; 2) three vehicle gates; 3) three pedestrian gates; and 4) establishing an entrance to the employee parking area from within the District's vehicle parking area.

Staff approved the project manual and exhibits reflecting the security fencing and gate improvement concepts in October and advertised the design-build project to a select bidders list of 11 contractors. The bid opening was held on November 14 with bids received from four contractors. The bids ranged from the apparent low bid of \$443,550 from Pacific Hydrotech Corporation to a high bid of \$694,491; the bid summary is attached as Exhibit "A". Staff's construction cost estimate of the improvements was \$168,750. Staff evaluated the bids and found significant differences between the contractors' and staff's pricing of the modular fencing and the motorized gate improvements at Gate 14. Staff recommends rejection of the bids and re-bidding after revising the security fencing material and alignment concept within the project documents.

FISCAL IMPACTS:

Projects 07824, 07825 and 07826 are included in the FY 2017-18 Capital Budget. Following the re-bid, staff will request a budget increase to fund the construction of the security fencing and gate improvements.

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 filed with the County of Orange on October 25, 2017.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD REJECT ALL BIDS RECEIVED FOR THE MICHELSON WATER RECYCLING PLANT SECURITY FENCING, PROJECTS 07824, 07825 AND 07826, AND AUTHORIZE STAFF TO RE-BID THE PROJECT AFTER REVISING THE PROJECT DOCUMENTS.

LIST OF EXHIBITS:

Exhibit "A" – Michelson Water Recycling Plant Security Fencing Bid Summary

# EXHIBIT "A"

Bid Opening: Tuesday, November 14, 2017 @ 2:00 p.m.

Irvine Ranch Water District Bid Summary For  
Michelson Water Recycling Plant Security Fencing  
PR 07824

Entered By: L. Gates

Item No.	Description	Qty	Unit	Engineer's Estimate		1 Pacific Hydrotech Corporation Perris, CA		2 GCI Construction, Inc. San Clemente, CA		3 Paulus Engineering, Inc. Anaheim, CA	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
1	Bonding, submittals, design drawings, mobilization, demobilization and cleanup.	1	LS	\$6,000.00	\$6,000.00	\$19,000.00	\$19,000.00	\$22,000.00	\$22,000.00	\$17,000.00	\$17,000.00
2	Site demolition and vegetation removal.	1	LS	\$2,000.00	\$2,000.00	\$17,600.00	\$17,600.00	\$49,480.00	\$49,480.00	\$25,800.00	\$25,800.00
3	Provide and install employee parking lot entrance including saw cutting, excavation, backfill compaction, concrete pavement and, curb return, asphalt pavement replacement, striping, and traffic delineators per the Fencing Exhibit and concrete pavement detail provided in the Appendix.	200	SF	\$25.00	\$5,000.00	\$125.00	\$25,000.00	\$42.00	\$8,400.00	\$219.00	\$43,800.00
4	Provide and install 6 ft. tall heavy industrial steel Ameristar modular fencing with concrete footings per the Fencing Exhibit and detail provided in the Appendix.	820	LF	\$75.00	\$61,500.00	\$171.00	\$140,220.00	\$175.00	\$143,500.00	\$195.00	\$159,900.00
4a	Provide and install 8 ft. tall heavy industrial steel Ameristar modular fencing with concrete footings per the Fencing Exhibit and detail provided in the Appendix.	30	LF	\$75.00	\$2,250.00	\$231.00	\$6,930.00	\$300.00	\$9,000.00	\$240.00	\$7,200.00
5	Provide and install 4 ft. wide 6 ft. tall heavy industrial steel self-closing pedestrian gates with electronic lock and latch. Knox switch and manual keyed override.	2	EA	\$2,000.00	\$4,000.00	\$8,900.00	\$17,800.00	\$4,200.00	\$8,400.00	\$11,000.00	\$22,000.00
6	Electrical conduit to connect two (2) pedestrian gates to the operations building including saw cutting, trenching, conduit, pull boxes, junction boxes, backfill, compaction, wall penetration, and concrete replacement.	1	LS	\$4,000.00	\$4,000.00	\$7,400.00	\$7,400.00	\$47,000.00	\$47,000.00	\$29,000.00	\$29,000.00
7	Integration of two (2) pedestrian gates with existing Hirsch access system by approved integrator including wiring from pedestrian gates to the main operations building gate controller, Knox switch, and all scramble pads, and card readers.	1	LS	\$3,000.00	\$3,000.00	\$16,800.00	\$16,800.00	\$21,000.00	\$21,000.00	\$16,500.00	\$16,500.00
8	Provide and install 4 ft. wide 6 ft. tall heavy industrial steel self-closing pedestrian gate near the employee parking lot with manual keyed lock and latch, and Knox lock.	1	EA	\$1,500.00	\$1,500.00	\$6,300.00	\$6,300.00	\$4,200.00	\$4,200.00	\$10,000.00	\$10,000.00
9	Provide and install 24 ft. wide, 6 ft. tall heavy industrial steel manual double swing gates outside of the main lobby and at the entrance to the employee parking area from Gate 1 including concrete footings, gate posts, and Knox locks.	2	EA	\$5,000.00	\$10,000.00	\$10,800.00	\$21,600.00	\$12,000.00	\$24,000.00	\$17,500.00	\$35,000.00
10	Provide and install motorized 24 ft. wide, 8 ft. tall, heavy industrial steel dual swing vehicle gate at Gate 14 including heavy industrial steel gate posts with concrete footings, two heavy industrial motor operators, control loops, control panel, Maglock, and dual height access keypads with gooseneck support. Includes removal of existing chain link gate and gate posts.	1	EA	\$20,000.00	\$20,000.00	\$37,100.00	\$37,100.00	\$48,000.00	\$48,000.00	\$43,500.00	\$43,500.00
11	Electrical work at Gate 14 to provide a complete working motorized gate system, including saw cutting, trenching, conduit, wiring, circuit breakers, pull boxes, junction boxes, 316 SS Nema 4X gate control enclosure with stanchion and concrete pad, UPS, backfill, compaction, and asphalt replacement.	1	LS	\$6,000.00	\$6,000.00	\$30,900.00	\$30,900.00	\$22,000.00	\$22,000.00	\$49,000.00	\$49,000.00

Item No.	Description	Qty	Unit	Engineer's Estimate		1 Pacific Hydrotech Corporation Perris, CA		2 GCI Construction, Inc. San Clemente, CA		3 Paulus Engineering, Inc. Anaheim, CA		
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount	
12	Integration of Gate 14 with existing Hirsch access system by approved integrator including local Hirsch control panel, wiring, installation of District provided radio, dual scramble pads, automated vehicle ID equipment, Maglocks, and Knox switch.	1	LS	\$6,000.00	\$6,000.00	\$23,800.00	\$23,800.00	\$19,300.00	\$19,300.00	\$17,025.00	\$17,025.00	
13	Coat Existing Rolling Gate 1 Per IRWD Std. Specification 09900 Coating System C-2.	1	LS	\$1,000.00	\$1,000.00	\$6,300.00	\$6,300.00	\$4,000.00	\$4,000.00	\$3,600.00	\$3,600.00	
14	Operation & Maintenance Manuals	1	LS	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	
15	Final Record Drawings	1	LS	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	
Subtotal, Base Bid Items						\$133,750.00		\$378,250.00		\$431,780.00		\$480,825.00
A-11	Alternative Electrical work at Gate 14 to provide a complete working motorized gate system, including saw cutting, trenching, backfill, compaction, conduit, wiring, circuit breakers, pull boxes, junction boxes, and asphalt replacement to connect motor operators with existing power feed panel. Provide and install approximately 230 linear feet of 1-1/2 inch PVC coated steel conduit from Gate 14 to the existing pull box at Gate 1. This alternative item replaces Bid Item 11.	1	LS	\$25,000.00	\$25,000.00	\$39,100.00	\$39,100.00		\$24,000.00		\$81,000.00	
A-12	Alternative Integration of Gate 14 with existing Hirsch access system by approved integrator including installation of Hirsch control panel in building 10, wiring of dual scramble pads, card readers, long range reader, Knox switch, and Maglocks. This alternative item replaces Bid Item 12.	1	LS	\$10,000.00	\$10,000.00	\$26,200.00	\$26,200.00		\$29,000.00		\$26,860.00	
Subtotal, Additive/Deductive Bid Items						\$35,000.00		\$65,300.00		\$53,000.00		\$107,860.00
Subtotal, Base Bid Items and Additive/Deductive Bid Items						\$168,750.00		\$443,550.00		\$484,780.00		\$588,685.00
Adjustment (+ or -)												(\$40,000.00)
<b>TOTAL AMOUNT OF BID</b>						\$168,750.00		\$443,550.00		\$484,780.00		\$548,685.00
<b>NOTES:</b>				<b>Item</b>	<b>Manufacturers:</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>			
1 - Pacific Hydrotech Corporation's Bid Total Submitted was \$448,680.00 - modified Bid Total due to mathematical error on Bid Item No. 4.				Fencing	Ameristar Fence	Ameristar Fence	Ameristar Fence	Ameristar Fence	Ameristar Fence	Ameristar Fence		
				Gate Operator	LiftMaster	LiftMaster	Hy-Security	Hy-Security	LiftMaster or Equal	LiftMaster or Equal		
2 - GCI Construction's Bid Total Submitted was \$487,780.00 - Bid Total was modified due to mathematical error on Subtotal of Base Bid Items.				Long Range Vehicle ID Reader	HID	HID	Engineered Parking Systems	Engineered Parking Systems	Engineered Parking Systems	Engineered Parking Systems		
3 - SS Mechanical Construction Corp.'s Bid Total Submitted was \$699,491.00 - Bid Total modified due to mathematical error on Subtotal of Additive/Deductive Bid Items.					<b>Subcontractors:</b>	<b>Subcontractors:</b>	<b>Subcontractors:</b>	<b>Subcontractors:</b>	<b>Subcontractors:</b>	<b>Subcontractors:</b>		
					Integration: Controlled Key Systems	Integration: Enterprise Security, Inc.	Integration: Enterprise Security, Inc.	Integration: Enterprise Security, Inc.	Integration: Enterprise Security, Inc.	Integration: Enterprise Security, Inc.		
					Electrical: Hydrotech Electric	Electrical: Hydrotech Electric	Electrical: Hydrotech Electric	Electrical: Hydrotech Electric	Electrical: Hydrotech Electric	Electrical: Hydrotech Electric		
					Fence: Econo Fence	Fence: Redhawk Fence	Fence: Redhawk Fence	Fence: Redhawk Fence	Gate: C-G Systems, Inc.	Gate: C-G Systems, Inc.		
									Concrete: CMB Structures, Inc.	Concrete: CMB Structures, Inc.		

Irvine Ranch Water District Bid Summary For  
 Michelson Water Recycling Plant Security Fencing  
 PR 07824

				Engineer's Estimate		4 SS Mechanical Construction Corp. Mission Viejo, CA	
Item No.	Description	Qty	Unit	Unit Price	Total Amount	Unit Price	Total Amount
1	Bonding, submittals, design drawings, mobilization, demobilization and cleanup.	1	LS	\$6,000.00	\$6,000.00	\$20,500.00	\$20,500.00
2	Site demolition and vegetation removal.	1	LS	\$2,000.00	\$2,000.00	\$31,500.00	\$31,500.00
3	Provide and install employee parking lot entrance including saw cutting, excavation, backfill compaction, concrete pavement and, curb return, asphalt pavement replacement, striping, and traffic delineators per the Fencing Exhibit and concrete pavement detail provided in the Appendix.	200	SF	\$25.00	\$5,000.00	\$157.50	\$31,500.00
4	Provide and install 6 ft. tall heavy industrial steel Ameristar modular fencing with concrete footings per the Fencing Exhibit and detail provided in the Appendix.	820	LF	\$75.00	\$61,500.00	\$238.40	\$195,488.00
4a	Provide and install 8 ft. tall heavy industrial steel Ameristar modular fencing with concrete footings per the Fencing Exhibit and detail provided in the Appendix.	30	LF	\$75.00	\$2,250.00	\$345.40	\$10,362.00
5	Provide and install 4 ft wide 6 ft. tall heavy industrial steel self-closing pedestrian gates with electronic lock and latch. Knox switch and manual keyed override.	2	EA	\$2,000.00	\$4,000.00	\$14,393.00	\$28,786.00
6	Electrical conduit to connect two (2) pedestrian gates to the operations building including saw cutting, trenching, conduit, pull boxes, junction boxes, backfill, compaction, wall penetration, and concrete replacement.	1	LS	\$4,000.00	\$4,000.00	\$33,750.00	\$33,750.00
7	Integration of two (2) pedestrian gates with existing Hirsch access system by approved integrator including wiring from pedestrian gates to the main operations building gate controller, Knox switch, and all scramble pads, and card readers.	1	LS	\$3,000.00	\$3,000.00	\$21,150.00	\$21,150.00
8	Provide and install 4 ft. wide 6 ft. tall heavy industrial steel self-closing pedestrian gate near the employee parking lot with manual keyed lock and latch, and Knox lock.	1	EA	\$1,500.00	\$1,500.00	\$12,780.00	\$12,780.00
9	Provide and install 24 ft. wide, 6 ft. tall heavy industrial steel manual double swing gates outside of the main lobby and at the entrance to the employee parking area from Gate 1 including concrete footings, gate posts, and Knox locks.	2	EA	\$5,000.00	\$10,000.00	\$21,055.00	\$42,110.00
10	Provide and install motorized 24 ft. wide, 8 ft. tall, heavy industrial steel dual swing vehicle gate at Gate 14 including heavy industrial steel gate posts with concrete footings, two heavy industrial motor operators, control loops, control panel, Maglock, and dual height access keypads with gooseneck support. Includes removal of existing chain link gate and gate posts.	1	EA	\$20,000.00	\$20,000.00	\$46,300.00	\$46,300.00
11	Electrical work at Gate 14 to provide a complete working motorized gate system, including saw cutting, trenching, conduit, wiring, circuit breakers, pull boxes, junction boxes, 316 SS Nema 4X gate control enclosure with stanchion and concrete pad, UPS, backfill, compaction, and asphalt replacement.	1	LS	\$6,000.00	\$6,000.00	\$59,100.00	\$59,100.00

Irvine Ranch Water District Bid Summary For  
 Michelson Water Recycling Plant Security Fencing  
 PR 07824

				Engineer's Estimate		4 SS Mechanical Construction Corp. Mission Viejo, CA	
Item No.	Description	Qty	Uni	Unit	Total	Unit	Total
				Price	Amount	Price	Amount
12	Integration of Gate 14 with existing Hirsch access system by approved integrator including local Hirsch control panel, wiring, installation of District provided radio, dual scramble pads, automated vehicle ID equipment, Maglocks, and Knox switch.	1	LS	\$6,000.00	\$6,000.00	\$23,000.00	\$23,000.00
13	Coat Existing Rolling Gate 1 Per IRWD Std. Specification 09900 Coating System C-2.	1	LS	\$1,000.00	\$1,000.00	\$5,600.00	\$5,600.00
14	Operation & Maintenance Manuals	1	LS	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
15	Final Record Drawings	1	LS	\$500.00	\$500.00	\$500.00	\$500.00
Subtotal, Base Bid Items						\$133,750.00	\$563,426.00
A-11	Alternative Electrical work at Gate 14 to provide a complete working motorized gate system, including saw cutting, trenching, backfill, compaction, conduit, wiring, circuit breakers, pull boxes, junction boxes, and asphalt replacement to connect motor operators with existing power feed panel. Provide and install approximately 230 linear feet of 1-1/2 inch PVC coated steel conduit from Gate 14 to the existing pull box at Gate 1. This alternative item replaces Bid Item 11.	1	LS	\$25,000.00	\$25,000.00		\$94,540.00
A-12	Alternative Integration of Gate 14 with existing Hirsch access system by approved integrator including installation of Hirsch control panel in building 10, wiring of dual scramble pads, card readers, long range reader, Knox switch, and Maglocks. This alternative item replaces Bid Item 12.	1	LS	\$10,000.00	\$10,000.00		\$36,525.00
Subtotal, Additive/Deductive Bid Items						\$35,000.00	\$131,065.00
Subtotal, Base Bid Items and Additive/Deductive Bid Items						\$168,750.00	\$694,491.00
Adjustment (+ or -)							
<b>TOTAL AMOUNT OF BID</b>						<b>\$168,750.00</b>	<b>\$694,491.00</b>
<b>NOTES:</b>				<b>Item</b>		<b>Manufacturers:</b>	
1 - Pacific Hydrotech Corporation's Bid Total Submitted was \$448,680.00 - modified Bid Total due to mathematical error on Bid Item No. 4.				Fencing		Ameristar Fence	
				Gate Operator		LiftMaster or Equal	
2 - GCI Construction's Bid Total Submitted was \$487,780.00 - Bid Total was modified due to mathematical error on Subtotal of Base Bid Items.				Long Range Vehicle ID Reader		Engineered Parking Systems	
3 - SS Mechanical Construction Corp's Bid Total Submitted was \$699,491.00 - Bid Total modified due to mathematical error on Subtotal of Additive/Deductive Bid Items.						<b>Subcontractors:</b>	
						Integration: Enterprise Security, Inc.	
						Electrical: C-G Systems, Inc.	
						Fence/Gate: C-G Systems, Inc.	
						Paving: Regan Paving	

December 11, 2017

Prepared by: H. Cho/M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *PAW*

## CONSENT CALENDAR

### RECYCLED WATER RESERVOIR FILTRATION BUDGET ADDITION

#### SUMMARY:

The Recycled Water Reservoir Filtration project will analyze the water at San Joaquin Reservoir, Rattlesnake Reservoir, and Oso Reservoir and will recommend a filtration system for water discharged from each reservoir. Staff recommends that the Board authorize the addition of Project 10436 in the amount of \$134,200 to the FY 2017-18 Capital Budget for the Recycled Water Reservoir Filtration.

#### BACKGROUND:

Dual-plumbed buildings, cooling towers, and advances in irrigation technology are creating an increased demand for higher quality nonpotable water. Recently, the City of Lake Forest reported that the Lake Forest Sports Complex irrigation filtration systems are clogging at an unacceptably high rate, particularly in the summer. Staff has also received reports regarding several dual-plumbed buildings in which the filters on the buildings' recycled water pipes are also clogging at high rates. Staff believes the cause is due to unfiltered water from open reservoirs. Dudek is currently evaluating operational alternatives to improve the recycled water quality in the Lake Forest Zone C system, where Santa Margarita Water District's Oso Reservoir is a source of supply. Potential alternatives include closing the interconnection to Santa Margarita Water District and operating the system as a "closed loop" system or installing filtration units on the distribution line from Oso Reservoir.

This project will analyze the water at San Joaquin, Rattlesnake and Oso Reservoirs to determine the water quality and recommend a filtration system for each reservoir. Although Rattlesnake Reservoir currently has a strainer system in place, it will be included in the study to confirm the system's level of effectiveness and whether improvements are needed to meet the increased requirements of modern irrigation systems. Syphon Reservoir will not be included in the study as the existing discharge equipment, including Hellan strainers, are temporary facilities that will be replaced when the reservoir is ultimately expanded.

Staff has solicited a proposal from PACE Engineering for the water analysis and filtration option recommendations. Staff anticipates PACE's start of work in December 2017, with completion in April 2018.

#### FISCAL IMPACTS:

Project 10436 is not included in the FY 2017-18 Capital Budget. Staff requests the addition of Project 10436 to the FY 2017-18 Capital Budget as shown in the following table. Funding will be provided from the Regional Capital Cost Allocations for Recycled Water.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10436	\$ -0-	\$134,200	\$134,200

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations Title 14, Chapter 3, Section 15004, the appropriate environmental document will be prepared when "meaningful information" becomes available.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on December 5, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF PROJECT 10436 IN THE AMOUNT OF \$134,200 TO THE FY 2017-18 CAPITAL BUDGET FOR THE RECYCLED WATER RESERVOIR FILTRATION, PROJECT 10436.

LIST OF EXHIBITS:

None.

December 11, 2017

Prepared by: K. Lew

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *PA Cook*

## CONSENT CALENDAR

### PLANNING AREA 6 (PORTOLA SPRINGS) NEIGHBORHOOD 5B AND 5C CAPITAL IMPROVEMENTS

#### SUMMARY:

Irvine Community Development Company (ICDC) is continuing with the Planning Area 6 (Portola Springs) development including backbone improvements for Neighborhood 5B and 5C. As part of its development, ICDC will design and construct IRWD's recycled water capital facilities under an existing Supplemental Reimbursement Agreement (SRA). Staff recommends that the Board authorize the addition of the Neighborhood 5B and 5C Recycled Water Improvements projects to the FY 2017-18 Capital Budget in the amounts of \$640,000 and \$81,000, respectively.

#### BACKGROUND:

IRWD and ICDC have had a Reimbursement Agreement (RA) for design and construction of IRWD capital facilities in place since May 1997. Under this RA, an SRA serves to define the improvements to be designed and constructed within a specific planning area as well as the estimated reimbursable costs.

An SRA was previously approved in April 2004 for all IRWD capital facilities within Planning Area 6. All required IRWD capital improvements are documented in the Planning Area 6 Sub-Area Master Plan Update, dated September 2017. The improvements are shown in Exhibit "A".

Neighborhood 5B and 5C Improvements include construction of approximately 6,000 feet of 6- to 10-inch recycled water pipeline. ICDC received design proposals from three consultants including Wilson Mikami Corporation, Stantec Consulting Services, and ProActive Engineering. The proposals ranged from \$30,000 to \$52,000. ICDC selected Wilson Mikami to complete the Enclave 3 Improvements design plans for the proposed cost of \$30,000. IRWD concurs with their selection. Construction is anticipated to begin in early spring 2018.

#### FISCAL IMPACTS:

Staff requests the addition of Projects 10100 and 10426 to the FY 2017-18 Capital Budget as shown in the table below.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10100	\$ 0	\$ 640,000	\$ 640,000
10426	\$ 0	\$ 81,000	\$ 81,000
Total	\$ 0	\$ 721,000	\$ 721,000

ENVIRONMENTAL COMPLIANCE:

The construction of the capital facilities for Planning Area 6 is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 7, an Environmental Impact Report, SCH#2001051010, was certified by the lead agency, the City of Irvine, on June 3, 2004.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on December 5, 2017.

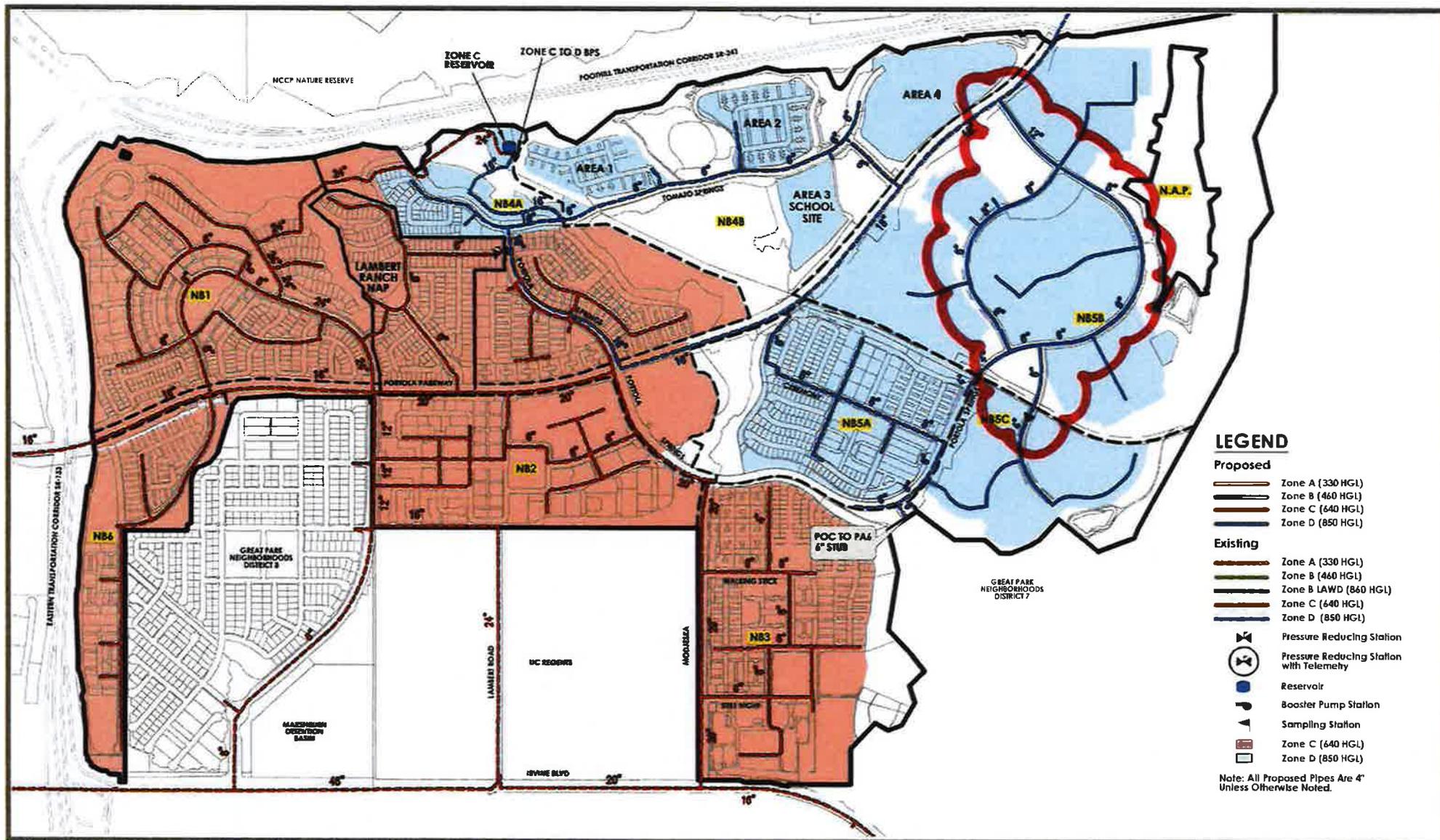
RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF PLANNING AREA 6 NEIGHBORHOOD 5B AND 5C IMPROVEMENTS, PROJECTS 10100 AND 10426, TO THE FY 2017-18 CAPITAL BUDGET IN THE AMOUNTS OF \$640,000 AND \$81,000, RESPECTIVELY, FOR THE DESIGN AND CONSTRUCTION OF RECYCLED WATER IMPROVEMENTS UNDER AN EXISTING SUPPLEMENTAL REIMBURSEMENT AGREEMENT WITH THE IRVINE COMMUNITY DEVELOPMENT COMPANY FOR PLANNING AREA 6 (PORTOLA SPRINGS).

LIST OF EXHIBITS:

Exhibit "A" – Project Location Map

# EXHIBIT "A"



PLANNING AREA 6 SAMPADDENDUM NO. 1  
NONPOTABLE WATER SYSTEM FACILITIES

FIGURE 5-1

December 11, 2017

Prepared by: B. Rios/K. Lew

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

Approved by: Paul A. Cook *PAC*

## CONSENT CALENDAR

### TUSTIN LEGACY MOFFETT DRIVE AND LEGACY ROAD CAPITAL FACILITIES

#### SUMMARY:

The City of Tustin (City) is proceeding with construction of Moffett Drive and Legacy Road in the Tustin Legacy development which includes the construction of streets, storm drains, domestic water, sewer, and recycled water improvements. As part of the project, the City will construct IRWD capital domestic water and recycled water facilities under an existing Reimbursement Agreement. Staff recommends that the Board:

- Authorize the addition of the Moffett Drive and Legacy Road Capital Domestic Water and Recycled Water Improvements, Projects 10260 and 10261 each in the amount of \$643,000, to the FY 2017-18 Capital Budget; and
- Authorize the General Manager to accept the City's construction contract with Sukut Construction, LLC in the amount of \$758,337 for the Moffett Drive and Legacy Road Capital Domestic Water and Recycled Water Improvements.

#### BACKGROUND:

The City of Tustin is moving forward with construction of Moffett Drive and Legacy Road in the Tustin Legacy development. The Tustin Legacy development is bound by Edinger Avenue to the northeast, Red Hill Avenue to the northwest, Barranca Parkway to the southwest, and Jamboree Road to the southeast. The Project Location Map is shown as Exhibit "A". As part of this development, the City will construct IRWD's domestic and recycled water capital improvements. The required IRWD capital facilities are documented in the Tustin Legacy Sub-Area Master Plan Update as prepared by Michael Baker International dated March 2017.

The design and construction of the IRWD capital facilities for the Moffett Drive and Legacy Road within the Tustin Legacy development will be performed under the terms of an existing Reimbursement Agreement between IRWD and the City.

The Moffett Drive and Legacy Road Capital Domestic Water and Recycled Water Improvements project consists of installing approximately 1,000 feet of 16-inch domestic water pipeline, 3,600 feet of 12-inch domestic water pipeline, 900 feet of 16-inch recycled water pipeline and 3,300 feet of 12-inch recycled water pipeline. The City retained Hunsaker and Associates to prepare the Moffett Drive and Legacy Road Capital Domestic Water and Recycled Water Improvements plans and received bids from nine contractors for the construction of the project. Sukut Construction, LLC, was the lowest bidder for both the overall project and for the IRWD portion of the work. Sukut's bid for the IRWD Capital Improvements portion was in the amount of \$758,337, as shown in Exhibit "B". Bids for IRWD's portion of the work ranged from \$758,337 to \$1,299,422. Staff has reviewed the construction bids and concurs with awarding the contract to Sukut Construction, LLC. In addition, the City has received consultant proposals for geotechnical observation and testing, and construction support services. Staff has reviewed the

consultant proposals and found the amounts to be acceptable. Proposals for field archeological and paleontological monitoring were not necessary because those costs were included as a part of the previously approved improvements. CNC Engineering will provide construction surveying services under a separate Professional Services Agreement with IRWD.

A summary of the Moffett Drive and Legacy Road Improvement costs is shown below.

Design (Hunsaker)	\$ 16,400.00
Construction (Sukut)	\$758,337.00
Geotechnical Services (NMG)	\$ 36,410.00
Construction Engineering/Surveying (Hunsaker)	\$ 13,000.00
Construction Surveying Services (CNC)	\$ 22,220.00
City of Tustin Administration Fee (4%)	<u>\$ 30,333.48</u>
	\$876,700.48

FISCAL IMPACTS:

Staff requests the addition of the Moffett Drive and Legacy Road Capital Domestic Water and Recycled Water Improvements, Projects 10260 and 10261 each in the amount of \$643,000, to the FY 2017-18 Capital Budget as shown in the following table.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10260	\$ -0-	\$ 643,000	\$ 643,000
10261	\$ -0-	\$ 643,000	\$ 643,000
Total	\$ -0-	\$1,286,000	\$1,286,000

ENVIRONMENTAL COMPLIANCE:

This project is subject to CEQA and is in conformance with the California Code of Regulations Title 14, Chapter 3, Article 7. A Joint Environmental Impact Statement/Environmental Impact Report was certified by the City of Tustin and the Department of the Navy on January 3, 2000 (SCH 1982040906).

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on December 5, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF THE MOFFETT DRIVE AND LEGACY ROAD CAPITAL DOMESTIC WATER AND RECYCLED WATER IMPROVEMENTS, PROJECTS 10260 AND 10261 EACH IN THE AMOUNT OF \$643,000, TO THE FY 2017-18 CAPITAL BUDGET; AND AUTHORIZE THE GENERAL MANAGER TO ACCEPT THE CITY OF TUSTIN'S CONSTRUCTION CONTRACT WITH SUKUT CONSTRUCTION, LLC IN THE AMOUNT OF \$758,337 FOR THE MOFFETT DRIVE AND

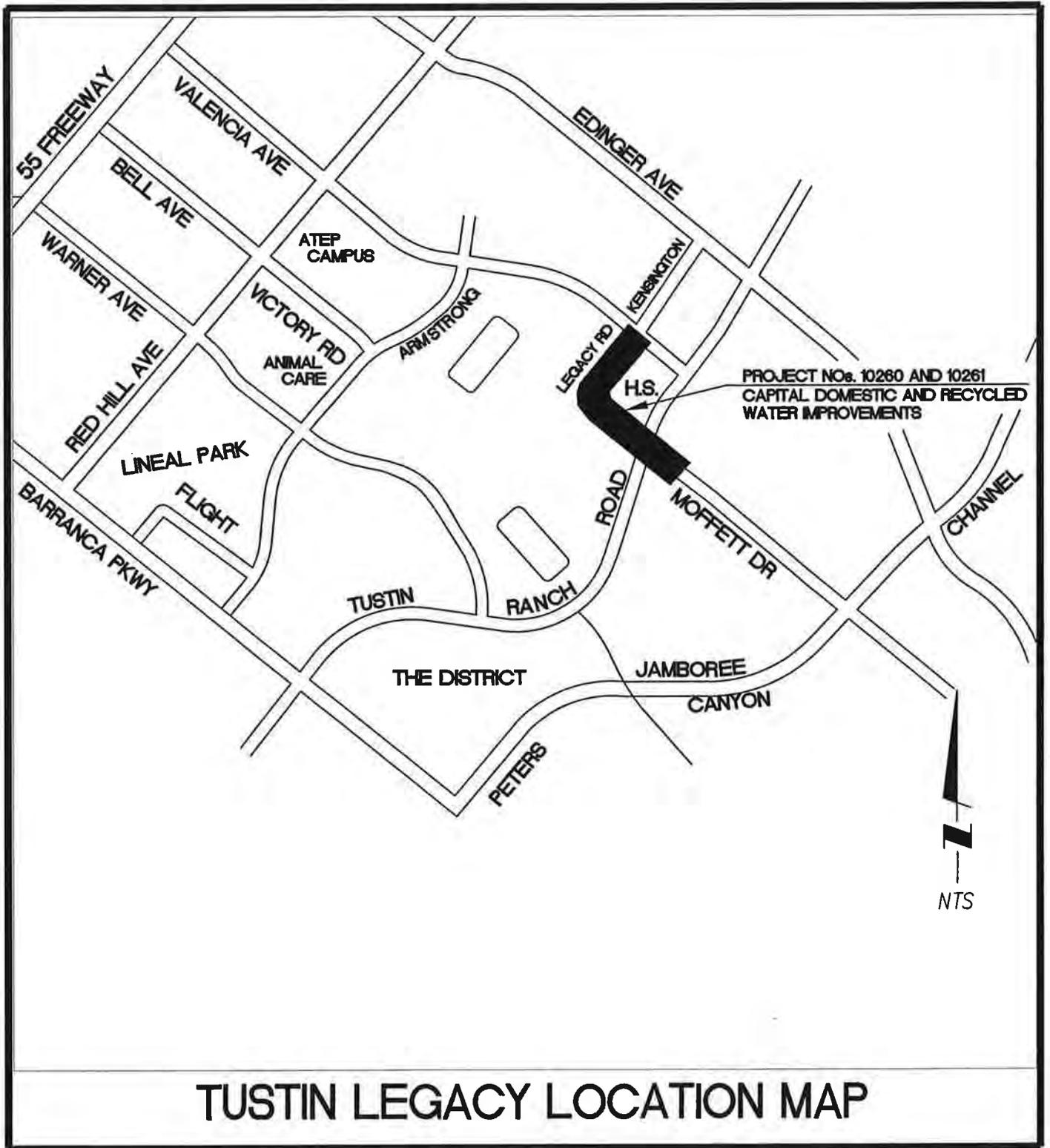
LEGACY ROAD CAPITAL DOMESTIC WATER AND RECYCLED WATER  
IMPROVEMENTS, PROJECTS 10260 AND 10261.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Bid Summary, Moffett Drive and Legacy Road

EXHIBIT "A"



TUSTIN LEGACY LOCATION MAP

# EXHIBIT "B"

Bid Opening : 10:00 A.M., August 29, 2017

ITEM NO.	CONTRACT ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	Sukut Construction, LLC		KEC Engineering		Boudreau Pipeline Corporation		PALP Inc. dba Excel Paving		USS Cal Builders		Sully-Miller Contracting Co		R.J. Noble Company		GBC Engineering, Inc.		All American Asphalt	
				UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE
1	Mobilization	1	LS	\$ 275,000.00	\$ 275,000.00	50,000.00	50,000.00	119,000.00	119,000.00	227,000.00	227,000.00	702,000.00	702,000.00	250,000.00	250,000.00	255,000.00	255,000.00	425,000.00	425,000.00	59,000.00	59,000.00
2	Construction Survey, Staking and Survey Monument Preservation	1	LS	\$ 56,000.00	\$ 56,000.00	105,000.00	105,000.00	95,000.00	95,000.00	167,000.00	167,000.00	55,000.00	55,000.00	100,000.00	100,000.00	95,000.00	95,000.00	30,000.00	30,000.00	94,000.00	94,000.00
3	Develop Construction Water	1	LS	\$ 30,000.00	\$ 30,000.00	5,000.00	5,000.00	12,100.00	12,100.00	12,100.00	12,100.00	32,000.00	32,000.00	10,000.00	10,000.00	18,000.00	18,000.00	39,000.00	39,000.00	45,000.00	45,000.00
4	SWPPP BMPs and WQMP Implementation (Entire Site)	1	LS	\$ 180,000.00	\$ 180,000.00	50,000.00	50,000.00	43,000.00	43,000.00	50,000.00	50,000.00	25,000.00	25,000.00	75,000.00	75,000.00	59,000.00	59,000.00	47,500.00	47,500.00	110,000.00	110,000.00
5	Traffic Control	1	LS	\$ 86,000.00	\$ 86,000.00	50,000.00	50,000.00	83,000.00	83,000.00	70,000.00	70,000.00	30,000.00	30,000.00	17,400.00	17,400.00	54,000.00	54,000.00	50,750.00	50,750.00	406,700.00	406,700.00
6	Protect Existing Monitoring Wells	1	LS	\$ 1,700.00	\$ 1,700.00	5,500.00	5,500.00	12,800.00	12,800.00	12,800.00	12,800.00	5,000.00	5,000.00	40,000.00	40,000.00	2,625.00	2,625.00	1,500.00	1,500.00	17,800.00	17,800.00
<b>Total</b>					<b>\$ 698,700.00</b>	<b>255,500.00</b>	<b>255,500.00</b>	<b>364,800.00</b>	<b>364,800.00</b>	<b>558,000.00</b>	<b>558,000.00</b>	<b>627,000.00</b>	<b>627,000.00</b>	<b>504,400.00</b>	<b>504,400.00</b>	<b>558,625.00</b>	<b>558,625.00</b>	<b>628,250.00</b>	<b>628,250.00</b>	<b>748,500.00</b>	<b>748,500.00</b>
Street Improvements																					
7	Asphalt Rubber Hull Mix Surface Course (ARHM-GG PG 64-16, 1/2")	4,400	TON	\$ 635.00	\$ 2,795,200.00	86.00	378,400.00	82.00	360,800.00	80.00	352,000.00	81.62	359,128.00	91.00	400,400.00	71.00	312,400.00	85.00	378,400.00	78.50	345,400.00
8	Asphalt Concrete Base Course (Type II, B2-PC64-10-RG, 3/4")	11,200	TON	\$ 62.00	\$ 694,400.00	66.00	739,200.00	63.00	705,600.00	63.00	705,600.00	62.54	700,488.00	71.00	795,200.00	64.00	604,800.00	67.50	756,000.00	64.00	716,800.00
9	Unbound Base	24,300	TON	\$ 13.05	\$ 317,115.00	21.00	510,300.00	19.00	465,500.00	19.00	465,500.00	17.00	413,100.00	15.00	364,500.00	15.00	364,500.00	19.00	465,000.00	18.00	437,400.00
10	8" Cut and Gutter, Type "A-Z" per City of Tustin Std. No. 201	6,500	LF	\$ 23.00	\$ 149,500.00	26.50	172,700.00	22.00	143,000.00	26.00	150,600.00	25.50	152,550.00	24.00	149,600.00	21.00	146,600.00	21.00	146,600.00	20.40	133,008.00
11	8" Cut and Gutter, Type "K" per City of Tustin Std. No. 201	2,500	LF	\$ 23.00	\$ 57,500.00	22.00	55,400.00	20.00	50,800.00	20.00	46,000.00	20.00	46,000.00	20.00	46,000.00	20.00	46,000.00	20.00	46,000.00	19.00	47,500.00
12	8" Cut and Gutter, Type "D" per City of Tustin Std. No. 201	1,500	LF	\$ 23.00	\$ 34,500.00	23.25	35,875.00	20.00	30,000.00	20.00	30,000.00	20.00	30,000.00	20.00	30,000.00	20.00	30,000.00	20.00	30,000.00	19.00	28,500.00
13	Curb Ramp per City of Tustin Std. No. 211	12	EA	\$ 1,170.00	\$ 14,040.00	4,300.00	5,160.00	2,500.00	3,000.00	2,600.00	3,120.00	1,500.00	1,800.00	3,000.00	3,600.00	2,800.00	3,360.00	1,975.00	2,370.00	3,300.00	3,960.00
14	Local Depression (L=7) per City of Tustin Std. No. 304	10	EA	\$ 840.00	\$ 8,400.00	1,550.00	15,500.00	750.00	7,500.00	1,900.00	19,000.00	500.00	5,000.00	1,500.00	15,000.00	1,050.00	10,500.00	2,900.00	29,000.00	840.00	8,400.00
15	Local Depression (L=10) per City of Tustin Std. No. 304	4	EA	\$ 840.00	\$ 3,360.00	1,500.00	6,000.00	800.00	3,200.00	2,000.00	8,000.00	500.00	2,000.00	1,500.00	6,000.00	1,575.00	6,300.00	2,900.00	11,600.00	570.00	3,480.00
16	Concrete Median Nose per City of Tustin Std. No. 213	5	EA	\$ 3,560.00	\$ 17,800.00	1,680.00	10,800.00	1,240.00	7,440.00	3,200.00	19,200.00	500.00	3,000.00	6,500.00	39,000.00	2,825.00	14,125.00	4,000.00	20,000.00	6,500.00	32,500.00
17	Medial Concrete Driveway Apron and Depressed Curb per City of Tustin Std. No. 213	5	EA	\$ 1,120.00	\$ 5,600.00	9.10	47,118.00	10.50	54,390.00	13.00	63,600.00	8.00	31,680.00	17.00	86,025.00	10.00	51,780.00	8.20	42,456.00	10.50	54,868.80
18	Existing Pavement per Detail on Sheet 3	1,578	SF	\$ 2.00	\$ 3,156.00	2.70	4,252.20	2.00	3,152.00	2.50	3,940.00	4.00	6,304.00	6.00	9,456.00	2.60	4,074.00	2.20	3,468.00	1.80	2,838.00
19	Hot Mix AC Pavement	32,380	SF	\$ 0.40	\$ 12,952.00	0.43	13,923.40	0.42	13,598.40	0.44	14,367.20	0.40	12,952.00	0.75	24,285.00	0.52	16,837.60	0.40	12,952.00	0.50	16,190.00
20	Concrete 0.2 Min. AC Overlay ARHM	32,380	SF	\$ 1.10	\$ 35,618.00	1.30	42,094.00	1.23	39,704.40	1.50	48,570.00	1.22	39,816.00	1.50	48,570.00	1.18	38,090.40	1.35	43,578.00	1.70	54,678.00
21	Remove AC & Base to 2" Depth and Compact Subgrade	188	SF	\$ 93.00	\$ 17,484.00	24.50	4,606.00	28.00	5,284.00	14.00	2,532.00	5.00	900.00	10.00	1,800.00	12.50	2,350.00	35.00	6,575.00	42.00	7,866.00
22	Contract Full Depth AC Base Course in Multiple Lifts - 2" Thick	58	SF	\$ 48.00	\$ 2,784.00	30.00	2,900.00	47.00	2,726.00	42.50	2,465.00	46.84	2,705.12	10.00	480.00	43.00	2,484.00	15.00	8,700.00	105.00	6,069.00
23	Shoulder per City of Tustin Std. No. 202	45,754	SF	\$ 4.90	\$ 224,394.60	3.79	184,126.80	4.50	225,936.00	5.00	248,820.00	4.60	199,968.00	4.50	225,936.00	6.15	306,048.60	5.00	248,820.00	4.80	238,867.20
24	Street Lights, Conduits and Wires	27	EA	\$ 6,000.00	\$ 162,000.00	6,000.00	182,000.00	7,100.00	191,700.00	5,400.00	154,800.00	6,000.00	182,000.00	6,000.00	182,000.00	6,000.00	182,000.00	6,700.00	199,800.00	6,275.00	187,425.00
25	Conduits, Hand Holes, Wire and All Necessary Appurtenances for Electrical Meter Panel for Street Light System	1	LS	\$ 127,000.00	\$ 127,000.00	30,300.00	30,300.00	113,000.00	113,000.00	86,000.00	86,000.00	127,000.00	127,000.00	135,000.00	135,000.00	107,000.00	107,000.00	68,119.00	68,119.00	125,000.00	125,000.00
26	8" PVC Class 200 Pipe Sleeve for Median Impingement	169	LF	\$ 86.00	\$ 14,534.00	99.00	15,681.00	79.00	12,643.00	85.00	14,365.00	83.74	14,250.00	58.00	9,802.00	83.00	14,211.00	15.00	2,400.00	8.00	1,280.00
27	6" PVC Class 200 Pipe Sleeve for Median Impingement	1,007	LF	\$ 15.00	\$ 15,105.00	7.85	7,904.85	15.00	15,105.00	25.00	25,175.00	7.00	7,049.00	7.00	7,049.00	2.00	2,014.00	10.00	10,070.00	31.00	31,217.00
28	Adjust Manhole to Grade	4	EA	\$ 783.00	\$ 3,132.00	1,800.00	7,200.00	1,010.00	4,040.00	1,100.00	4,400.00	500.00	2,000.00	1,000.00	4,000.00	875.00	3,500.00	625.00	3,000.00	300.00	3,600.00
29	Adjust Gate Valve Cover to Grade	3	EA	\$ 763.00	\$ 2,289.00	1,200.00	3,600.00	930.00	2,790.00	690.00	1,950.00	400.00	1,200.00	985.00	2,955.00	1,165.00	3,495.00	715.00	2,145.00	788.00	2,384.00
30	Interlocking Concrete Pavers for Median Nose Paving	4,254	SF	\$ 25.50	\$ 108,481.50	21.00	89,544.00	17.00	72,488.00	29.00	123,666.00	30.00	127,530.00	36.00	153,504.00	22.50	95,940.00	18.50	78,884.00	21.50	91,678.00
31	Interlocking Concrete Pavers for Maintenance Edge Paving	1,051	SF	\$ 28.00	\$ 29,428.00	22.00	23,122.00	17.00	17,867.00	29.00	30,479.00	30.00	31,530.00	52.00	54,852.00	24.00	25,224.00	18.50	19,443.50	18.50	19,443.50
32	8" Cut Only, Type "B-1" per City of Tustin Std. No. 201	661	LF	\$ 22.00	\$ 14,542.00	21.50	14,211.50	31.00	20,481.00	24.00	15,884.00	21.00	13,881.00	22.00	14,642.00	18.00	12,984.00	13.50	8,923.50	11.40	7,536.40
33	Transition from 8" to 8" Cut Base	51	LF	\$ 24.00	\$ 1,224.00	41.10	2,096.10	44.00	2,244.00	25.00	1,275.00	22.00	1,122.00	36.00	1,636.00	21.75	1,109.25	13.50	688.50	100.00	5,100.00
34	Protect Existing Sign	6	EA	\$ 290.00	\$ 1,740.00	320.00	1,920.00	235.00	1,410.00	500.00	3,000.00	300.00	1,800.00	110.00	660.00	260.00	1,560.00	500.00	3,000.00	890.00	5,340.00
35	Install Thermoplastic 1/2" Solid White Limit Line or Crosswalk Marking	1,700	LF	\$ 2.10	\$ 3,570.00	2.30	3,610.00	2.03	3,451.00	2.10	3,570.00	2.10	3,570.00	3.00	5,100.00	2.00	3,400.00	1.80	3,060.00	1.91	3,247.00
36	Install Thermoplastic Lane Line Extension per Detail "B"	600	LF	\$ 1.00	\$ 600.00	1.00	600.00	0.91	726.00	0.95	760.00	0.50	400.00	1.00	800.00	0.89	712.00	0.70	560.00	0.70	560.00
37	Install Thermoplastic Bike Lane Legend per Detail "C"	19	EA	\$ 27.00	\$ 513.00	20.00	540.00	26.00	494.00	27.00	513.00	8.00	216.00	7.00	182.00	25.00	487.50	11.00	297.00	11.00	297.00
38	Install Median Nose Signing per Detail "D"	5	EA	\$ 280.00	\$ 1,400.00	304.00	1,520.00	270.00	1,350.00	280.00	1,400.00	265.00	1,325.00	274.00	1,370.00	1,375.00	1,375.00	265.00	1,325.00	282.00	1,410.00
39	Install Thermoplastic White Lead Line per Detail "E"	855	LF	\$ 1.00	\$ 855.00	1.00	855.00	1.00	855.00	0.95	812.25	0.40	342.00	0.50	427.50	0.89	760.95	0.40	342.00	0.45	3

Bid Opening : 10:00 A.M., August 29, 2017

ITEM NO.	CONTRACT ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	Sukut Construction, LLC 4010 W. Chandler Ave. Santa Ana, CA 92704 714 540 5351		KEC Engineering 200 N. Sherman Ave. Corona, CA 92682 951 493 7300		Boudreau Pipeline Corporation 463 N. Smith Ave. Corona, CA 92680 951 493 6780		PALP Inc. dba Excel Paving 2230 Lemon Ave. Long Beach, CA 90806 562 599 5841		USS Cal Builders 8051 Main St Stanton, CA 90680 714 828 4882		Sully-Miller Contracting Co. 135 S. State College Blvd #400 Brea, CA 92821 714 578 9600		R.J. Noble Company 15505 E. Lincoln Ave. Orange, CA 92665 714 637 1500		GMC Engineering, Inc. 1401 Warner Ave., Ste #B Tustin, CA 92780 714 247 1040		All American Asphalt 400 East Sixth St Corona, CA 92679 951 736 7800	
				UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE
85	Bio Clean Modular Wetland System, (4 x 8) with 8" PVC SDR 35	2	EA	\$21,453.00	\$42,906.00	24,930.00	49,860.00	21,800.00	43,600.00	22,200.00	44,400.00	26,500.00	53,000.00	23,000.00	46,000.00	32,550.00	65,100.00	27,500.00	55,000.00	33,000.00	66,000.00
86	Bio Clean Modular Wetland System, (4 x 8) with 8" PVC SDR 35	4	EA	\$30,885.00	\$123,540.00	34,000.00	136,000.00	28,200.00	112,800.00	27,000.00	108,000.00	32,200.00	128,800.00	35,000.00	140,000.00	42,000.00	168,000.00	36,500.00	146,000.00	42,500.00	170,000.00
81	Bio Clean Modular Wetland System, (4 x 13) with 8" PVC SDR 35	1	EA	\$38,300.00	\$38,300.00	41,000.00	287,000.00	35,700.00	249,900.00	35,000.00	245,000.00	40,000.00	280,000.00	45,000.00	315,000.00	52,710.00	368,570.00	52,800.00	368,600.00	53,400.00	373,600.00
82	Bio Clean Modular Wetland System, (4 x 15) with 8" PVC SDR 35	1	EA	\$40,800.00	\$40,800.00	42,500.00	42,500.00	40,000.00	40,000.00	37,000.00	37,000.00	41,000.00	41,000.00	41,000.00	41,000.00	54,600.00	54,600.00	55,000.00	55,000.00	55,300.00	55,300.00
84	Bio Clean Modular Wetland System, (4 x 19) with 8" PVC SDR 35	2	EA	\$45,900.00	\$91,800.00	51,300.00	102,600.00	45,400.00	80,800.00	42,700.00	85,400.00	46,000.00	92,000.00	50,000.00	100,000.00	63,210.00	126,420.00	62,700.00	125,400.00	84,000.00	168,000.00
<b>Total for Storm Drain Improvements</b>					<b>\$1,432,691.00</b>		<b>1,729,125.00</b>		<b>1,661,303.00</b>		<b>1,538,391.00</b>		<b>1,354,559.00</b>		<b>1,657,305.00</b>		<b>1,999,538.00</b>		<b>2,307,219.36</b>		<b>2,827,136.00</b>
<b>Landscaping and Irrigation</b>																					
85	Remove/Retain/Adjust/Conflict/Remove of Existing Landscaping	1	LS	\$12,000.00	\$12,000.00	12,500.00	12,500.00	15,500.00	15,500.00	169,000.00	169,000.00	5,000.00	5,000.00	10,000.00	10,000.00	11,592.00	11,592.00	16,700.00	16,700.00	4,250.00	4,250.00
86	Irrigation System	1	LS	\$53,400.00	\$53,400.00	61,500.00	61,500.00	53,000.00	53,000.00	55,000.00	55,000.00	49,500.00	49,500.00	55,000.00	55,000.00	51,975.00	51,975.00	40,525.00	40,525.00	35,100.00	35,100.00
87	Landscape Planting	1	LS	\$26,480.00	\$26,480.00	30,500.00	30,500.00	26,100.00	26,100.00	28,000.00	28,000.00	24,500.00	24,500.00	34,000.00	34,000.00	25,725.00	25,725.00	28,330.00	28,330.00	39,400.00	39,400.00
88	Maintenance & Plant Establishment Period (Working Day)	60	WDAY	\$48.00	\$2,880.00	243.00	12,780.00	48.00	2,880.00	50.00	3,000.00	45.00	2,700.00	55.00	3,300.00	47.00	2,820.00	27.00	1,620.00	38.00	2,280.00
<b>Total for Landscape and Irrigation</b>					<b>\$94,900.00</b>		<b>117,280.00</b>		<b>67,480.00</b>		<b>251,000.00</b>		<b>61,700.00</b>		<b>102,300.00</b>		<b>62,112.00</b>		<b>67,175.00</b>		<b>61,830.00</b>
<b>Dry Utility</b>																					
89	7" Conduit (1-1)	279	LF	\$23.00	\$6,417.00	25.00	6,975.00	19.00	5,301.00	29.00	6,417.00	18.00	5,022.00	19.50	5,440.50	18.00	5,022.00	11.25	3,138.75	23.00	6,417.00
90	3" Conduit (1-2)	43	LF	\$23.00	\$989.00	25.00	1,075.00	19.00	817.00	29.00	989.00	18.00	774.00	19.50	838.50	18.00	774.00	11.25	493.75	23.00	989.00
91	3" Conduit (1-3)	804	LF	\$23.00	\$18,492.00	25.00	20,100.00	19.00	15,276.00	29.00	18,492.00	18.00	14,472.00	19.50	15,678.00	18.00	14,472.00	11.25	9,045.00	23.00	18,492.00
92	3" Conduit (1-1)	288	LF	\$31.00	\$8,928.00	35.00	10,980.00	45.00	12,960.00	32.00	9,216.00	45.00	12,960.00	49.00	14,112.00	44.00	12,672.00	13.75	3,960.00	30.00	8,640.00
93	3" Conduit (1-2)	93	LF	\$31.00	\$2,883.00	35.00	3,225.00	45.00	4,185.00	32.00	2,976.00	45.00	4,185.00	49.00	4,575.00	44.00	4,092.00	13.75	1,218.75	29.00	2,697.00
94	3" Conduit (1-3)	155	LF	\$31.00	\$4,805.00	35.00	5,425.00	45.00	6,975.00	32.00	4,960.00	45.00	6,975.00	49.00	7,595.00	44.00	6,820.00	13.75	2,175.00	29.00	4,465.00
95	2.5" Conduit (1-1)	1,201	LF	\$55.00	\$66,055.00	56.00	67,296.00	77.00	92,477.00	52.00	62,452.00	76.00	91,276.00	84.00	100,884.00	75.00	90,075.00	27.85	33,447.85	54.00	64,854.00
96	2.5" Conduit (1-2)	1,411	LF	\$55.00	\$77,605.00	56.00	79,016.00	77.00	108,647.00	52.00	73,372.00	76.00	107,236.00	84.00	116,524.00	75.00	105,825.00	27.85	39,296.35	54.00	76,194.00
97	2.5" Conduit (1-3)	1,338	LF	\$55.00	\$73,590.00	56.00	74,826.00	77.00	103,026.00	52.00	69,576.00	76.00	101,886.00	84.00	112,392.00	75.00	100,350.00	27.85	32,253.50	54.00	72,252.00
98	48" x 54" Pad (1-1)	1	EA	\$2,700.00	\$2,700.00	3,500.00	3,500.00	1,520.00	1,520.00	3,200.00	3,200.00	2,000.00	2,000.00	2,000.00	2,000.00	1,900.00	1,900.00	2,250.00	2,250.00	2,600.00	2,600.00
99	48" x 54" Pad (1-3)	1	EA	\$2,700.00	\$2,700.00	3,500.00	3,500.00	1,520.00	1,520.00	3,200.00	3,200.00	2,000.00	2,000.00	2,000.00	2,000.00	1,900.00	1,900.00	2,250.00	2,250.00	2,600.00	2,600.00
100	8" x 12" x 7" Vault (1-1)	2	EA	\$32,500.00	\$65,000.00	30,000.00	90,000.00	39,500.00	79,000.00	28,000.00	56,000.00	39,000.00	78,000.00	45,000.00	90,000.00	38,850.00	77,700.00	71,950.00	143,900.00	32,000.00	64,000.00
101	8" x 10" x 7" Vault (1-2)	1	EA	\$25,000.00	\$25,000.00	26,700.00	26,700.00	36,300.00	36,300.00	27,000.00	27,000.00	36,000.00	36,000.00	41,000.00	41,000.00	35,700.00	35,700.00	59,425.00	59,425.00	24,500.00	24,500.00
102	8" x 10" x 7" Vault (1-3)	1	EA	\$25,000.00	\$25,000.00	26,700.00	26,700.00	36,300.00	36,300.00	27,000.00	27,000.00	36,000.00	36,000.00	41,000.00	41,000.00	35,700.00	35,700.00	59,425.00	59,425.00	24,500.00	24,500.00
103	17" x 30" x 24" Handhole	3	EA	\$550.00	\$1,650.00	470.00	1,410.00	427.00	1,281.00	435.00	1,305.00	500.00	1,500.00	500.00	1,500.00	420.00	1,260.00	975.00	2,925.00	530.00	1,590.00
<b>Total for Dry Utility</b>					<b>\$382,014.00</b>		<b>389,520.00</b>		<b>506,365.00</b>		<b>368,115.00</b>		<b>500,088.00</b>		<b>557,521.00</b>		<b>494,262.00</b>		<b>400,220.00</b>		<b>374,850.00</b>
<b>IRWD Non-Capital Improvements</b>																					
<b>Domestic Water (IRWD Non-Capital)</b>																					
104	Fire Hydrant w/ 6" Diameter Lateral and 8" Butterfly Valve, CL 150B, FE x PO, Condition 1, per	2	EA	\$9,300.00	\$18,600.00	9,000.00	18,000.00	7,400.00	14,800.00	13,800.00	27,600.00	11,000.00	22,000.00	9,500.00	19,000.00	21,850.00	43,700.00	19,900.00	39,800.00	22,200.00	44,400.00
105	Fire Hydrant w/ 6" Diameter Lateral and 8" Butterfly Valve, CL 150B,	1	EA	\$10,250.00	\$10,250.00	10,000.00	10,000.00	9,600.00	9,600.00	14,100.00	14,100.00	12,000.00	12,000.00	12,000.00	12,000.00	26,150.00	26,150.00	13,200.00	13,200.00	26,500.00	26,500.00
106	8" PVC, CS00, DR 14	342	LF	\$62.00	\$21,204.00	100.00	34,200.00	160.00	54,720.00	72.00	24,624.00	42.00	14,364.00	78.00	26,676.00	86.00	28,412.00	55.00	18,910.00	87.00	29,754.00
107	8" Ecentric Valve, CL 150B, FE x PO, w/ Thrust Block per IRWD Std. Drawing W-7	2	EA	\$2,680.00	\$5,360.00	3,400.00	6,800.00	2,760.00	5,520.00	2,200.00	4,400.00	4,500.00	9,000.00	3,100.00	6,200.00	2,750.00	5,500.00	2,600.00	5,200.00	2,800.00	5,600.00
108	12" x 12" x 8" D I Cul-In Tee, Flanged w/ Flanged Coupling Adapter	1	EA	\$6,232.00	\$6,232.00	2,625.00	2,625.00	4,400.00	4,400.00	3,100.00	3,100.00	6,000.00	6,000.00	9,500.00	9,500.00	14,700.00	14,700.00	6,930.00	6,930.00	14,900.00	14,900.00
109	8" 22.5" D I Bend, PO x PO, w/ Thrust Block per IRWD Std. Drawing W-7	1	EA	\$415.00	\$415.00	1,250.00	1,250.00	440.00	440.00	1,250.00	1,250.00	600.00	600.00	610.00	610.00	340.00	340.00	374.00	374.00	348.00	348.00
110	Temporary Flush-Out Assembly per IRWD Std. Drawing W-12	6	EA	\$1,700.00	\$10,200.00	1,500.00	9,000.00	1,880.00	11,280.00	8,300.00	49,800.00	2,000.00	12,000.00	2,400.00	14,400.00	6,510.00	39,060.00	3,410.00	20,460.00	6,600.00	39,600.00
111	Remove Temporary Flush-Out and Join Existing 8" PVC Domestic	1	EA	\$1,600.00	\$1,600.00	1,500.00	2,950.00	2,950.00	8,900.00	8,900.00	8,000.00	4,300.00	4,300.00	4,300.00	2,415.00	6,600.00	6,500.00	2,500.00	6,500.00	2,500.00	6,500.00
112	Copper Service and Meter Box for Future 2" Meter per IRWD Std. Drawing W-7	1	EA	\$4,000.00	\$4,000.00	5,400.00	5,400.00	3,530.00	3,530.00	7,000.00	7,000.00	4,000.00	4,000.00	3,200.00	3,200.00	3,675.00	3,675.00	6,050.00	6,050.00	3,700.00	3,700.00
113	4" Resilent Wedge Gate Valve, CL 150, Flanged w/ Valve Box per IRWD Std. Drawing W-7	1	EA	\$3,115.00	\$3,115.00	2,300.00	910.00	910.00	1,500.00	3,500.00	3,500.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,210.00	1,210.00	1,300.00	1,300.00
114	4" x 3" D I Eccentric Reducer, FE x PO	1	EA	\$200.00	\$200.00	1,100.00	1,100.00	374.00	374.00	350.00	350.00	750.00	750.00	200.00	200.00	693.00	693.00	100.00	702.00	702.00	702.00
115																					

Bid Opening: 10:00 A.M., August 29, 2017

ITEM NO.	CONTRACT ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	Sukar Construction, LLC		KEC Engineering		Soudra Pipeline Corporation		PALP Inc dba Excel Paving		USS Cal Builders		Sully-Miller Contracting Co		R.J. Noble Company		GMC Engineering, Inc.		All American Asphalt		
				UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE	TOTAL PRICE	UNIT PRICE
146	12" 1125° D I Bend, MJ x MJ, w/ Thrust Block per IRWD Std	1	EA	\$ 570.00	\$ 570.00	1,250.00	1,250.00	894.00	894.00	1,400.00	1,400.00	643.00	643.00	965.00	965.00	735.00	735.00	495.00	495.00	745.00	745.00	
147	12" D I FE x PO Adapter	21	EA	\$ 600.00	\$ 12,600.00	1,125.00	23,625.00	384.00	8,274.00	1,200.00	25,200.00	565.00	11,865.00	520.00	10,920.00	378.00	7,938.00	550.00	11,550.00	382.00	8,022.00	
148	12" x 8" D I Eccentric Reducer, FE x PO	3	EA	\$ 470.00	\$ 1,410.00	1,400.00	4,200.00	685.00	2,055.00	1,200.00	3,600.00	751.00	2,253.00	720.00	2,160.00	463.00	1,449.00	550.00	1,650.00	490.00	1,470.00	
149	2" Air-Vac Assembly, Case 3, per IRWD Std Drawing W-11	3	EA	\$ 4,260.00	\$ 12,780.00	6,400.00	19,200.00	5,130.00	15,390.00	11,000.00	33,000.00	3,316.00	9,948.00	6,900.00	20,700.00	6,510.00	19,530.00	6,710.00	20,130.00	6,600.00	19,800.00	
150	Temporary Flush-Out Assembly per IRWD Std Drawing W-12	2	EA	\$ 2,060.00	\$ 4,120.00	1,950.00	3,900.00	3,220.00	6,440.00	9,000.00	18,000.00	880.00	1,760.00	3,500.00	7,000.00	6,510.00	13,020.00	3,740.00	7,480.00	6,600.00	13,200.00	
151	16" x 12" D I Eccentric Reducer (Softi Flat), FE x PO	1	EA	\$ 680.00	\$ 680.00	1,430.00	1,430.00	1,330.00	1,330.00	1,400.00	1,400.00	1,219.00	1,219.00	1,800.00	1,800.00	1,680.00	1,680.00	825.00	825.00	1,700.00	1,700.00	
152	16" x 12" D I Eccentric Reducer (Invert Flat), Flanged	1	EA	\$ 680.00	\$ 680.00	1,430.00	1,430.00	590.00	590.00	1,400.00	1,400.00	911.00	911.00	1,200.00	1,200.00	2,205.00	2,205.00	825.00	825.00	2,250.00	2,250.00	
153	16" PVC, CS05, DR 18	1,084	LF	\$ 69.00	\$ 74,796.00	105.00	113,820.00	134.00	145,256.00	95.00	102,960.00	42.00	45,528.00	120.00	130,260.00	109.00	116,196.00	87.00	94,308.00	111.00	120,324.00	
154	16" Butterfly Valve, CL 150B, Flanged, Valve Box per IRWD Std	1	EA	\$ 5,400.00	\$ 5,400.00	5,900.00	5,900.00	4,600.00	4,600.00	4,500.00	4,500.00	259.00	259.00	5,700.00	5,700.00	10,710.00	10,710.00	6,380.00	6,380.00	10,900.00	10,900.00	
155	16" x 16" x 8" D I Cut-In Tee, Flanged, w/ Thrust Block per IRWD	1	EA	\$ 5,750.00	\$ 5,750.00	1,700.00	1,700.00	6,360.00	6,360.00	2,400.00	2,400.00	4,102.00	4,102.00	10,000.00	10,000.00	12,235.00	12,235.00	950.00	950.00	12,400.00	12,400.00	
156	16" D I FE x PO Adapter	2	EA	\$ 645.00	\$ 1,290.00	1,325.00	2,650.00	680.00	1,360.00	1,400.00	2,800.00	677.00	1,354.00	1,200.00	2,400.00	3,675.00	7,350.00	825.00	1,650.00	3,700.00	7,400.00	
157	16" 225° D I Bend, FE x MJ, w/ Thrust Block Per IRWD Std	1	EA	\$ 1,300.00	\$ 1,300.00	1,900.00	1,900.00	1,330.00	1,330.00	2,000.00	2,000.00	1,477.00	1,477.00	2,000.00	2,000.00	3,675.00	3,675.00	1,320.00	1,320.00	3,700.00	3,700.00	
158	16" 225° D I Bend, MJ x MJ, w/ Thrust Block per IRWD Std	1	EA	\$ 925.00	\$ 925.00	1,325.00	1,325.00	1,070.00	1,070.00	1,700.00	1,700.00	965.00	965.00	1,500.00	1,500.00	3,675.00	3,675.00	880.00	880.00	3,700.00	3,700.00	
159	16" 1125° D I Bend, PO x FE, w/ Thrust Block per IRWD Std	1	EA	\$ 1,100.00	\$ 1,100.00	1,700.00	1,700.00	960.00	960.00	1,700.00	1,700.00	1,219.00	1,219.00	1,400.00	1,400.00	3,675.00	3,675.00	990.00	990.00	3,700.00	3,700.00	
<b>Recycled Water (IRWD Capital)</b>																						
160	12" PVC (Purple), CS02, DR14	3,420	LF	\$ 56.00	\$ 191,520.00	62.00	212,400.00	77.00	263,340.00	78.00	266,760.00	29.00	99,160.00	90.00	307,800.00	100.00	342,000.00	71.50	244,530.00	102.00	348,840.00	
161	12" Butterfly Valve, CL 150B, Flanged, Valve Box per IRWD Std	6	EA	\$ 3,550.00	\$ 21,300.00	4,100.00	24,600.00	3,230.00	19,380.00	2,800.00	16,800.00	2,510.00	15,060.00	3,800.00	22,800.00	3,300.00	20,100.00	3,850.00	23,100.00	3,400.00	20,400.00	
162	16" x 16" x 16" D I Cross, Flanged, w/ Thrust Block per IRWD	1	EA	\$ 2,100.00	\$ 2,100.00	2,100.00	2,100.00	4,460.00	4,460.00	2,800.00	2,800.00	1,362.00	1,362.00	3,300.00	3,300.00	3,465.00	3,465.00	1,540.00	1,540.00	3,500.00	3,500.00	
163	12" x 12" x 12" x 12" D I Cross, Flanged, w/ Thrust Block per IRWD	1	EA	\$ 1,400.00	\$ 1,400.00	1,625.00	1,625.00	910.00	910.00	2,300.00	2,300.00	891.00	891.00	2,200.00	2,200.00	861.00	861.00	680.00	680.00	870.00	870.00	
164	12" x 12" x 4" D I Tee, Flanged, w/ Thrust Block per IRWD	1	EA	\$ 1,125.00	\$ 1,125.00	1,400.00	1,400.00	480.00	480.00	1,300.00	1,300.00	673.00	673.00	800.00	800.00	472.00	472.00	625.00	625.00	478.00	478.00	
165	6" x 6" x 6" D I Cut-In Tee, Flanged, w/ Flanged Coupling Adapter &	1	EA	\$ 1,830.00	\$ 1,830.00	2,300.00	2,300.00	3,200.00	3,200.00	3,000.00	3,000.00	1,635.00	1,635.00	5,700.00	5,700.00	6,510.00	6,510.00	1,650.00	1,650.00	6,800.00	6,800.00	
166	16" x 12" D I Eccentric Reducer (Softi Flat), FE x FE	1	EA	\$ 815.00	\$ 815.00	1,550.00	1,550.00	850.00	850.00	1,467.00	1,467.00	911.00	911.00	1,300.00	1,300.00	2,205.00	2,205.00	990.00	990.00	2,250.00	2,250.00	
167	12" D I FE x PO Adapter	7	EA	\$ 1,185.00	\$ 8,295.00	1,950.00	13,650.00	750.00	5,250.00	750.00	5,250.00	5,250.00	827.00	5,789.00	875.00	6,125.00	1,965.00	13,755.00	1,430.00	10,010.00	2,050.00	14,460.00
168	12" D I FE x PO Adapter	7	EA	\$ 425.00	\$ 2,975.00	940.00	6,580.00	640.00	4,480.00	1,400.00	9,800.00	617.00	4,319.00	750.00	5,250.00	3,000.00	2,100.00	2,940.00	465.00	3,255.00	745.00	5,240.00
169	12" 225° D I Bend, MJ x MJ, w/ Thrust Block per IRWD Std	4	EA	\$ 575.00	\$ 2,300.00	1,250.00	5,000.00	640.00	2,560.00	1,200.00	4,800.00	453.00	1,812.00	575.00	2,300.00	661.50	2,646.00	330.00	1,320.00	670.00	2,680.00	
170	12" 225° D I Bend, PO x PO, w/ Thrust Block per IRWD Std	1	EA	\$ 450.00	\$ 450.00	1,120.00	1,120.00	1,330.00	1,330.00	534.00	534.00	1,700.00	1,700.00	468.00	468.00	730.00	730.00	735.00	735.00	550.00	550.00	
171	12" 1125° D I Bend, FE x PO, w/ Thrust Block per IRWD Std	1	EA	\$ 632.00	\$ 632.00	1,300.00	1,300.00	534.00	534.00	1,700.00	1,700.00	468.00	468.00	730.00	730.00	735.00	735.00	550.00	550.00	615.00	615.00	
172	12" 1125° D I Bend, PO x PO, w/ Thrust Block per IRWD Std	4	EA	\$ 445.00	\$ 1,780.00	1,120.00	4,480.00	374.00	1,496.00	2,300.00	9,200.00	450.00	1,800.00	521.00	2,084.00	595.00	2,380.00	330.00	1,320.00	615.00	2,445.00	
173	6" Butterfly Valve, CL 150B, Flanged, Valve Box per IRWD Std	4	EA	\$ 1,950.00	\$ 7,800.00	2,850.00	11,400.00	1,750.00	7,000.00	1,700.00	6,800.00	1,908.00	7,632.00	2,900.00	11,600.00	1,315.00	5,260.00	2,200.00	8,800.00	1,300.00	5,200.00	
174	2" Air-Vac Assembly, Case 1, per IRWD Std Drawing W-11	3	EA	\$ 4,400.00	\$ 13,200.00	6,500.00	19,500.00	5,240.00	15,720.00	11,000.00	33,000.00	3,348.00	10,044.00	8,500.00	25,500.00	6,405.00	19,215.00	6,820.00	20,460.00	6,500.00	19,500.00	
175	16" PVC (Purple), CS05, DR18	848	LF	\$ 71.00	\$ 60,168.00	85.00	71,800.00	108.00	116,640.00	96.00	91,008.00	42.00	35,816.00	110.00	104,280.00	111.00	105,228.00	91.30	88,552.40	113.00	107,124.00	
176	16" x 16" x 8" D I Tee, Flanged, w/ Thrust Block per IRWD Std	1	EA	\$ 1,450.00	\$ 1,450.00	1,700.00	1,700.00	650.00	650.00	1,700.00	1,700.00	981.00	981.00	1,400.00	1,400.00	3,465.00	3,465.00	1,045.00	1,045.00	3,500.00	3,500.00	
177	16" D I FE x PO Adapter	2	EA	\$ 800.00	\$ 1,600.00	1,450.00	2,900.00	960.00	1,920.00	1,500.00	3,000.00	878.00	1,756.00	935.00	1,870.00	3,780.00	990.00	1,980.00	3,800.00	7,600.00		
178	16" x 8" D I Eccentric Reducer (Softi Flat), PO x FE	1	EA	\$ 1,444.00	\$ 1,444.00	1,650.00	1,650.00	1,170.00	1,170.00	1,700.00	1,700.00	1,240.00	1,240.00	1,500.00	1,500.00	2,205.00	2,205.00	1,320.00	2,250.00	2,250.00		
179	4" Blow Off Assembly, Case 3, per IRWD Std Drawing W-14	1	EA	\$ 10,225.00	\$ 10,225.00	8,650.00	8,650.00	11,000.00	11,000.00	11,000.00	11,000.00	3,816.00	3,816.00	12,200.00	12,200.00	7,140.00	7,140.00	8,250.00	8,250.00	7,300.00	7,300.00	
180	8" x 4" D I Eccentric Reducer (Invert Flat), PO x FE, w/Thrust Block	1	EA	\$ 145.00	\$ 145.00	920.00	920.00	427.00	427.00	1,200.00	1,200.00	514.00	514.00	315.00	315.00	420.00	420.00	224.50	224.50	425.00	425.00	
181	6" Butterfly Valve, CL 150B, Flanged Valve Box per IRWD Std	1	EA	\$ 1,950.00	\$ 1,950.00	3,000.00	3,000.00	1,760.00	1,760.00	1,800.00	1,800.00	1,910.00	1,910.00	2,900.00	2,900.00	1,335.00	1,335.00	2,310.00	2,310.00	1,400.00	1,400.00	
182	12" x 4" D I Eccentric Reducer, FE x PO	2	EA	\$ 405.00	\$ 810.00	965.00	1,930.00	860.00	1,720.00	1,050.00	2,100.00	597.00	1,194.00	560.00	1,120.00	241.00	482.00	275.00	550.00	240.00	480.00	
183	Remove Temporary Flush-Out & Join Existing 16" PVC Recycled	1	EA	\$ 3,140.00	\$ 3,140.00	3,200.00	3,200.00	3,700.00	3,700.00	9,900.00	9,900.00	807.00	807.00	4,000.00	4,000.00	6,510.00	6,510.00	6,160.00	6,160.00	6,600.00	6,600.00	
184	2" Air-Vac Assembly, Case 1, per IRWD Std Drawing W-11	1	EA	\$ 4,100.00	\$ 4,100.00	6,250.00	6,250.00	5,770.00	5,770.00	10,400.00	10,400.00	3,774.00	3,774.00	7,400.00	7,400.00	6,405.00	6,405.00	6,380.00	6,380.00	6,600.00		

December 11, 2017

Prepared by: A. McNulty

Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook

## CONSENT CALENDAR

### VARIANCE NO. 5 TO SYNERGY COMPANIES AGREEMENT FOR WATER-ENERGY GRANT RELATED CUSTOMER PROGRAMS

#### SUMMARY:

In October 2015, IRWD was awarded a Water-Energy Grant from the California Department of Water Resources (DWR). The grant provides funding for a program that offers customers the opportunity to upgrade their homes with efficient water and energy fixtures. IRWD entered into an agreement with Synergy Companies to install indoor water efficient fixtures for the program. To fully allocate the remaining DWR funds and to continue providing funding for the program, staff recommends the Board authorize the General Manager to execute Variance No. 5 to the District's agreement with Synergy Companies in the amount of \$169,000. IRWD's expenditures through the agreement with Synergy Companies will be reimbursed to IRWD by DWR from the grant funds.

#### BACKGROUND:

In October 2015, DWR awarded a Water-Energy Grant to IRWD in the amount of \$1,932,621 for the development and implementation of a water and energy efficiency device installation program. Upon receiving the grant, IRWD collaborated with Southern California Edison (SCE) and Southern California Gas Company (SoCalGas) to implement a program that provides customers with the opportunity to upgrade their homes with efficient energy and water fixtures. This program is called the "One-Stop Shop for Water and Energy Efficiency Program."

The DWR grant is being used to reimburse IRWD for the cost of installing toilets, showerheads and faucet aerators. Funding for the energy efficient devices is provided by SCE and SoCalGas. All indoor devices are installed under the District's agreement with Synergy Companies, a full-service energy management organization that assists with controlling energy demands. IRWD, SCE and SoCalGas maintain separate contracts with Synergy Companies for the installation of utility-specific devices under the program.

Services for the outdoor portion of the water efficiency program are provided through a separate agreement with a different contractor in the amount of \$200,000. An additional \$30,000 has been spent for marketing of the One-Stop Shop Program.

#### Agreement with Synergy Companies:

In August 2015, IRWD entered into an agreement with Synergy Companies to install water efficient toilets, showerheads and aerators as a pilot program for customers in a small mobile home park in the District's service area. The pilot was successful and the participating customers were satisfied with Synergy's installation work. In January 2017, the second phase of the program began and included installing water efficient fixtures in single-family residences. In July 2017, the third

phase of the program expanded the program to multi-family properties and also included clothes washers. The Agreement for Non-Consultant Services Between IRWD and Synergy Companies is attached as Exhibit "A".

*Previous Variances:*

Variance No. 1 to the agreement with Synergy Companies was executed in October 2016 to extend the program to single-family customers and to accommodate requirements of the DWR grant without increasing costs to the District. Variance No. 2 was approved by the Board in January 2017, which increased the indoor program budget by \$500,000 bringing the total indoor program budget to \$580,000. Variance No. 3 was executed in March 2017 to clarify fixture flow rates without modifying the program budget. Variance No. 4 was executed in July 2017 to increase indoor program funding by \$950,000 bringing the total indoor program budget to \$1,530,000.

*Variance Request:*

Variance No. 5 has been prepared to allocate the remaining \$169,000 in DWR grant funds to the indoor portion of the program. Based on participation rates, the increase in the indoor program budget of \$169,000 will fully expend the remaining grant funds by the end of 2017. Program funding is fully reimbursable through the DWR Water-Energy Grant. Staff recommends that the Board authorize the General Manager to execute Variance No. 5 with Synergy Companies.

FISCAL IMPACTS:

Funding for the One-Stop Shop for Water and Energy Efficiency Program is included in the FY 2017-18 Operating Budget. The District will be fully reimbursed for Synergy Companies' work through the DWR Water-Energy Grant.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on December 5, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 5 TO THE AGREEMENT FOR NON-CONSULTANT SERVICES BETWEEN IRWD AND SYNERGY COMPANIES IN THE AMOUNT OF \$169,000 TO CONTINUE PROVIDING FUNDING FOR THE ONE-STOP SHOP FOR WATER AND ENERGY EFFICIENCY PROGRAM, WHICH WILL BE FULLY REIMBURSED THROUGH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES WATER-ENERGY GRANT.

Consent Calendar: Variance No. 5 To Synergy Companies Agreement for Water-Energy Grant-  
Related Customer Programs  
December 11, 2017  
Page 3

LIST OF EXHIBITS:

Exhibit "A" – Agreement for Non-Consultant Services Between IRWD and Synergy Companies  
Exhibit "B" – Non-Consultant Services Variance No. 5 to the IRWD Agreement with Synergy  
Companies

## EXHIBIT "A"

### AGREEMENT FOR NON-CONSULTANT SERVICES BETWEEN IRVINE RANCH WATER DISTRICT AND SYNERGY COMPANIES

This AGREEMENT FOR NON-CONSULTANT SERVICES ("Agreement") is made and entered into this 10 day of AUGUST, 2015 by and between the IRVINE RANCH WATER DISTRICT, a California Water District formed and existing pursuant to the California Water District Law ("District"), and SYNERGY COMPANIES ("Contractor"), who agree as follows:

**1. Agreement.** The following documents (if applicable) are incorporated into this Agreement by this reference:

Certificate(s) of Insurance, Endorsements and Payment Bond

In the event of conflict between any of the terms and conditions contained in the above-listed documents and any of the terms and conditions contained in this Agreement, the parties agree that the terms and conditions contained in this Agreement will control.

**2. Services.** Subject to the terms and conditions set forth in this Agreement, Contractor agrees to provide District the services described in the Scope of Services, attached hereto as Exhibit 1 ("Services"). Contractor must, at its sole cost and expense, furnish all equipment that may be required for furnishing the Services. Contractor will not be compensated for services outside the scope of the Services as described in Exhibit 1, and in the Contractor's proposal, unless prior to the commencement of such out of scope services: (a) Contractor notifies District and District agrees that such services are out of scope services; (b) Contractor estimates the additional compensation required for such out of scope services; and (c) District, after notice, approves in writing a variance in the form attached hereto as Exhibit 6, specifying such out of scope services and amount of compensation for performing those out of scope services. District does not have any obligations whatsoever under this Agreement and/or any variance unless and until this Agreement and/or any variance is approved by the District's General Manager or authorized designee. Specific authorization to proceed with the Services shall be granted in writing by District. Contractor shall not proceed with the Services unless authorized. If it is specified in the Scope of Services as described in Exhibit 1 that the Services are to be performed in phases as authorized, Contractor shall not proceed with any phase unless it is separately authorized.

**3. Exhibits.** The following exhibits are attached to this Agreement and incorporated into this Agreement by this reference:

- \_\_\_ Exhibit 1 – Scope of Services
- \_\_\_ Exhibit 2 – Fee Schedule (including Schedule of Charges for Services)
- \_\_\_ Exhibit 3 – Insurance Requirements
- \_\_\_ Exhibit 4 – Public Works Requirements
- \_\_\_ Exhibit 5 – Special Provisions
- \_\_\_ Exhibit 6 – Non-consultant Services Variance

**4. Payment.** District must pay Contractor for the Services in the manner specified in Exhibit 2. The payments specified in Exhibit 2 are the only payments to be made to Contractor for the services rendered pursuant to this Agreement unless pursuant to Section 1, above, District approves additional compensation for additional services. Contractor must submit all billings for said services to District in the manner specified in Exhibit 2.

**5. No Guarantee of Compensation for On-Call Services.** If this Agreement is an agreement for “on-call” Services, District makes no guarantee to Contractor as to the amount of Contractor-provided on-call Services will be requested by the District or the amount of compensation that will be provided Contractor pursuant to this Agreement. Under no circumstances, will Contractor or any of its subcontractors be entitled to or compensated for any direct or indirect loss arising from or relating to District’s failure to authorize performance of services under this Agreement. Such direct and indirect loss includes, but is not limited to, loss of expected profits, business overhead, loss of productivity, and loss of opportunity to work on other projects.

**6. Standards of Performance.** Contractor must perform all Services required pursuant to this Agreement in the manner and according to the standards currently observed by a competent practitioner of Contractor’s industry in California. Contractor must prepare all deliverables provided to District pursuant to this Agreement in a professional manner and conform to the standards of quality normally observed by a person currently practicing in Contractor’s industry, and must be provided in accordance with any schedule of performance specified in Exhibit 1. Contractor must assign only competent personnel to perform Services. Contractor must also devote such time and effort to the performance of Services as is necessary for the satisfactory and timely performance of Contractor’s obligations under this Agreement. Neither party will be deemed in default of this Agreement, to the extent that party’s performance is prevented or delayed by any cause, present or future, that is beyond the reasonable control of that party.

**7. Independent Contractor.** It is understood and agreed that Contractor (including Contractor’s employees) is an independent contractor and that no relationship of employer-employee exists between the parties hereto for any purpose whatsoever.

Neither Contractor nor Contractor's assigned personnel shall be entitled to any benefits payable to employees of District. District is not required to make any deductions or withholdings from the compensation payable to Contractor under the provisions of this Agreement. It is further understood and agreed by the parties hereto that Contractor, in the performance of its obligations hereunder, is subject to the control and direction of District as to the designation of tasks to be performed and the results to be accomplished under this Agreement, but not as to the means, methods, or sequence used by Contractor for accomplishing such results. To the extent that Contractor obtains permission to, and does, use District facilities, space, equipment or support services in the performance of this Agreement, this use is at the Contractor's sole discretion based on the Contractor's determination that such use will promote Contractor's efficiency and effectiveness. Except as may be specifically provided elsewhere in this Agreement, the District does not require that Contractor use District facilities, equipment or support services or work in District locations in the performance of this Agreement. If, in the performance of this Agreement, any third persons are employed by Contractor, then Contractor must ensure that such persons are entirely and exclusively under Contractor's direction, supervision, and control.

**8. Contractor Not Agent of District.** Except as District may specify in writing, Contractor and Contractor's personnel do not have authority, express or implied, to act on behalf of District in any capacity whatsoever as an agent. Contractor and Contractor's personnel do not have the authority, express or implied, to bind District to any obligations whatsoever.

**9. Conflicts of Interest.** Contractor covenants that neither it, nor any officer or principal of its firm, has or will acquire any interest, directly or indirectly, that would conflict in any manner with the interests of District or that would in any way hinder Contractor's performance of the Services. Contractor further covenants that in the performance of this Agreement, no person having any such interest will be employed by Contractor as an officer, employee, agent or subcontractor, without the written consent of District. Contractor agrees to avoid conflicts of interest or the appearance of any conflicts of interest with the interests of District at all times during the performance of this Agreement.

**10. Licenses and Permits.** Except for any licenses, permits, or approvals which are expressly provided by the Scope of Services to be obtained by the District, Contractor represents and warrants that Contractor has all licenses, permits, qualifications, and approvals that are legally required for Contractor to provide the Services. Contractor represents and warrants that Contractor will, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement any licenses, permits, and

approvals that are legally required for Contractor to provide the Services. Without limiting the generality of the foregoing, if Contractor is an out-of-state corporation, Contractor warrants and represents that it possesses a valid certificate of qualification to transact business in the State of California issued by the California Secretary of State pursuant to Section 2105 of the California Corporations Code.

**11. Indemnification.** Contractor agrees to defend, hold harmless and indemnify District, its officers and employees, and each and every one of them, from and against any and all actions, damages, costs, liabilities, claims, demands, losses, judgments, penalties, costs and expenses of every type and description, including, but not limited to, any fees and/or costs reasonably attorney fees and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as "Liabilities"), including but not limited to Liabilities arising from personal injury or death, damage to personal, real or intellectual property or the environment, contractual or other economic damages, or regulatory penalties, arising out of or in any way connected with performance of or failure to perform this Agreement by Contractor, any subcontractor or agent, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, whether or not (i) such Liabilities are caused in part by a party indemnified hereunder or (ii) such Liabilities are litigated, settled or reduced to judgment; provided that the foregoing indemnity does not apply to liability for any damage or expense for death or bodily injury to persons or damage to property to the extent arising from the negligence or willful misconduct of District.

**12. Insurance Requirements.** During the entire term of this Agreement, Contractor must maintain the insurance coverage described in Exhibit 3.

**13. Public Works Requirements.** If the Services include "public work" subject to the requirements of the California Labor Code or other applicable statutes (generally, any of the following paid for by the District, with a contract amount of \$1,000 or more: construction work (including inspection and land surveying), alteration work, demolition work, installation work, street or other improvement work, repair work, certain refuse hauling for disposal, and maintenance work other than routine or recurring janitorial or custodial work), Contractor shall comply with the requirements set forth in Exhibit 4, to the extent applicable to any of the Services.

**14. Non-Discrimination.** Contractor represents and warrants that it has and adheres to a policy of equal opportunity non-discrimination, and non-harassment of all persons regardless of race, religion, color, national origin, ancestry, disability, medical condition, marital status, gender, age, veteran status, or sexual orientation. Such policy must be in conformance with applicable State and Federal guidelines including the California

Government Code "Section 12940(h), 12940(i)," and the Federal Equal Opportunity Clause "Section 60-1.4 of Title 41, Part 60 of the Code of Federal Regulations" and must apply to all employment practices including recruitment, candidate selection, training, compensation, promotion, demotion, and recreation. Contractor will designate a specific person responsible for assuring nondiscrimination and non-harassment as provided in the Agreement. That named individual will be responsible for investigating all complaints directed to him/her by District. District will refer complaints in writing, and investigations will be deemed concluded only upon submission of a written investigation report from the Contractor to the District. The scope of such investigations includes not only officers, employees, and agents of the Contractor, but also all subcontractors, subcontractors, material, men, and suppliers of the Contractor. In cases where such investigation results in a finding of discrimination, harassment, or hostile work environment, Contractor must take prompt, effective disciplinary action against the offender. Failure to take appropriate action may be considered a material breach of the Agreement.

**15. Compliance with Laws.** In the performance of this Agreement, Contractor must at all times comply with all applicable governmental laws, statutes, ordinances, rules, codes, regulations, orders and other requirements. Upon the District's request, Contractor must provide the District with documentation demonstrating Contractor's compliance with such governmental requirements. After reasonable notice and under reasonable conditions, Contractor agrees that the District has the right to inspect and copy any records of Contractor regarding such compliance. Contractor represents and warrants that neither Contractor nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any government department or agency.

**16. Term; Suspension; Termination.** This Agreement will become effective on the date that it is approved by both parties, set forth on the first page of the Agreement, and continues in effect until both parties have fully performed their respective obligations under this Agreement, unless sooner terminated as provided herein. District must have the right at any time to temporarily suspend Contractor's performance hereunder, in whole or in part, by giving a written notice of suspension to Contractor. If District gives such notice of suspension, Contractor must immediately suspend its activities under this Agreement, as specified in such notice. District may terminate this Agreement at any time by giving at least 10-days prior written notice of termination to Contractor. If District gives such notice of termination, Contractor must immediately cease rendering Services pursuant to this Agreement. If District terminates this Agreement, Contractor must, no later than five days after such notice of termination, deliver to District all Work Product

prepared pursuant to this Agreement. District must pay Contractor the reasonable value of Services rendered by Contractor prior to termination.

**17. Confidentiality of District Information.** During performance of this Agreement, Contractor may gain access to and use District information regarding personnel, future plans, business affairs, governmental affairs, processes, trade secrets, security of facilities, customer account information, and other sensitive information (hereafter collectively referred to as "District Information"). Contractor agrees to protect all District Information and treat it as strictly confidential, and further agrees not at any time, either directly or indirectly, to divulge, disclose or communicate in any manner any District Information to any third party without the prior written consent of District. A violation by Contractor of this Section is a material violation of this Agreement and must justify legal and/or equitable relief.

**18. Ownership of Work Product.** Contractor agrees that District has full ownership and control, including ownership of any copyrights, of all information prepared, produced, or provided by Contractor pursuant to this Agreement ("Work Product"). Contractor is not responsible for any unauthorized modification or use of such Work Product for other than its intended purpose by District. Contractor agrees to fully defend, indemnify and hold harmless District, its officers and employees, and each and every one of them, from and against any and all claims, actions, lawsuits or other proceedings alleging that all or any part of the information prepared, produced, or provided by Contractor pursuant to this Agreement infringes upon any third party's trademark, trade name, copyright, patent or other intellectual property rights.

**19. California Public Records Act.** All proprietary and other information received from Contractor by District, whether received in connection with Contractor's proposal to District or in connection with any Services performed by Contractor, will be disclosed upon receipt of a request for disclosure, pursuant to the California Public Records Act; provided, however, that, if any information is set apart and clearly marked "trade secret" when it is provided to District, District must give notice to Contractor of any request for the disclosure of such information. The Contractor has five (5) days from the date it receives such notice to enter into an agreement with the District, satisfactory to the District Counsel, providing for the defense of, and complete indemnification and reimbursement for all costs (including plaintiff's attorney fees) incurred by District in any legal action to compel the disclosure of such information under the California Public Records Act. The Contractor has sole responsibility for defense of the actual "trade secret" designation of such information. The failure of Contractor to respond to the notice provided by District constitutes a complete waiver by Contractor of any rights regarding

the information designated "trade secret" by Contractor, and such information will be disclosed by District pursuant to the California Public Records Act.

**20. Severability.** The parties agree that if any portion of this Agreement or the application thereof to any person or circumstance is held invalid or unenforceable, then the remainder of this Agreement will remain effective and is enforceable to the greatest extent permitted by law.

**21. Waiver.** Neither District acceptance of, or payment for, any Service or Additional Service performed by Contractor, nor any waiver by either party of any default, breach or condition precedent, may be construed as a waiver of any provision of this Agreement, nor as a waiver of any other default, breach or condition precedent or any other right hereunder.

**22. Choice of Law and Venue.** The parties agree that this Agreement is to be governed, construed and enforced in accordance with the laws of the State of California. The parties also agree that the venue of any litigation arising out of or connected with this Agreement will lie exclusively in the state trial court or Federal District Court located in Orange County in the State of California, and the parties consent to jurisdiction over their persons and over the subject matter of any such litigation in such courts, and consent to service of process issued by such courts.

**23. No Assignment.** The expertise and experience of Contractor are material considerations for this Agreement. District has a strong interest in the qualifications and capability of the persons and entities who will fulfill the obligations imposed on Contractor under this Agreement. In recognition of this interest, Contractor must not assign any right or obligation pursuant to this Agreement without the written consent of the District. Any attempted or purported assignment without District's written consent is void and of no effect.

**24. Survival of Terms.** The provisions of Section 5, 7, 8, 9, 10, 11, 15, and 17 through 26, survive termination of this Agreement.

**25. Binding Effect.** This Agreement is binding on the heirs, executors, administrators, successors and assigns of the parties.

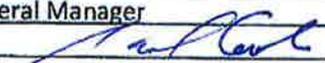
**26. Entire Agreement.** This document, including all Exhibits, contains the entire agreement between the parties and supersedes whatever oral or written understanding they may have had prior to the execution of this Agreement. No alteration to the terms of this Agreement is valid unless approved in the form of a written variance signed by an authorized representative of Contractor and District.

**27. Authority.** The person signing this Agreement for Contractor hereby represents and warrants that he/she is fully authorized to sign this Agreement on behalf of Contractor and to bind Contractor to the performance of its obligations hereunder.

**EXECUTED AS OF THE DATE FIRST STATED ABOVE.**

**IRVINE RANCH WATER DISTRICT**

Approved as to form:

Name: Paul Cook  
Title: General Manager  
Signature: 



**Contractor:**

Name of Firm: Synergy Companies  
Federal I.D. No.: 87-0389611  
State I.D. No.: C2420016

Type of Business Entity (check one):

Individual/Sole Proprietor

Partnership

Corporation (i.e. either corporate president must sign or two corporate officers)

Limited Liability Company

Other (please specify: \_\_\_\_\_)

Name of Firm's Authorized Representative: Steve Shallenberger

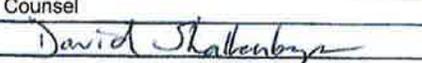
Title: President

Signature: 

***(If the firm is a corporation and its president did not sign above, then another corporate officer must sign below)***

Name of Firm's Authorized Representative: David Shallenberger

Title: Legal Counsel

Signature: 

**EXHIBIT 1  
SCOPE OF SERVICES**

**1. Representatives.**

a. The District Representative for this Agreement is:

Amy McNulty, Water Efficiency Manager  
15600 Sand Canyon Avenue  
Irvine, CA 92618  
(949) 453-5634  
[mcnulty@irwd.com](mailto:mcnulty@irwd.com)

All Contractor questions pertaining to this Agreement must be referred to the District Representative or the District Representative's designee.

b. The Contractor Representative for this Agreement is:

Matthew Clark, Project Director  
90 Business Park Drive  
Perris, CA 92571  
(951) 230-6425  
[matt.clark@synergycompanies.org](mailto:matt.clark@synergycompanies.org)

All District questions pertaining to this Agreement must be referred to the Contractor Representative. All correspondence to Contractor must be addressed to the address set forth on page one of this Agreement. Unless otherwise provided in this Agreement, all correspondence to the District must be addressed to the District Representative.

**2. Scope of Services.**

The scope of services for the Water-Energy Combined Manufactured Homes\_Direct Install Program and One-Stop Shop Program\_will consist of the direct installation of high efficiency toilets, low-flow showerheads, and kitchen and bathroom faucet aerators within the manufactured homes and single-family homes of Irvine Ranch Water District customers. The program will consist of multiple phases depending on customer participation rates. Each phase will have a not-to-exceed amount of \$80,000. Each phase requires separate authorization by the District to proceed. Any additional phases will be considered sequentially, when the prior phase is completed, and the determination to authorize each such phase will be at the District's sole discretion. The District's authorization to proceed with a subsequent phase will include a Notice to Proceed for such phase.

Manufactured Homes Direct Install Program

The Contractor will engage in the following activities to acquire customer participation: manufactured housing clubhouse presentations, direct outreach and customer

enrollment. Clubhouse presentations consist of collaboration with manufactured housing community managers to promote the event through flyers, newsletters and manufactured housing television channels. The presentation will be given by trained presenters with audiovisual slide show and video to educate the attendees and answer questions courteously and thoughtfully. Attendees are encouraged to enroll in the program throughout the presentation.

After the presentation, marketing associates politely contact community residents through door-to-door and phone outreach. Interested residents are educated by the marketing associate, enrolled electronically on the program and given an appointment date and time with reminder card. Contractor will work with IRWD to develop a customer participation form.

Contractor replaces the existing 1.6 gallon per flush (gpf) or greater toilet with a more water efficient model. The existing toilet is also removed from the site and recycled. The contractor installs a 0.8 gpf toilet including the toilet seat, wax ring, seal and hose. If site conditions prohibit the installation of the 0.8 gpf toilet model, IRWD staff will be contacted to approve the installation of the 1.28 gpf model as an alternative.

#### Single-Family One-Stop Shop Program

The Contractor will manage the customer intake process via the program web portal developed by IRWD. The Contractor will be responsible for contacting customers who register via the portal to schedule an on-site appointment to determine customer's eligibility for the direct installation of high efficiency toilets, low-flow showerheads, and kitchen and bathroom faucet aerators within the single-family homes. After performing the installation for qualified customers, the Contractor will leave behind outreach materials for rebates and other programs for additional outdoor direct installation measures as determined by IRWD. The Contractor will provide the names and addresses of customers interested in outdoor measures to IRWD.

The Contractor will replace existing 1.6 gpf or greater toilets with a more water efficient model. The existing toilet is also removed from the site and recycled. The contractor installs a 0.8 gpf toilet including the toilet seat, wax ring, seal and hose. If site conditions prohibit the installation of the 0.8 gpf toilet model, IRWD staff will be contacted to approve the installation of the 1.28 gpf model as an alternative. Showerheads and faucet aerators that do not meet current plumbing code requirements will be replaced with low-flow 1.8 gallon per minute (gpm) or higher efficiency model showerheads, kitchen faucet aerators with 1.5 gpm or higher efficiency model, and bathroom faucet aerators with 0.5 gpm or higher efficiency models. The Contractor will remove the existing showerhead and aerators from the site and recycle if able. The contractor performs post installation tests to ensure the new water efficient toilets, kitchen and bath faucet aerators, and showerheads are functioning properly.

### Multi-Family One-Stop Shop Program

The Contractor will manage the customer intake process via the program web portal developed by IRWD. The Contractor will be responsible for contacting customers who register via the portal to schedule an on-site appointment to determine customer's eligibility for the direct installation of high efficiency toilets, low-flow showerheads, kitchen and bathroom faucet aerators, and at the Districts direction, high efficiency clothes washers within multi-family properties. After performing the installation for qualified customers, the Contractor will leave behind outreach materials for rebates and other programs for additional IRWD programs.

The Contractor will replace existing 1.6 gpf or greater toilets with a more water efficient model. The existing toilet is also removed from the site and recycled. The contractor installs a 0.8 gpf toilet including the toilet seat, wax ring, seal and hose. If site conditions prohibit the installation of the 0.8 gpf toilet model, IRWD staff will be contacted to approve the installation of the 1.28 gpf model as an alternative. Showerheads and faucet aerators that do not meet current plumbing code requirements will be replaced with low-flow 1.8 gallon per minute (gpm) or higher efficiency model showerheads, kitchen faucet aerators with 1.5 gpm or higher efficiency model, and bathroom faucet aerators with 0.5 gpm or higher efficiency models. The Contractor will remove the existing showerhead and aerators from the site and recycle if able. The contractor performs post installation tests to ensure the new water efficient toilets, kitchen and bath faucet aerators, and showerheads are functioning properly. High efficiency clothes washers will be installed at qualifying sites as determined by IRWD.

### Payment

Invoices will be submitted routinely and include information on the customer name, address, old toilet gpf, new toilet gpf, old bath and kitchen faucet aerator gpm, new bath and kitchen faucet aerator gpm, old showerhead gpm, new showerhead gpm, old clothes washer water factor, new clothes washer water factor, quantity of toilets installed, quantity of bath and kitchen faucet aerators installed, quantity of showerheads installed, quantity of clothes washers installed, installation date, customer water account number, and the signed customer participation agreement.

### **3. Time of Performance.**

The time from the onset of program marketing to complete installation varies depending on customer participation. Payments are made for completed installations only.

**4. Additional Services.** If the District requests Contractor to provide services in addition to those specified above, Contractor shall develop a scope of work detailing the specific tasks to be completed and the estimated costs to complete those tasks. Contractor shall not perform any additional services unless authorized to provide those additional services are specified in a variance to this Agreement signed by both parties.

## EXHIBIT 2

### FEE SCHEDULE

**1. Contractor's Compensation.** The parties agree that the total of all fees paid to the Contractor for the performance of all services set forth in Exhibit 1, including normal revisions (hereafter the "Services"), and for all authorized reimbursable expenses, must not exceed the total sum of ~~\$950,000~~ \$1,699,000.

**2. Billable Rates.** Contractor must be paid for the performance of Services on an hourly rate, daily rate, flat fee, lump sum or other basis, as set forth in the Schedule of Charges for Services, attached hereto and incorporated by this reference.

**3. Contractor's Reimbursable Expenses.** Reimbursable expenses are limited to actual expenditures of Contractor for expenses that are necessary for the proper completion of the Services and are only be payable if specifically authorized in writing in advance by District.

**4. Payments to Contractor.**

a. Undisputed invoices must be paid by the District within 30 days after receipt of such invoices. Contractor must be responsible for the cost of supplying all documentation necessary to verify the invoiced amounts to the satisfaction of District.

b. All invoices submitted by Contractor must contain the following information:

- i. Date of Invoice Issuance
- ii. Sequential Invoice Number
- iii. Purchase Order Number
- iv. Total Agreement Not-to-Exceed Amount
- v. Amount of this Invoice (Itemize all reimbursable expenses, if any)
- vi. Database with customer address, name, water account number, model and gallons per flush of toilet installed, model and gallons per minute of showerhead installed model and gallons per minute of faucet aerator installed, and the installation date.

c. Billings that do not conform to the format outlined above must be returned to Contractor for correction. District must not be responsible for delays in payment to Contractor resulting from Contractor's failure to comply with the invoice format described below.

d. Requests for payment must be sent to the District Representative.

**5. Contractor's Accounting Records.** During performance of this Agreement and for a period of three (3) years after completing all Services and Additional Services hereunder, Contractor must maintain all accounting and financial records related to this Agreement, including, but not limited to, records of Contractor's costs for all Services and Additional Services performed under this Agreement and records of Contractor's Reimbursable Expenses, in accordance with generally accepted accounting practices, and must keep and make such records available for inspection and audit by representatives of the District upon reasonable written notice.

**SCHEDULE OF CHARGES FOR SERVICES FOR IRVINE RANCH WATER DISTRICT**

PRICE PER INSTALLATION  
 (INCLUDES EQUIPMENT, INSTALLATION, TOILET RECYCLING, TAXES AND ANY  
 ADDITIONAL FEES)

	<b>COST EACH</b>	<b>MaP SCORE</b>
<b>Tank-Style High Efficiency Toilet</b>	\$ 487.92	
Make and Model: Niagara Stealth .8 GPF		600
<b>Tank-Style High Efficiency Toilet</b>	\$ 437.92	
Make and Model: Western Pottery 1.28 GPF		900
<b>Handheld Low-Flow Showerhead</b>	\$ 34.95	
Make and Models: Earth N2945CH or N2945 1.5 GPM		
Evolve EV3030-CP150-SB or EV3040-CP150-SB 1.5 GPM		
Evolve EV3030-CP175-SB or EV3040-CP175-SB 1.75 GPM		
<b>Standard Low-Flow Showerhead</b>	\$ 19.95	
Make and Models: Evolve EV3010-CP150-SB or EV3020-CP150-SB 1.5 GPM		
Evolve EV3010-CP175-SB or EV3020-CP175-SB 1.75 GPM		
<b>Swivel Kitchen Faucet Aerator</b>	\$ 13.95	
Make and Model: Niagara Conservation N3115-P 1.5 GPM		
<b>Standard Kitchen Faucet Aerator</b>	\$ 9.95	
Make and Models: AM Conservation FA014CPB1 1.0 GPM		
AM Conservation FA012CPB1 1.5 GPM		
<b>Bathroom Faucet Aerator</b>	\$ 9.95	
Make and Model: Niagara Conservation N3205N-PC 0.5 GPM		
<b>High Efficiency Clothes Washer</b>	Cost	Water Factor
<b>Eligible models (listed below)</b>	Not to exceed \$850 each	≤ 3.7

### High Efficiency Clothes Washers Qualified Products List

BRAND	MODEL	BRAND	MODEL
Amana	NFW5800D*+	Crosley	CFWH4084G**
Electrolux	EFLS517****	Electrolux	EFLS617****
Electrolux	EFLW317****	Electrolux	EFLW417****
Electrolux	EIFLS55IHW	Frigidaire	FFFS5115***
Frigidaire	FFFW5000QW	Frigidaire	FFFW5100**
Ge	GFW400S*K***	Ge	GFW450S*K***
Ge	GFW490R*K***	Ge	GFWH1200H***
Ge	GFWN1100H***	Ge	GFWN1300J***
Ge	GFWN1600J***	Ge	GFWR2700H***
Ge	GFWR2705H***	Ge	GFWR4800F***
Ge	GFWR4805F***	Ge	GFWS1600H***
Ge	GFWS1605H***	Ge	GFWS1700H***
Ge	GFWS1705H***	Ge	GFWS2600F***
Ge	GTW810S*J***	Ge	GTW860S*J***
Huebsch	YFNE5BJP113+	Huebsch	YFNE5RSP113+
Huebsch	YTEE5ASP173+	Huebsch	YTEE5ASP283+
Huebsch	YTGE5ASP093+	Huebsch	YTGE5ASP113+
Huebsch	ZFNE9BSP113+	Ipso	BFNE6BJP113+
Ipso	BTEE6ASP173+	Ipso	BTEE6ASP283+
Ipso	BTGE6ASP093+	Ipso	BTGE6ASP113+
Kenmore	3142#	Kenmore	3142#41#
Kenmore	3146#	Kenmore	3146#41#
Kenmore	3155#	Kenmore	4100#
Kenmore	4107#	Kenmore	4107####
Kenmore	4116#	Kenmore	4116####
Kenmore	4126#	Kenmore	4130#
Kenmore	4138#	Kenmore	4138####
Kenmore	4139#	Kenmore	4148#
Kenmore	4148####	Kenmore	4158#
Kenmore	4158####	Kenmore	4168#
Kenmore	417.4112	Kenmore	4196#
Kenmore	4198#	Kenmore	4198####
Lg	WM3050C*	Lg	WM3075C*
Lg	WM3085C*	Lg	WM3170C*
Lg	WM3175C*	Lg	WM3180C*
Lg	WM3270C*	Lg	WM3270H*A
Lg	WM3275C*	Lg	WM3370H*A
Lg	WM3475H*A	Lg	WM3570H*A
Lg	WM3575C*	Lg	WM3650H**
Lg	WM3670H*A	Lg	WM3770H*A
Lg	WM3997H**	Lg	WM4270H*A
Lg	WM4370H*A	Lg	WM5000H*A
Lg	WM5005H*A	Lg	WM8000H**
Lg	WM8100H*A	Lg	WM8500H**
Lg	WM9000H*A	Lg	WM9500H*A
Lg	WT1150C*	Lg	WT1301C*
Lg	WT1501C*	Lg	WT1701C*

BRAND	MODEL	BRAND	MODEL
Lg	WT1801H*A	Lg	WT1901C*
Lg	WT5270C*	Lg	WT5275C*
Lg	WT5480C*	Lg	WT5680H*A
Lg	WT7200C*	Lg	WT7500C*
Lg	WT7600H*A	Lg	WT7700H*A
Lg	WT7710H*A	Lg	WT9000H*A
Lg Electronics	WM1832C*	Maytag	MHW3100D*+
Maytag	MHW3500F**	Maytag	MHW3505F**
Maytag	MHW4100D*+	Maytag	MHW4300D*+
Maytag	MHW5100D*+	Maytag	MHW5400D*+
Maytag	MHW5500F**	Maytag	MHW7100D*+
Maytag	MHW8100D*+	Maytag	MHW8150E**
Maytag	MHW8200F**	Maytag	MVWB955F**
Primus	PFNE3BJP113+	Primus	PFNE3RSP113+
Primus	PTEE3FSP173+	Primus	PTGE3FSP113+
Samsung	WA50K86**A*	Samsung	WA52J806*A*
Samsung	WF42H50**A*	Samsung	WF42H51**A*
Samsung	WF42H52**A*	Samsung	WF42H54**A*
Samsung	WF42H55**A*	Samsung	WF42H56**A*
Samsung	WF42H57**A*	Samsung	WF457A*GS**
Samsung	WF45H61**A*	Samsung	WF45H63**A*
Samsung	WF45K62**A*	Samsung	WF45K65**A*
Samsung	WF45M51**A*	Samsung	WF45M55**A*
Samsung	WF50K75**A*	Samsung	WF56H91**A*
Samsung	WF56H91**C*	Samsung	WV55M96**A*-L
Samsung	WV60M99**A*-L	Speed Queen	AFN50RSP113+
Speed Queen	AFNE8RSP113+	Speed Queen	AFNE9BSP113+
Speed Queen	AFNE9RSP113+	Speed Queen	ATEE9AGP173+
Speed Queen	ATEE9ASP283+	Speed Queen	ATGE9AGP113+
Speed Queen	ATGE9ASP093+	Speed Queen	LFN50RSP113+
Speed Queen	LFNE5BJP113+	Speed Queen	LFNE5BSP113+
Speed Queen	LFNE5RSP113+	Speed Queen	LTE50FSP173+
Speed Queen	LTEA5FSP153**04	Speed Queen	LTEA5FSP153+
Speed Queen	LTEA5FSP173**04	Speed Queen	LTEA5FSP173+
Speed Queen	LTEE5ASP153+	Speed Queen	LTEE5ASP173+
Speed Queen	LTEE5ASP283+	Speed Queen	LTGA5FSP113+
Speed Queen	LTGE5ASP093+	Speed Queen	LTGE5ASP113+
Unimac	UFNE5BJP113+	Unimac	UTEE5ASP173+
Unimac	UTEE5ASP283+	Unimac	UTGE5ASP113+
Whirlpool	WFW7590FW	Whirlpool	WFL98HEB**
Whirlpool	WFW3090G**	Whirlpool	WFW5090G**
Whirlpool	WFW61HEB**	Whirlpool	WFW72HED*+
Whirlpool	WFW7540F**	Whirlpool	WFW7590F**
Whirlpool	WFW75HEF**	Whirlpool	WFW81HED*+
Whirlpool	WFW8540F**	Whirlpool	WFW85HEF**
Whirlpool	WFW8740D*+	Whirlpool	WFW87HED*+
Whirlpool	WFW90HEF**	Whirlpool	WFW9290F**
BRAND	MODEL	BRAND	MODEL
Whirlpool	WFW92HEF**	Whirlpool	WFW95HED*+
Whirlpool	WFW97HED*+	Whirlpool	WTW9500E**

## EXHIBIT 3

### INSURANCE REQUIREMENTS

- 1. General.** CONTRACTOR shall not commence or continue to perform any Services unless they, at their own expense, have in full force and effect all required insurance. CONTRACTOR shall not permit any Subcontractor to perform Services on this project until the same insurance requirements have been complied with by such Subcontractor.
- 2. Types of Insurance.** CONTRACTOR shall obtain and maintain for the full period of the Agreement are Worker's compensation insurance, commercial general liability insurance, and business automobile liability insurance.
- 3. Insurer Rating.** Insurers shall have financial and size ratings of at least an "A", VIII in accordance with the most current Best's Key Rating Guide, Property Casualty.
- 4. Evidence of Insurance.** As evidence that specified insurance coverage has been obtained for the period of the Agreement, the CONTRACTOR shall provide, on forms satisfactory to District, including endorsements providing that policies cannot be canceled or reduced except on thirty (30) calendar days written notice by the insurance carrier of cancellation or non-renewal (ten (10) calendar days notice for non-payment of premium). Industry standard forms for "certificate on insurance" from ACORD are accepted, provided that appropriate language regarding notice of non-renewal or cancellation is provided on the form. Contractor shall provide proof that policies of insurance required herein expiring or terminated during the term of this Agreement have been renewed or replaced with other policies providing coverage meeting the requirements hereof. Such proof will be furnished at least fourteen (14) calendar days prior to the expiration of termination of the coverages. No alteration or substitution of said forms will be allowed. Certified copies of insurance policies from the insurance company affording coverage shall be provided by CONTRACTOR upon request.
- 5. Noncompliance.** DISTRICT reserves the right to withhold payments to CONTRACTOR in the event of material noncompliance with insurance requirements.
- 6. Limitation of Contractor liability.** The requirements set forth herein as to the types and limits of insurance coverage to be maintained by the CONTRACTOR and any approval of said insurance by the DISTRICT or its insurance consultant(s) is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the CONTRACTOR pursuant to the Agreement, including but not limited to the provisions concerning indemnification.
- 7. Worker's Compensation Insurance.** CONTRACTOR shall provide worker's compensation insurance coverage for no less than the statutory limits and employer's liability insurance coverage, with limits not less than those listed in 7.A, for all persons

whom CONTRACTOR employs or may employ in carrying out the Services. This insurance shall be in strict accordance with the requirements of the most current and applicable state worker's compensation insurance laws.

- A. Employer's Liability Insurance shall be for not less than:
  - \$1,000,000 Each Accident
  - \$1,000,000 Each Disease – Policy Limit
  - \$1,000,000 Each Disease – Each Employee

B. Notwithstanding the requirements of Section 3, above, DISTRICT will accept Workers Compensation Insurance from the State Compensation Fund (State Fund) that is not rated and that is evidenced on the State Fund's certificate form. Except as provided above with respect to State Fund, all other insurance shall comply with all requirements of this Exhibit.

**8. Waiver of right of subrogation.** The worker's compensation insurance shall include a waiver of right of subrogation against the DISTRICT, the District Board of Directors, DISTRICT's Representative, the Engineer/Architect, owners of record of all private properties on which entry will be made, and their consultants, and each of their officers, agents, and employees but only while acting in their capacity as such and only in respect to operations of the original named insured, their Subcontractors, agents, officers, and employees in the performance of the Services.

**9. Commercial General Liability Insurance.** CONTRACTOR shall provide commercial general liability insurance coverage equivalent to Insurance Services Office Form CG 00 01, with limits not less than those specified in 9.A.

- A. Commercial General Liability Insurance shall be for not less than:

Bodily Injury	Products/Completed
Property Damage	Completed
Personal Injury	Operations
<u>(Occur/Aggr)</u>	<u>(Occur/Aggr)</u>
\$1M/\$2M	\$1M/\$2M

B. Included in such insurance shall be blanket contractual liability coverage and severability of interests (no cross suits exclusion).

C. The commercial general liability insurance shall be primary and non-contributory and include as additional insureds: DISTRICT, the District Board of Directors, DISTRICT's Representative, the State of California, its officers, agents, and employees, the Engineer/Architect, owners of record of all private properties on which entry will be made, and their consultants, and each of their officers, agents, and employees but only while acting in their capacity as such and only in respect to

operations of the original named insured, their Subcontractors, agents, officers, and employees in the performance of the Services and shall be evidenced by ISO CG 20 33 07 04 endorsement form or equivalent.

D. Such insurance shall have a deductible or self insured retention not to exceed \$25,000.

**10. Automobile Liability Insurance.** CONTRACTOR shall provide business automobile liability insurance coverage equivalent to Insurance Services Office Form CA 00 01, with limits not less than those specified in 10 A. Business automobile liability insurance coverage shall be provided for all owned, non-owned and hired vehicles.

A. Automobile liability insurance shall be for not less than:

\$2,000,000 Bodily injury and property damage each occurrence.

B. The same requirements stated in 9.C shall apply to the automobile liability insurance.

**11. CONTRACTOR's Responsibility Not Limited by Insurance.** Nothing contained in these insurance requirements is to be construed as limiting the extent of the liability of CONTRACTOR or CONTRACTOR's sureties.

**12. Maintaining Insurance.** The maintenance of proper insurance in conformity with the Contract Documents is a material element of this Agreement. If at any time during the life of the Agreement, including the guarantee period, or any extension, CONTRACTOR fails to maintain the required insurance in full force and effect, the Services shall be discontinued immediately and all payments due or that become due to CONTRACTOR shall be withheld until notice is received by DISTRICT that the required insurance has been restored to full force and effect and that the premiums have been paid for a period satisfactory to DISTRICT. Failure to maintain or renew coverage or to provide evidence of renewal upon request of DISTRICT may be treated by DISTRICT as a material breach of contract.

## EXHIBIT 4

### SUPPLEMENTARY CALIFORNIA PUBLIC WORKS REQUIREMENTS

If the Scope of Work includes construction work to be performed during the construction phase or design and preconstruction phases of construction, including, but not limited to, inspection and land surveying work, or work to be performed during the post-construction phases of construction, including, but not limited to, all cleanup work at the jobsite, or any other work that has been determined by the California Director of Industrial Relations to constitute "public work," that portion of the Scope of Work is subject to the following provisions which amend and supplement the contract, or to the extent of any inconsistency supersede and take precedence over the contract.

**SECTION 1. Bidding Requirements.** The requirements of this Section apply to the public work portion of the Scope of Work if the contract is to be obtained by competitive bidding.

1.01 *Additive and Deductive Bid Items.* (applicable if a bid contains additive or deductive items – Public Contract Code 20103.8)

If a schedule of work items includes bid items or schedule(s) of bid items that may be added to ("Additive Items") or deducted from ("Deductive Items") the bids, the lowest responsible bidder will be determined by adding all Additive Items to, and deducting all Deductive Items from, the total of the base bid, unless another method is provided in the bid documents. IRWD reserves the right to award the Work to the lowest responsible bidder based on any single schedule or combination of schedules of bid items deemed by IRWD, in its sole discretion, to be in IRWD's best interest.

1.02 *Listing of Subcontractors.* (applicable if bids are taken – Public Contract Code 4104)

The name, State of California license number, and location of place of business of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the Work, or improvements, in an amount in excess of 1/2 of 1 percent (0.5%) of the bidder's total Bid, and the portion of the Work which will be done by each subcontractor shall be set forth in the bid. CONTRACTOR agrees that except to the extent that subcontractors were set forth in its bid, that all work in excess of one-half of one percent shall be performed by CONTRACTOR. It is agreed and acknowledged that should CONTRACTOR fail to conform hereto or with any of the requirements of Section 4100 through and inclusive of Section 4114 of the Public Contract Code, Contractor shall be subject to the requirements and penalties of Section 4106 of the Public Contract Code.

1.03 *Registration.* (applicable if bids are taken – Labor Code 1725.5)

Qualification to bid on this project or to be listed as a subcontractor (if required by Section 1.02), or to engage in the performance of any of the work requires proof of the contractor's or subcontractor's current registration and qualification to perform public work pursuant to Labor Code Section 1725.5. A bid shall not be accepted nor any contract or subcontract entered into without proof of the contractor's or subcontractor's current registration.

1.04 *Non-Collusion Affidavit.* (applicable if bids are taken – Public Contract Code 4104)

**SECTION 2. Bonding.** This Section applies to the direct contractor awarded a public works contract exceeding \$25,000. This requirement does not apply to a design professional.

2.01 *Payment and Performance Bond.* Before commencing performance of the work, CONTRACTOR shall furnish a payment bond and a faithful performance bond approved by IRWD, each in an amount not less than one hundred (100%) percent of the Contract Price, from a surety company satisfactory to IRWD and who is authorized to transact business in California. CONTRACTOR shall use the bond forms provided by IRWD. A certified copy of power of attorney must be attached to each bond.

**SECTION 3. Labor.** The requirements of this Section apply to the public work portion of the Scope of Work, if more than \$1,000 (Labor Code 1771).

3.01 *Compliance Monitoring; Registration; Notices.* The project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

Qualification to engage in the performance of any of the work requires that CONTRACTOR and subcontractors maintain their current registration to perform public work pursuant to Labor Code Section 1725.5.

CONTRACTOR shall post on the jobsite all notices as prescribed by law or regulation.

3.02 *Prevailing Wage Requirements.* Under the provisions of the California Labor Code, the Director of the Department of Industrial Relations has determined the prevailing rate of wages for the locality in which the Work is to be performed and IRWD has adopted said prevailing rate of wages. A copy of these prevailing rates is on file at the office of IRWD and shall be made available to any interested party on request. A copy of such prevailing wage rates shall be posted on the jobsite by CONTRACTOR.

CONTRACTOR shall comply with Labor Code Section 1775. In accordance with said Section 1775, CONTRACTOR shall forfeit as a penalty to IRWD, up to two hundred dollars (\$200), as determined by the Labor Commissioner, for each calendar day or

portion of a day for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed for any work done under the contract by them or, except as provided by the Labor Code, by any Subcontractor under them in violation of the provisions of the Labor Code, and in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to Section 1775, the difference between the stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion of a day for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by CONTRACTOR.

CONTRACTOR shall forfeit as a penalty to IRWD \$25 for each worker employed in the execution of the Work by CONTRACTOR or any Subcontractor under them for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one calendar week in violation of the provisions of the Labor Code, in particular, Section 1810 to Section 1815 thereof, inclusive, except that work performed by employees of CONTRACTOR in excess of eight (8) hours per day and forty (40) hours during any one (1) week shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one half (1 1/2) times the basic rate of pay as provided in said Section 1815.

3.03 *Payroll Records.* CONTRACTOR and each of their Subcontractors shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by them in connection with the Work. The records shall be in a format prescribed by the Labor Commissioner. The records may consist of printouts of payroll data maintained as computer records, if the printouts are in a format prescribed by the Labor Commissioner and are verified as required under this paragraph. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating that (1) the information contained in the payroll record is true and correct, and (2) CONTRACTOR (or the Subcontractor, as the case may be) has complied with the requirements of Sections 1771, 1811 and 1815 of the Labor Code for any of the work performed by their employees. The payroll records shall be submitted monthly to IRWD and directly to the Labor Commissioner and shall be available for inspection at all reasonable hours at the principal office of CONTRACTOR (or the Subcontractor, as the case may be) to the employee or their authorized representative on request, to the Division of Labor Standards Enforcement on request, and the public, provided that requests by the public must be made through IRWD or the Division of Labor Standards Enforcement in accordance with the requirements of Labor Code Section 1776. Copies shall be provided to the requesting entity within ten (10) days after receipt of a written request. Any copy of a payroll record made available to the public or any public agency by IRWD shall be marked or obliterated to prevent disclosure of individual workers' names, addresses and social security numbers. CONTRACTOR shall inform IRWD of the location address of payroll records of CONTRACTOR and each Subcontractor and notify

IRWD of a change in any such location within five (5) working days. In the event CONTRACTOR or a subcontractor fails to comply with the above-specified 10-day period, CONTRACTOR or the subcontractor shall forfeit as a penalty to IRWD one hundred dollars (\$100) for each calendar day or portion of a day for each worker until strict compliance is effectuated. CONTRACTOR is not subject to a penalty under this paragraph due to the failure of a subcontractor to comply with this paragraph.

3.04 *Apprentices.* (applicable if contract is \$30,000 or more) CONTRACTOR and any Subcontractor under them shall comply with the requirements of Sections 1777.5 and 1777.6 of the Labor Code in the employment of apprentices. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Department of Industrial Relations. Willful violations of Section 1777.5 will result in forfeiture of one hundred dollars (\$100) for each calendar day of noncompliance, or up to three hundred dollars (\$300) for each calendar day of noncompliance for second and subsequent violations within a three-year period that result in apprenticeship training not being provided as required by the Labor Code, and may also result in debarment sanctions in the case of violations, as determined by the Labor Commissioner pursuant to Section 1777.7. Section 1777.7 also imposes requirements that, if not observed by CONTRACTOR, will result in CONTRACTOR's liability for Subcontractor violations of Section 1777.5.

3.05 *Subcontracting.* CONTRACTOR is prohibited from performing any of the work with a subcontractor who is ineligible to perform such Work pursuant to Section 1777.1 or 1777.7 of the Labor Code. CONTRACTOR agrees that in accordance with Public Contract Code Section 6109, a subcontract with an ineligible subcontractor is void as a matter of law, amounts paid to the subcontractor shall be returned to IRWD, and CONTRACTOR is responsible for paying wages of the subcontractor's employees if the subcontractor is allowed to perform any part of the work.

3.06 *CONTRACTOR'S Certificate Regarding Workers' Compensation* (Labor Code Section 1861): I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract.

**SECTION 4. Site Conditions.** The requirements of this Section apply to the public work portion of the Scope of Work, subject to the applicability further specified below.

4.01 *Utilities* (applicable if the contract with IRWD is made pursuant to an invitation for bids and includes removal, relocation or protection of main or trunkline utility facilities – Government Code Section 4215)

CONTRACTOR shall be compensated by IRWD for the costs of locating, repairing damage not due to the failure of CONTRACTOR to exercise reasonable care, and removing, relocating, protecting, or temporarily maintaining main or trunk line utility facilities not indicated with reasonable accuracy in the plans and specifications, and for equipment in the project necessarily idled during such work. Alternatively IRWD may change the project grade or alignment to avoid such removal, relocation or protection or make arrangements with the owner of the utility for such work to be done at no cost to CONTRACTOR. No forfeiture due to delay shall be made because of any delays in the completion of the Work due to the failure of IRWD or the owner of a utility to provide for removal or relocation of main or trunk line facilities not indicated in the plans or specifications with reasonable accuracy.

IRWD is not responsible for removal, relocation or temporary maintenance of (i) main or trunk line utilities or other structures which are in the position shown on the plans, or (ii) service connections, and CONTRACTOR shall bear all expenses incidental thereto. Such work shall be done in a manner satisfactory to the owner of the utility or service connection, it being understood that the owner has the option of doing such work with their own forces or permitting the work to be done by CONTRACTOR. It shall be the responsibility of CONTRACTOR to investigate to find out whether or not this cost is required to be borne by the owner of the utility.

**4.02 *Excavation Plans for Worker Protection*** (applicable if the public work portion is over \$25,000, and involves excavation of any trench five (5) feet or more in depth – Labor Code Section 6705)

CONTRACTOR shall submit to IRWD for acceptance, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches five (5) feet or more in depth. The plan shall be prepared specifically for the work by a registered civil or structural engineer who is licensed by the State of California. The plan shall be in an original format, not a reproduced copy, and shall include the engineer's original signature and seal. As a part of the plan, a note shall be included stating that the registered civil or structural engineer certifies that the plan complies with the CAL OSHA Construction Safety Orders, or stating that the registered civil or structural engineer certifies that the plan is not less effective than the shoring, bracing, sloping, or other provisions of the safety orders.

All shoring submittals shall include surcharge loads from adjacent embankments, construction loads and spoil bank. The submittal shall indicate the minimum horizontal distance from the top of trench to the edge of all surcharge loads for all cases of shoring and side slopes.

The detailed plan showing the design of shoring, etc., which CONTRACTOR is required to submit to IRWD for acceptance in advance of excavation, will not be accepted if the plan

is based on subsurface conditions which are more favorable than those revealed by the investigations made by IRWD or the Engineer/Architect or their consultants; nor will the plan be accepted if it is based on soils related design criteria that are less restrictive than the criteria set forth in the report on the investigations of subsurface conditions.

Nothing contained in this paragraph shall be construed as relieving CONTRACTOR of the full responsibility for providing shoring, bracing, sloping, or other provisions which are adequate for worker protection.

**4.03 Differing Physical Conditions.** (applicable if the public work portion involves excavation more than four (4) feet in depth – Public Contract Code Section 7104)

CONTRACTOR shall promptly notify IRWD of the following work site conditions (hereinafter called differing physical conditions), in writing, upon their discovery and before they are disturbed: (1) any material that CONTRACTOR believes may be material that is a hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; (2) subsurface or latent physical conditions differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids; (3) unknown physical conditions of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character being performed.

IRWD will promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in CONTRACTOR's cost of, or the time required for, performance of any part of the work, shall issue a change order under the procedures described in the Contract.

In the event that a dispute arises between IRWD and CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in CONTRACTOR's cost of, or time required for, performance of any part of the work, CONTRACTOR shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. CONTRACTOR shall retain any and all rights provided either by the Contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

CONTRACTOR shall not be required to resume work in connection with a condition involving hazardous waste until after IRWD has obtained any required permits related thereto and delivered to CONTRACTOR written notice specifying any special conditions under which such work may be resumed safely.

**SECTION 5. Materials.** The requirements of this Section apply to the public work portion of the Contract, pursuant to Public Contract Code §3400.

5.01 *Substitutions.* Whenever materials or equipment are specified or described in the Plans or specifications by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, the name shall be deemed to be followed by the words “or approved equivalent” and materials or equipment of other suppliers may be accepted by IRWD if sufficient information is submitted by CONTRACTOR to allow IRWD to determine that the material or equipment proposed is equivalent to that named. Approval of proposed equivalent materials or equipment is at the sole discretion of IRWD. No substitute shall be ordered or installed without IRWD’s prior written acceptance.

CONTRACTOR assumes sole responsibility for verifying the proposed substitute items are in accordance with the requirements of the contract documents, and that the dimensions, arrangement, design and construction details and all other features of substitute items are suitable for their intended purpose.

In the event that a substitute item, and said difference was not expressly identified in CONTRACTOR’s request for the substitution, or the incorporation of the substitute into the work results in a change(s) to the work or in the function or general design of the project, which was not expressly identified in CONTRACTOR’s request for the substitution, IRWD may require the removal and replacement of the substitute at CONTRACTOR’s sole expense.

CONTRACTOR may submit data substantiating requests for substitutions of equivalent items at any time after notice of award. Under no circumstances shall CONTRACTOR be entitled to an increase in Contract Time as a result of the submission or review of a substitution request.

**SECTION 6. Claims.** The requirements of this Section apply to the public work portion of the Contract, pursuant to Public Contract Code §20104.

6.01 *Resolution of Construction Claims.* (applicable to a claim meeting the below-described criteria – Public Contract Code Section 20104)

This Section is intended as a summary of the provisions of Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3 of Division 2 of the Public Contract Code (“Claims Resolution Statute”) and is subject to the actual provisions of the Claims Resolution Statute. This Section shall govern the resolution of any claim of \$375,000 or less which may be made by CONTRACTOR.

“Claim” is defined as CONTRACTOR’s demand for (i) a time extension, (ii) money or damages arising from the work, payment for which is not otherwise expressly provided for or CONTRACTOR is not otherwise entitled to, or (iii) an amount disputed by IRWD.

CONTRACTOR shall make all claims in writing and include the necessary substantiating documents. Any claim which is intended to invoke the procedures under the Claims Resolution Statute shall specify that the claim is being made pursuant to the Claims Resolution Statute. All claims by CONTRACTOR must be filed on or before the date of final payment.

IRWD shall respond in writing, within forty-five (45) days of receipt of a claim less than \$50,000 and within sixty (60) days of receipt of a claim over \$50,000 and less than \$375,000, or IRWD may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims IRWD may have against CONTRACTOR. If additional information is thereafter required, it shall be requested and provided upon mutual agreement of IRWD and CONTRACTOR. If IRWD requests additional documentation, IRWD’s written response to the claim shall be submitted to CONTRACTOR, (i) within fifteen (15) days after receipt of the additional documentation for a claim less than \$50,000 and within thirty (30) days after receipt of the additional documentation for a claim over \$50,000 and less than \$375,000, or (ii) within the same time period as used by CONTRACTOR in producing the additional documentation, whichever is greater.

If CONTRACTOR disputes IRWD’s written response, or IRWD fails to respond within the time prescribed, CONTRACTOR may, by giving written notice to IRWD within fifteen (15) days of receipt of IRWD’s response (or within fifteen (15) days of IRWD’s failure to respond), demand an informal conference to meet and confer for settlement of the issues in dispute. Upon such demand, IRWD shall schedule a “meet and confer” conference within thirty (30) days.

If after the “meet and confer” conference, any portion of the claim remains in dispute, CONTRACTOR may file a claim pursuant to Government Code Section 900 et seq. If a court action is thereafter filed to resolve the claim, the court must, within the time specified by law, submit the matter to nonbinding mediation unless waived by mutual stipulation of IRWD and CONTRACTOR. If after the mediation process, the matter remains in dispute, the case must then be submitted to judicial arbitration pursuant to the applicable law.

6.02 *Third Party Claims.* In accordance with Public Contract Code Section 9201, IRWD shall timely notify CONTRACTOR if IRWD receives any third-party claim relating to the Work. IRWD shall be entitled to recover from CONTRACTOR the reasonable costs incurred by IRWD in providing such notification.

**SECTION 7. Payment and Retention.** The requirements of this Section apply to construction contracts.

**7.01 *Progress Payments.***

The following is a summary of the provisions of Article 1.7 of Chapter 1 of Part 3 of Division 2 (commencing with Section 20104.50) of the Public Contract Code, regarding progress payments, and is subject to the actual provisions of that statute. For purposes of this Section, a “progress payment” includes all payments due CONTRACTOR, except that portion of the final payment designated under this Agreement as retention.

If IRWD fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted progress payment request from CONTRACTOR, IRWD shall pay interest to CONTRACTOR equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Civil Code of Procedure.

Upon receipt of a progress payment request, IRWD shall (i) review each payment request as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request, and (ii) return to CONTRACTOR, as soon as practicable but not later than seven (7) days after receipt, any payment request determined not to be a proper payment request suitable for payment. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing why the payment request is not proper. The number of days available to IRWD to make a payment without incurring interest shall be reduced by the number of days by which IRWD exceeds the seven (7) day return requirement.

**7.02 *Progress Payment Retention.*** (Applies if performance retention will apply.) IRWD shall retain five (5) percent of such estimated value as part security for fulfillment of the Contract by CONTRACTOR and shall pay to CONTRACTOR the balance of such estimated value after deducting all previous payments and all sums to be kept or retained under the terms of the Contract. Nothing herein shall require payment of a disputed amount or limit IRWD’s ability to withhold an amount in respect of a disputed amount as provided for in Section 7107 of the Public Contract Code. The retention payment shall not be due and payable until the expiration of thirty-five (35) days from the date of IRWD’s recording of a notice of completion of the work in the office of the County Recorder.

**7.03 *Substitution of Securities for Amounts Withheld.*** Pursuant to Section 22300 of the Public Contract Code, CONTRACTOR may substitute securities for any monies withheld by IRWD to ensure performance of the Work. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with IRWD or with a state or federally chartered bank in California as the escrow agent. Such securities shall be released to CONTRACTOR at the same time as amounts retained would be released upon satisfactory completion of the work, to the extent such

securities have not previously been utilized or are not then being held by IRWD or the escrow agent for purposes as provided in this Contract. Alternately, CONTRACTOR may request, and IRWD shall make, payment of retention earned directly to the escrow agent at the expense of CONTRACTOR.

If the securities are deposited with IRWD, IRWD shall determine their value. IRWD shall also be entitled in their discretion to sell, redeem, or otherwise convert them or portions thereof to cash in order to apply them to any of the purposes set forth in the Contract for which amounts may be withheld from CONTRACTOR and used. CONTRACTOR shall furnish such documents as are deemed necessary by IRWD to enable IRWD to make such sales, redemptions, or conversions. If the securities are deposited with an escrow agent, CONTRACTOR, escrow agent and IRWD shall execute IRWD's form entitled "Escrow Agreement for Security Deposits in Lieu of Retention."

**SECTION 8. Miscellaneous.** The requirements of this Section apply as specified.

8.01 *Audit.* (applicable if the contract exceeds \$10,000 – Government Code 8546.7)

Pursuant to Government Code Section 8546.7, this contract, and CONTRACTOR and IRWD as the contracting parties, are subject to the examination and audit of the California State Auditor, at the request of IRWD or as part of any audit of IRWD, for a period of three years after the final payment under the contract.

8.02 *Notice of Taxable Possessory Interest.*

The terms of this contract may result in the creation of a possessory interest. If such a possessory interest is vested in CONTRACTOR, CONTRACTOR may be subjected to the payment of property taxes levied on such interest.

8.03 *Antitrust Claims Assignment.* (applicable if contract is awarded by competitive bidding)

In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, CONTRACTOR or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2, commencing with Section 16700, of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

8.04 *License.*

CONTRACTOR shall possess a State of California license for the contracting class(es) applicable to the work.

8.05 *Delays.* (Applies if contract documents specify damages for failure to complete work by applicable contract times.)

No forfeiture due to delay shall be made because of any delays in the completion of the work due to unforeseeable causes beyond the control and without the fault or negligence of CONTRACTOR (including but not restricted to acts of God or of the public enemy, acts of the government, acts of IRWD, or acts of another contractor in the performance of a contract with IRWD, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays caused by the failure of IRWD, or the owner of a utility to provide for removal or relocation of main or trunk line facilities not indicated in the plans or specifications with reasonable accuracy). Any such delays shall not entitle CONTRACTOR to any additional compensation, and the sole remedy of CONTRACTOR shall be an extension of time obtained in accordance with the contract; the only exception shall be if the delay has been caused solely by acts for which IRWD is responsible and which delay is unreasonable under the circumstances involved, is not within the contemplation of the parties, and continues after CONTRACTOR's notice to IRWD of such acts.

#### 8.06 DRUG-FREE WORKPLACE CERTIFICATION

Certification of Compliance: By signing the Agreement For Non-Consultant Services Between Irvine Ranch Water District and Synergy Companies, dated August 10, 2015 ("Agreement"), Contractor, its contractors or subcontractors hereby certify, under penalty of perjury under the laws of State of California, compliance with the requirements of the Drug-Free Workplace Act of 1990 (Government Code 8350 *et seq.*) and have or will provide a drug-free workplace by taking the following actions:

- a) Publish a statement notifying employees, contractors, and subcontractors that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees, contractors, or subcontractors for violations, as required by Government Code Section 8355(a)(1).
- b) Establish a Drug-Free Awareness Program, as required by Government Code Section 8355(a)(2) to inform employees, contractors, or subcontractors about all of the following:
  - i) The dangers of drug abuse in the workplace,
  - ii) Contractor's policy of maintaining a drug-free workplace,
  - iii) Any available counseling, rehabilitation, and employee assistance programs, and
  - iv) Penalties that may be imposed upon employees, contractors, and subcontractors for drug abuse violations.
- c) Provide, as required by Government Code Sections 8355(a)(3), that every

employee, contractor, and/or subcontractor who works under this Grant Agreement:

- i) Will receive a copy of Contractor's drug-free policy statement, and
- ii) Will agree to abide by terms of Contractor's condition of employment, contract or subcontract.

#### 8.07 Right to Inspection

The State of California shall have the right to inspect the work being performed under this Agreement and any subcontracts at any and all reasonable times during the term of the District's agreement with the State to obtain grant funding for the Services. This right shall extend to any subcontracts entered into pursuant to this Agreement.

**EXHIBIT 5**

**SPECIAL PROVISIONS**

**(e.g., project schedule, form of customer participation releases and other items not covered elsewhere)**

## EXHIBIT 6

### NON-CONSULTANT SERVICES VARIANCE

**Purpose.** This procedure shall be used to identify, estimate, and report variances to the scope of work in non-consultant services agreements between IRWD and a contracting engineer or other type of contractor. A variance may be initiated by either IRWD's Project Manager or by the Engineer/Contractor.

**Variance.** The Variance shall be used to identify all changes to the original scope of work, budget, and schedule for any study, design, or construction phases services.

**Engineer/Contractor Initiates Variance.** If a Variance is initiated by the Engineer/Contractor, the Engineer/Contractor shall prepare the Variance including the Description of Variance, the Engineering & Management Cost Impact, the Schedule Impact, and the Required Approval Determination sections. The Engineer/Contractor shall then sign the Variance and submit it to the IRWD Project Manager for action.

**IRWD Initiates Variance.** If a Variance is initiated by IRWD's Project Manager, the IRWD Project Manager shall complete the Description of Variance and fill-in the Total Original Contract amount and Previous Variances amount (if any). The Variance shall then be given to the Engineer/Contractor to complete the Cost Impact, the Schedule Impact, and the Required Approval Determination sections. The Engineer/Contractor shall then sign the Variance and submit it to the IRWD Project Manager for action.

**Variance Processing.** Once a Variance is signed and submitted by the Engineer/Contractor, the IRWD Project Manager shall:

1. Enter the Variance's details onto a Variance Register for the project,
2. Review, sign, and date the Variance, and
3. Obtain appropriate approvals.

**Notice to Proceed.** Work covered by a Variance may proceed upon signing by the department Director. A copy of the Variance, signed by the Director, shall be the Engineer's/Contractor's Notice to Proceed with the required work.

**Contractual Authorization.** Work covered by a Variance which has been signed by the Director may require final approval from the General Manager, Committee, or Board based upon the requirements of the Procurement Policy. These approvals may be obtained after the Engineer/Contractor has been given a copy of the Variance signed by the Director (the Engineer's/Contractor's Notice to Proceed). The IRWD Project Manager shall promptly thereafter prepare a memo to the General Manager, Committee and/or Board agenda items(s) for approvals as required. Once the Variance is properly approved, it modifies the existing Engineer's/Contractor's agreement.

**Financial Authorization.** An approved Variance may require any of the following:

1. A Capital Budget increase,
2. A new Expenditure Authorization,
3. An extension to an existing Purchase Order, and/or
4. A new Purchase Order.

It is the IRWD Project Manager's responsibility to process the necessary paperwork to grant the required financial authorization

**IRVINE RANCH WATER DISTRICT  
NON-CONSULTANT SERVICES VARIANCE**

Project Title: \_\_\_\_\_ File No.: \_\_\_\_\_  
 \_\_\_\_\_ Date: \_\_\_\_\_  
 \_\_\_\_\_ Variance No.: \_\_\_\_\_  
 Project No.: \_\_\_\_\_ Project No.: \_\_\_\_\_  
 Purchase Order No.: \_\_\_\_\_

Originator:     IRWD         ENGINEER/CONTRACTOR         Other (Explain) \_\_\_\_\_

Description of Variance (*attach any back-up material*):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Engineering & Management Cost Impact:**

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
<b>Total \$ =</b>						

**Schedule Impact:**

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule

**Required Approval Determination:**

Total Original Contract	\$ _____	<input type="checkbox"/> General Manager: Single Variance less than or equal to \$30,000. <input type="checkbox"/> Committee: Single Variance greater than \$30,000, and less than or equal to \$60,000. <input type="checkbox"/> Board: Single Variance greater than \$60,000. <input type="checkbox"/> Board: Cumulative total of Variances greater than \$60,000, or 30% of the original contract, whichever is higher.
Previous Variances \$	_____	
This Variance \$	_____	
Total Sum of Variances	\$ _____	
New Contract Amount	\$ _____	
Percentage of Total Variances to Original Contract	_____ %	

ENGINEER/CONTRACTOR: \_\_\_\_\_  
 Company Name

IRVINE RANCH WATER DISTRICT

Project Engineer/Manager \_\_\_\_\_ Date \_\_\_\_\_

Department Director \_\_\_\_\_ Date \_\_\_\_\_

Engineer's/Contractor's Management \_\_\_\_\_ Date \_\_\_\_\_

General Manager/Comm./Board \_\_\_\_\_ Date \_\_\_\_\_



# EXHIBIT "B"

## IRVINE RANCH WATER DISTRICT NON-CONSULTANT SERVICES VARIANCE

Project Title: DWR Water-Energy Grant 4600011091 File No.: \_\_\_\_\_  
Water-Energy Combined Customer Programs Date: December 5, 2017  
 Project No.: 6703 (DWR Grant) Variance No.: 5  
 Purchase Order No.: \_\_\_\_\_ Project No. \_\_\_\_\_  
 Originator:  IRWD  ENGINEER/CONTRACTOR  Other (Explain) \_\_\_\_\_

Description of Variance (*attach any back-up material*): Increase to agreement amount of \$169,000 to allocate remaining grant funds by extending the One-Stop Shop for Water and Energy Efficiency Program to additional customers.. Funding is provided by a grant from the Department of Water Resources (DWR).

**Engineering & Management Cost Impact:**

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
Agreement Increase Amount for Program Continuation				\$169,000		\$169,000
<b>Total \$ =</b>						<b>\$169,000</b>

**Schedule Impact:**

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule

**Required Approval Determination:**

Total Original Contract <u>\$80,000</u> Previous Variances <u>\$ 1,450,000</u> This Variance <u>\$ 169,000</u> Total Sum of Variances <u>\$ 1,619,000</u> New Contract Amount <u>\$ 1,699,000</u> Percentage of Total Variances to Original Contract <u>2123</u> %	<input type="checkbox"/> General Manager: Single Variance less than or equal to \$30,000. <input type="checkbox"/> Committee: Single Variance greater than \$30,000, and less than or equal to \$60,000. <input type="checkbox"/> Board: Single Variance greater than \$60,000. <input checked="" type="checkbox"/> Board: Cumulative total of Variances greater than \$60,000, or 30% of the original contract, whichever is higher.
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ENGINEER/CONTRACTOR: Synergy Companies  
Company Name

IRVINE RANCH WATER DISTRICT

\_\_\_\_\_  
Project Engineer/Manager Date

\_\_\_\_\_  
Department Director Date

\_\_\_\_\_  
Engineer's/Contractor's Management Date

\_\_\_\_\_  
General Manager/Comm./Board Date

**IRVINE RANCH WATER DISTRICT  
NON-CONSULTANT SERVICES VARIANCE REGISTER**

Project Title: DWR Water-Energy Grant 4600011091 Water-Energy Combined Customer Programs

Project No.: 6703 Project Manager: Amy McNulty

Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	Changes to Exhibit 1	10/20/16	10/25/16	\$0; extend eligibility to single-family homes
1	Changes to Exhibit 2	10/20/16	10/25/16	\$0; include pricing for installation and materials of showerheads and aerators
1	Changes to Exhibit 3, Section 9.C and 10.B	10/20/16	10/25/16	\$0; extend liability insurance coverage to State and make conforming change to auto liability coverage requirements
1	Changes to Exhibit 4, Section 8.06	10/20/16	10/25/16	\$0; add drug-free workplace certification
1	Changes to Exhibit 4, Section 8.07	10/20/16	10/25/16	\$0; add State right of inspection
2	Program Expansion to approximately 350 single-family homes	1/12/17	01/23/16	\$500,000
3	Changes to Exhibit 1	03/08/17	03/08/17	\$0; extend eligibility to 1.6 or greater gpf toilets
4	Program Expansion to include additional single-family customers and expand to include multi-family customers.	07/06/17		\$950,000;
4	Changes to Exhibit 1	07/06/17		\$0; extend eligibility to multi-family homes
4	Changes to Exhibit 2	07/06/17		\$0; addition of high efficiency clothes washers
5	Changes to Exhibit 2	12/05/17		\$169,000; increase to expend remaining grant funds on additional program participants

December 11, 2017  
 Prepared by: B. Meserlian/K. Drake  
 Submitted by: P. Shields  
 Approved by: Paul A. Cook 

CONSENT CALENDAR

ENTERPRISE ASSET MANAGEMENT SUPPORT SERVICES

SUMMARY:

Following a successful implementation of the Enterprise Asset Management (EAM) software, Maximo, the District is now seeking to expand Maximo’s application throughout other District functions. Staff recommends the Board authorize the General Manager to execute a Professional Services Variance with Kayuga Solution for a not-to-exceed cost of \$176,800 to commit on-site resources for the next phases of implementation.

BACKGROUND:

Enterprise Asset Management refers to the lifecycle management of assets through its various states: planning, design, construction, commissioning, operation, maintenance, and decommissioning. An EAM system records the state and criticality of assets, identifies rehabilitation and replacement needs, and enhances the planning and scheduling of maintenance activities.

EAM Program Status:

The District’s EAM program is subdivided into multiple phases and milestones. Phase 1 of the program included pre-implementation activities that primarily focused on asset database development. Phase 2 of the program involved the implementation of the software, divided into three parts as illustrated in Table 1:

<b>EAM Program Milestones</b>	<b>Target Completion</b>	<b>Current Status</b>
<b>Phase 1: Pre-Implementation</b>		
- Asset Identification/ Inventory	August 2016	Complete
- EAM Software Selection	May 2016	Complete
- Implementer Selection Process	October 2016	Complete
<b>Phase 2: Implementation</b>		
- EAM Software Procurement	December 2016	Complete
- Part 1: Work & Asset Management - Go Live 1	October 2017	Complete
Maximo Assignment Manager - Go Live 2	March 2018	Ongoing
HQ & Ops Building Assets, including Lab	April 2018	Ongoing
NTS/ Siphon Assets	May 2018	Ongoing
Maximo Scheduler,	June 2018	-
Maximo Transportation,	October 2018	-
Biosolids Facility Assets	December 2018	Ongoing
- Part 2: Linear Assets	June 2019	-
- Part 3: Info. Services & SCADA integration	December 2019	-

The stepped approach outlined in Table 1 was adopted to expedite the development of a maintenance platform for the District's "vertical" facilities (treatment plants, pump stations, lift stations, wells, reservoirs, and valve stations). Subsequently, the focus of the EAM program will now to shift to other types of District functions and assets.

The core component of the EAM software, known as "Work and Asset Management", is complete. As of October 26, 2017, District employees can initiate, plan, schedule, track, and complete work orders within Maximo. The Maximo system is now capable of logging work and asset history on approximately 29,000 pieces of equipment that make up the District's "vertical asset" portfolio. To establish Maximo as the sole work-order system, staff will need to implement supplementary Maximo modules, while continuing to incorporate other types of District assets into the system. The Maximo modules targeted for 2018 include a robust work planning/scheduling tool known as Maximo Scheduler, and a fleet asset management tool known as Maximo Transportation. The next set of assets to be incorporated into Maximo include IRWD's two administration buildings, natural treatment sites (NTS), siphon structures, District vehicles, the Biosolids Facility, and the thousands of pipeline segments, manholes, and laterals that make up the District's linear asset portfolio.

#### EAM Support Services:

In January 2015, the services of a specialty EAM consultant, Mr. Iday Syachrani of Kayuga Solution, were retained to optimize the District's approach to EAM and to provide day-to-day management of the District's asset inventory activities. The District continued to utilize Kayuga in 2016 and 2017 for asset inventory and implementation support services. Moving forward, staff is seeking to extend these services through December 2018. Kayuga's principal consultant, who will be on-site on a part time basis, will continue to provide specialty asset management expertise, consultation, and advice to IRWD management and executive sponsors, and provide technical support towards achieving the following 2018 goals:

- Continue asset inventory activities for the Biosolids facility, the headquarters building, the Operations Center building, natural treatment sites, and siphon structures;
- Support District staff through the implementation of supplementary Maximo modules (Maximo Scheduler and Maximo Transportation); and
- Initiate Part 2 of the implementation, which incorporates IRWD linear assets (pipelines, manholes, laterals etc.) into Maximo.

Staff recommends the execution of a Professional Services Variance, in the amount of \$176,800 with Kayuga Solution for these services. Kayuga's proposal is attached as Exhibit "A".

#### FISCAL IMPACTS:

Projects 03566 and 03567 are included in the FY 2017-18 Capital Budget, and the existing budget is sufficient to fund the consulting services described above.

Project No.	Current Budget	Addition <Reduction>	Total Budget
03566	\$2,682,100	\$-0-	\$2,682,100
03567	\$2,682,100	\$-0-	\$2,682,100
Total	\$5,364,200	\$-0-	\$5,364,200

ENVIRONMENTAL COMPLIANCE:

This activity is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15060 (c)(1) Preliminary Review. An activity is not subject to CEQA if the activity will not result in a direct reasonably foreseeable indirect physical change to the environment.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on December 5, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES VARIANCE WITH KAYUGA SOLUTION FOR A NOT-TO-EXCEED COST OF \$176,800.

LIST OF EXHIBITS:

Exhibit "A" – Kayuga Proposal



November 13, 2017

Mr. Patrick Shields  
Executive Director of Operations  
3512 Michelson Dr.  
Irvine, CA 92612

Subject: **Proposal for Asset Management Program Development Assistance – Variance No. 2**

Dear Mr. Shields,

Kayuga Solution (Kayuga) is pleased to present this proposal for your consideration. Irvine Ranch Water District (IRWD) is continually strengthening its asset management program. To date, IRWD has completed the following core asset management tasks:

- Development of an asset management strategy
- Creation of an Enterprise Asset Management (EAM) implementation roadmap
- Establishment of an asset management team
- Completion of asset inventory, asset hierarchy, and asset data standards
- Selection of Maximo Computerized Maintenance Management System (CMMS)
- Development of Maximo Implementer Request for Proposal (RFP)
- Part 1 Implementation - Maximo Asset and Work Management for Vertical Assets

With the key tasks completed, IRWD is now focusing on providing operational support for Maximo users while continuing to the next phase of implementation. The next chapter of implementation includes the following:

- Second Go Live - Maximo Planning and Scheduling
- The addition of new assets (Administration Buildings, Laboratory and SCADA assets) into Maximo Database
- Continue asset inventory for new facilities (Biosolids, Natural Treatment Sites, Siphons, etc.)
- Implementation of Maximo for fleet assets
- Part 2 Implementation: Maximo Asset and Work Management for Linear Assets

Kayuga is honored to be part of IRWD's asset management team. Together, we are able to make great progress and find success in development of IRWD's asset management program. As IRWD enters into to this milestone phase, the implementation of Maximo CMMS, Kayuga proposes to continually guide and support IRWD to ensure successful achievement of this milestone. The following tasks outline Kayuga's proposed asset management scope:

**Task 1 - Asset Management Support Services**– Kayuga has been guiding and supporting the asset management program development work (e.g., asset inventory, asset data standards, asset hierarchy, Maximo CMMS implementer RFP). As the asset management program develops, IRWD will require support for asset management training, knowledge transfer, best practice process development, go live support, and other related tasks. Kayuga's asset management scope is broadly developed to support IRWD's Maximo implementation Part 1 – Maximo Asset and Work Management for Vertical Assets.

Kayuga will provide a Principal Consultant on-site who will report to and work out of the IRWD Operations Center at

3512 Michelson Drive, Irvine, CA. He will report directly to IRWD's Director of Maintenance and/or the Asset System Manager.

**Cost of Services**

The cost to provide these services will be based on an hourly rate schedule shown below. The cost shall not exceed \$176,800. Any work beyond the scope or budgeted amount will be performed, with IRWD's approval, on the proposed rate schedule as time and material.

Tasks	Iday Syachrani Principal Management Consultant	
	Hours	\$170/hr
1. Asset Management Support	1040	\$ 176,800
		<b>Total : \$ 176,800</b>

We thank you for the opportunity to submit this proposal. Please review our proposal and contact us with any questions at your convenience. Thank you again for your consideration.

Sincerely,



Colin Chung, PhD

President  
Kayuga Solution, Inc.  
colin.chung@kayugasolution.com  
(949) 300-3903

December 11, 2017  
Prepared by: L. Bonkowski  
Submitted by: C. Clary  
Approved by: Paul Cook

CONSENT CALENDAR

APPROVING DISSOLUTION OF IRWD IMPROVEMENT CORPORATION

SUMMARY:

The Irvine Ranch Water District Improvement Corporation (Corporation) was formed as a non-profit public benefit corporation for the purposes of rendering financial assistance for water, sewer and other improvements to the Irvine Ranch Water District, a California Water District. There has been no activity in the Corporation since fiscal year 2010. State tax regulations require that a Corporation must be active and operating to retain their tax exempt status. Staff has determined that the Corporation is no longer necessary and recommends taking such actions to dissolve this entity which requires the adoption of a resolution. Staff will be submitting the same action at the Special Water Improvement Corporation Board meeting on December 11, 2017.

BACKGROUND:

In August of 1986, the Corporation was formed for the purpose of financing the Irvine Ranch Water District 1986 Certificates of Participation which included a resolution between the two entities approving a trust indenture, installment sale agreement and assignment agreement, and directing certain actions with respect thereto. The 1986 Certificates of Participation were refunded and retired in 2010.

Staff has reviewed the need to continue this Corporation, and has determined that it is in the best interest to dissolve this entity. A resolution has been prepared to carry out these transactions as provided in Exhibit A. Staff also reviewed the two deeds of the Corporation which have been granted back to the Irvine Ranch Water District.

An agenda item will be submitted to the Corporation's Board of Directors on December 11, 2017 to adopt a resolution approving these actions.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

None.

RECOMMENDATION:

THAT THE FOLLOWING RESOLUTION BE ADOPTED BY TITLE:

RESOLUTION NO. 2017-

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT APPROVING  
DISSOLUTION OF IRVINE RANCH WATER DISTRICT  
IMPROVEMENT CORPORATION

IRWD Consent Calendar: Approving Dissolution of the Irvine Ranch Water District  
Improvement Corporation  
December 11, 2017  
Page 2

LIST OF EXHIBITS:

Exhibit "A" – Resolution

EXHIBIT "A"

RESOLUTION NO. 2017-

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT  
APPROVING DISSOLUTION OF IRVINE RANCH WATER DISTRICT  
IMPROVEMENT CORPORATION

WHEREAS, the Irvine Ranch Water District Improvement Corporation (the "Corporation") and the Irvine Ranch Water District ("IRWD") entered into a trust indenture, installment sale agreement and assignment agreement authorizing certain actions, including the sale of in-tract facilities by IRWD to the Corporation dated August 11, 1986, all for the purpose of forming the Irvine Ranch Water District Improvement Corporation, a domestic nonprofit corporation of the Internal Revenue Code of 1954; and

WHEREAS, the Corporation was duly formed; and

WHEREAS, the two deeds, 86-387401 and 86-387402, recorded on August 27, 1986 which were granted to the Corporation have been granted back to the Irvine Ranch Water District; and

WHEREAS, this Board of Directors deems that the Corporation is no longer needed for the purpose for rendering financial assistance, and dissolution is recommended due to its inactivity. The Bylaws of the Corporation under Section 31 provide for the dissolution by a vote of the Board of Directors, and upon dissolution, any assets discovered of the Corporation are to be distributed to the Irvine Ranch Water District.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT RESOLVES AND DETERMINES AS FOLLOWS:

Section 1. The Irvine Ranch Water District hereby votes for and approves the dissolution of the Irvine Ranch Water District Improvement Corporation and the cancellation of its articles of organization. IRWD waives notice of such matters.

Section 2. IRWD will assume the remaining tax liability, if any, of the Corporation. IRWD will also assume or guarantee payment of all of the outstanding debts and liabilities, if any, of the Corporation.

Section 3. The President, Treasurer and Secretary and each other officer of the IRWD are authorized and directed, on behalf of the IRWD, or on behalf of IRWD as a member of the Corporation, to execute and deliver any and all documents and instruments and to do and cause to be done any and all acts and things necessary or proper for carrying out the transactions contemplated by the resolution.

ADOPTED, SIGNED and APPROVED this 11<sup>th</sup> day of December 2017.

\_\_\_\_\_  
President, IRVINE RANCH WATER  
DISTRICT and the Board of Directors  
thereof

\_\_\_\_\_  
Secretary, IRVINE RANCH WATER  
DISTRICT and  
The Board of Directors thereof

APPROVED AS TO FORM:

\_\_\_\_\_  
Alfred Smith, Legal Counsel – Nossaman LLP

December 11, 2017

Prepared by: J. Davis/T. Fournier

Submitted by: R. Jacobson/C. Clary

Approved by: Paul Cook

## CONSENT CALENDAR

### NOVEMBER 2017 TREASURY REPORTS

#### SUMMARY:

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

- A. The Investment Summary Report for November 2017. This Investment Summary Report is in conformity with the 2017 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Summary of Fixed and Variable Debt as of November 30, 2017, as outlined in Exhibit "B".
- C. The Monthly Interest Rate Swap Summary as of November 30, 2017, as outlined in Exhibit "C".
- D. The November 30, 2017 Disbursement Summary of warrants 381564 through 382441, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$19,270,394 as outlined in Exhibit "D".
- E. The Summary of Payroll ACH payments in the total amount of \$1,996,983, as outlined in Exhibit "E".
- F. The Disclosure Report of Reimbursements to Board Members and Staff for November 2017, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "F".

#### FISCAL IMPACTS:

As of November 30, 2017, the book value of the investment portfolio was \$370,603,160, with a 1.12% rate of return and a market value of \$368,462,950. Based on the District's September 30, 2017 quarterly real estate investment rate of return of 8.79%, the weighted average return for the fixed income and real estate investments was 3.40%.

As of November 30, 2017, the outstanding principal amount of fixed and variable rate debt was \$684,735,000. The monthly weighted average all-in variable rate was 1.22%. Including the District's weighted average fixed rate bond issues of 3.70% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.63%.

As of November 30, 2017, the total notional amount of the interest rate swap portfolio was \$130 million of fixed payer swaps. Cash accrual in November from all swaps was negative \$488,316.

Payroll ACH payments totaled \$1,996,983, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for November totaled \$19,270,394.

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 SUMMARY OF FIXED AND VARIABLE RATE DEBT, THE MONTHLY INTEREST RATE SWAP SUMMARY FOR NOVEMBER 2017, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE NOVEMBER 2017 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$1,996,983 AND APPROVE THE NOVEMBER 2017 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 381564 THROUGH 382441 WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$19,270,394.

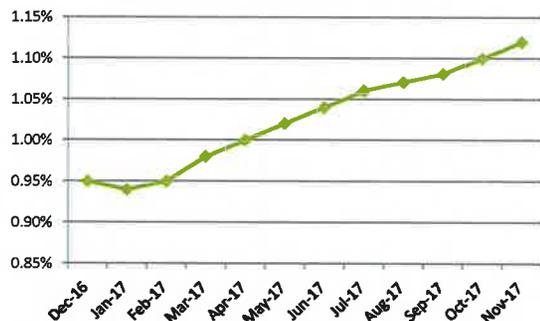
LIST OF EXHIBITS:

- Exhibit "A" – Investment Summary Report
- Exhibit "B" – Summary of Fixed and Variable Debt
- Exhibit "C" – Monthly Interest Rate Swap Summary
- Exhibit "D" – Monthly Summary of District Disbursements
- Exhibit "E" – Monthly Payroll ACH Summary
- Exhibit "F" – Disclosure of Reimbursements to Board Members and Staff

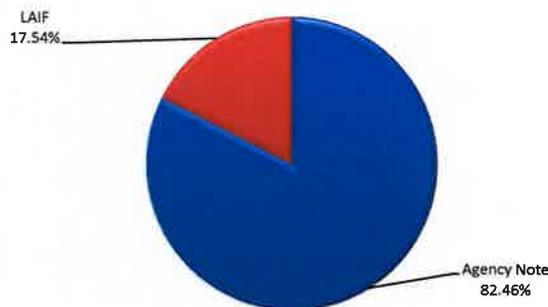
# Exhibit "A"

## Irvine Ranch Water District Investment Portfolio Summary November 2017

**Monthly Fixed Income Yield**



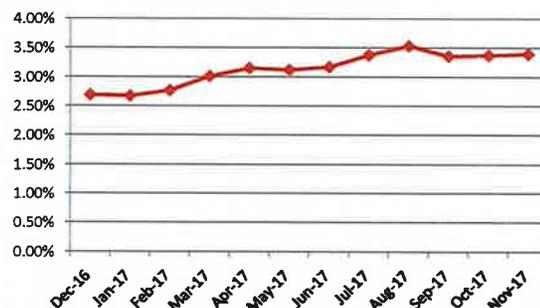
**Portfolio Distribution**



**Investment Summary**

Type	PAR	Book Value	Market Value
Agency Note	305,550,000	305,603,160	303,516,513
LAIF	65,000,000	65,000,000	64,946,437
Collateral Deposit	0	0	0
<b>Grand Total</b>	<b>370,550,000</b>	<b>370,603,160</b>	<b>368,462,950</b>

**Weighted Average Return  
Including Real Estate Portfolio**



**Maturity Distribution**



**Top Issuers**

Issuer	PAR	% Portfolio
Fed Home Loan Bank	96,000,000	25.91%
Fed Home Loan Mortgage Corp	79,000,000	21.32%
Fed Natl Mortgage Assoc	65,550,000	17.69%
State of California Treasury - LAIF	65,000,000	17.54%
Fed Farm Credit Bank	65,000,000	17.54%
Citi-Group Collateral	0	0.00%
Merrill Lynch Collateral	0	0.00%
<b>Grand Total</b>	<b>370,550,000</b>	<b>100%</b>

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

11/30/17

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 11/30/2017	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
08/23/17			12/01/17		LAIF	State of California Tsy.	\$65,000,000		1.170%	\$65,000,000.00	\$65,000,000.00	64,946,436.82	(53,563.19)
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	4,999,537.24	4,999,600.00	62.76
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	3,999,963.52	3,997,160.00	(2,803.52)
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	4,996,750.00	(3,250.00)
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	5,002,915.07	4,995,350.00	(7,565.07)
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	4,999,295.08	4,988,300.00	(10,995.08)
05/16/16	N/A	N/A	05/16/18	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.750%	0.801%	4,995,000.00	4,998,863.01	4,983,950.00	(14,913.01)
05/13/16	N/A	N/A	05/21/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.875%	0.768%	5,010,700.00	5,002,479.27	4,986,150.00	(16,329.27)
05/24/16	N/A	N/A	06/08/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	11,000,000	1.250%	0.995%	11,056,540.00	11,014,343.70	10,986,030.00	(28,313.70)
06/29/16	N/A	N/A	06/29/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.000%	0.679%	10,016,000.00	10,004,602.74	9,968,700.00	(35,902.74)
09/01/16	N/A	N/A	07/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.750%	0.928%	4,983,250.00	4,994,255.76	4,973,300.00	(20,955.76)
12/21/16	N/A	N/A	08/15/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.000%	1.245%	4,980,000.00	4,991,461.79	4,978,950.00	(12,511.79)
09/01/16	One Time	02/28/17	08/28/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.000%	1.000%	5,000,000.00	5,000,000.00	4,977,800.00	(22,200.00)
09/01/16	NA	NA	09/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.125%	0.916%	5,021,000.00	5,008,111.71	4,980,150.00	(27,961.71)
12/28/16	NA	NA	09/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.125%	1.225%	4,991,500.00	4,996,096.80	4,980,150.00	(15,946.80)
10/12/16	N/A	N/A	09/27/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	0.900%	0.952%	9,990,000.00	9,995,524.48	9,949,200.00	(46,324.48)
10/12/16	N/A	N/A	09/28/18	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.880%	0.942%	4,994,000.00	4,997,310.06	4,971,700.00	(25,610.06)
09/01/16	NA	NA	10/01/18	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.030%	0.925%	5,010,750.00	5,004,300.00	4,977,500.00	(26,800.00)
10/12/16	N/A	N/A	10/12/18	Aaa/NR/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.000%	1.041%	9,992,000.00	9,996,328.77	9,947,300.00	(49,028.77)
10/12/16	N/A	N/A	11/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	10,000,000	1.625%	0.956%	10,140,360.00	10,068,913.87	9,996,300.00	(72,613.87)
12/21/16	N/A	N/A	12/05/18	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.100%	1.319%	4,978,900.00	5,041,380.58	4,973,650.00	(67,730.58)
09/01/16	NA	NA	12/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.750%	0.941%	5,091,300.00	5,021,897.75	5,001,750.00	(20,147.75)
12/27/16	NA	NA	12/14/18	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.750%	1.320%	5,041,536.20	4,989,095.38	5,001,750.00	12,654.62
09/01/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.009%	4,993,000.00	4,996,623.16	4,954,300.00	(42,323.16)
10/26/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.035%	4,990,500.00	4,995,042.98	4,954,300.00	(40,742.98)
10/26/16	One Time	07/30/18	01/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.950%	1.040%	4,990,000.00	4,994,782.08	4,954,300.00	(40,482.08)
10/12/16	Continuous after	02/12/18	02/12/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.050%	1.093%	9,990,000.00	9,994,630.72	9,907,100.00	(87,530.72)
09/01/16	NA	NA	03/08/19	Aaa/AA+/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	1.500%	0.964%	5,066,500.00	5,033,467.32	4,985,250.00	(48,217.32)
10/12/16	N/A	N/A	03/29/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%	4,999,950.00	4,999,971.99	4,954,050.00	(45,921.99)
10/12/16	N/A	N/A	04/15/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.125%	0.992%	10,032,800.00	10,018,640.44	9,913,400.00	(105,240.44)
10/31/16	N/A	N/A	04/26/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.060%	4,998,750.00	4,999,294.38	4,950,300.00	(48,994.38)
09/01/16	One Time	08/28/17	05/28/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.030%	1.048%	4,997,550.00	4,998,668.32	4,946,150.00	(52,518.32)
09/01/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	0.987%	5,087,400.00	5,048,173.23	4,987,000.00	(61,173.23)
10/12/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	1.103%	5,068,515.88	5,040,758.16	4,987,000.00	(53,758.16)
10/12/16	NA	NA	07/19/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.875%	1.098%	4,969,652.90	4,981,521.32	4,924,300.00	(57,221.32)
09/01/16	NA	NA	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,997,553.31	4,944,900.00	(52,653.31)
09/01/16	One Time	08/28/17	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.160%	4,998,500.00	4,999,126.95	4,942,000.00	(57,126.95)
09/01/16	NA	NA	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,417.97	4,939,850.00	(59,567.97)

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

11/30/17

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 11/30/2017	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
09/28/16	Quarterly	03/09/17	09/09/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.142%	4,997,500.00	4,998,493.98	4,933,300.00	(65,193.98)
09/28/16	Continuous after	12/27/16	09/27/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.189%	5,001,500.00	5,000,911.79	4,941,250.00	(59,661.79)
10/12/16	Continuous after	10/03/17	10/03/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.125%	1.160%	9,989,780.00	9,993,497.22	9,864,600.00	(128,897.22)
10/12/16	Continuous after	10/11/17	10/11/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.120%	1.205%	9,975,000.00	9,984,026.51	9,861,000.00	(123,026.51)
11/08/16	Quarterly	05/08/17	11/08/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.250%	1.245%	5,000,750.00	5,000,484.25	4,929,750.00	(70,734.25)
11/28/16	NA	NA	11/15/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.375%	1.440%	4,990,550.00	4,993,764.05	4,944,700.00	(49,064.05)
11/28/16	Quarterly	05/25/17	11/25/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.400%	1.503%	4,985,000.00	4,990,054.95	4,946,750.00	(43,304.95)
12/12/16	NA	NA	12/12/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.450%	1.440%	5,001,450.00	5,000,980.80	4,957,950.00	(43,030.80)
12/21/16	NA	NA	12/19/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.500%	1.621%	4,982,350.00	4,987,921.13	4,962,300.00	(25,621.13)
10/16/17	NA	NA	02/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.612%	4,987,025.00	4,987,715.00	4,955,850.00	(31,865.00)
10/03/17	NA	NA	04/20/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.375%	1.630%	4,968,350.00	4,970,357.90	4,940,400.00	(29,957.90)
11/21/17	Continuous after	02/20/18	05/20/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.830%	1.930%	4,987,500.00	4,968,335.08	4,983,400.00	15,064.92
11/10/17	NA	NA	06/22/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.750%	4,968,000.00	4,968,703.66	4,946,750.00	(21,953.66)
10/31/17	One Time	10/30/18	10/30/20	Aaa/NR/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,550,000	1.850%	1.850%	5,550,000.00	5,550,000.00	5,515,923.00	(34,077.00)
11/30/17	NA	NA	11/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.850%	1.964%	4,983,550.00	4,983,565.09	4,976,900.00	(6,665.09)
<b>TOTAL INVESTMENTS</b>							<b>\$370,550,000</b>			<b>\$370,823,059.98</b>	<b>\$370,603,160.30</b>	<b>\$368,462,949.82</b>	

Petty Cash  
Ck Balance Bank of America

3,400.00  
941,091.65  
\$371,767,551.63

<sup>(1)</sup> LAIF market value is as of the most recent quarter-end as reported by LAIF.	Outstanding Variable Rate Debt	\$284,200,000	
Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing.	Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps)	\$154,200,000	
<sup>(2)</sup> Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers	Investment Balance:	\$371,767,552	
<sup>(3)</sup> Real estate rate of return is based on most recent quarter end return	Investment to Variable Rate Debt Ratio:	241%	
<sup>(4)</sup> Swap Collateral Deposits assumes 6 month maturity, dependent on interest rate changes	Portfolio - Average Number of Days To Maturity <sup>(4)</sup>	389	
	<b>Investment Portfolio</b>	<b>Real Estate<sup>(3)</sup> Portfolio</b>	<b>Weighted Avg. Return</b>
	<b>November</b>	<b>8.79%</b>	<b>3.40%</b>
	<b>October</b>	<b>8.79%</b>	<b>3.38%</b>
	<b>Change</b>	<b>0.02%</b>	<b>0.02%</b>

This Investment Summary Report is in conformity with the 2017 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.  
\*S - Step up

IRVINE RANCH WATER DISTRICT  
SUMMARY OF MATURITIES

11/30/17

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
11/17	\$65,000,000	17.54%	\$65,000,000				
12/17	5,000,000	1.35%		5,000,000			
01/18	4,000,000	1.08%		4,000,000			
02/18	5,000,000	1.35%		5,000,000			
03/18	5,000,000	1.35%		5,000,000			
04/18	5,000,000	1.35%		5,000,000			
05/18	10,000,000	2.70%		10,000,000			
06/18	21,000,000	5.67%		21,000,000			
07/18	5,000,000	1.35%		5,000,000			
08/18	10,000,000	2.70%		10,000,000			
09/18	25,000,000	6.75%		25,000,000			
10/18	15,000,000	4.05%		15,000,000			
<b>SUB-TOTAL</b>	<b>\$175,000,000</b>	<b>47.23%</b>	<b>\$65,000,000</b>	<b>\$110,000,000</b>			
<b>13 Months - 3 YEARS</b>							
11/01/18 - 1/31/2019	40,000,000	10.79%		40,000,000			
2/01/19 - 4/30/2019	35,000,000	9.45%		35,000,000			
5/01/19 - 7/31/2019	25,000,000	6.75%		25,000,000			
8/01/2019 - 10/31/19	40,000,000	10.79%		40,000,000			
11/01/19 - 1/31/2020	25,000,000	6.75%		25,000,000			
2/01/2020 - 4/30/2020	10,000,000	2.70%		10,000,000			
05/01/2020 - 07/31/2020	10,000,000	2.70%		10,000,000			
08/01/2020 -10/31/2020	5,550,000	1.50%		5,550,000			
11/01/2020 -1/31/2021	5,000,000	1.35%		5,000,000			
	-						
<b>TOTALS</b>	<b>\$370,550,000</b>	<b>100.00%</b>	<b>\$65,000,000</b>	<b>\$305,550,000</b>			

% OF PORTFOLIO

17.54%

82.46%

**IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT**  
**INVESTMENT ACTIVITY**  
**Nov-17**

**MATURITIES/SALES/CALLS**

**PURCHASES**

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
11/21/2017	FHLB - Note	\$10,000,000	0.86%	11/10/2017	6/22/2020	FNMA - Note	\$5,000,000	1.75%
				11/21/2017	5/20/2020	FFCB - Note	\$5,000,000	1.93%
				11/30/2017	11/24/2020	FFCB - Note	\$5,000,000	1.96%

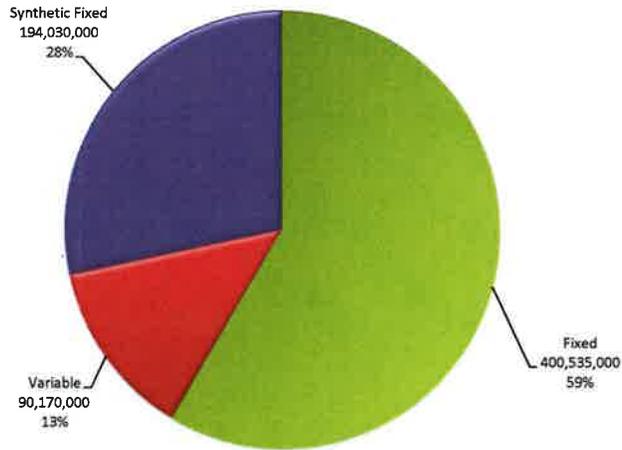
Irvine Ranch Water District  
 Summary of Real Estate - Income Producing Investments  
 9/30/2017

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	ESTIMATED MARKET VALUE 9/30/2017	RATE OF RETURN QUARTER ENDED 9/30/2017
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 147,507,750	18.69%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 28,934,076	8.56%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 9,571,680	7.12%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 7,803,000	5.57%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 10,820,160	8.66%
<b>Total - Income Properties</b>				<b>\$ 72,569,826</b>	<b>\$ 204,636,666</b>	<b>14.18%</b>
<b>OTHER REAL ESTATE DESCRIPTION</b>						
Serrano Summit - Promissory Note	Sep-17	NA	NA	\$ 81,600,000	\$ 81,600,000	4.00%
<b>Total - Income Producing Real Estate Investments</b>				<b>\$ 154,169,826</b>	<b>\$ 286,236,666</b>	<b>8.79%</b>

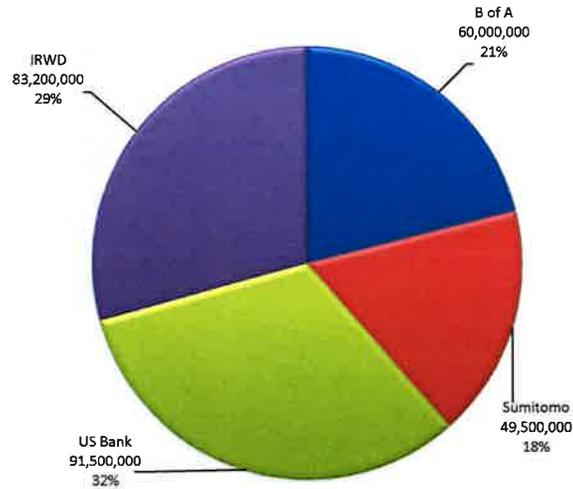
Exhibit "B"

Irvine Ranch Water District  
 Summary of Fixed and Variable Rate Debt  
 November 2017

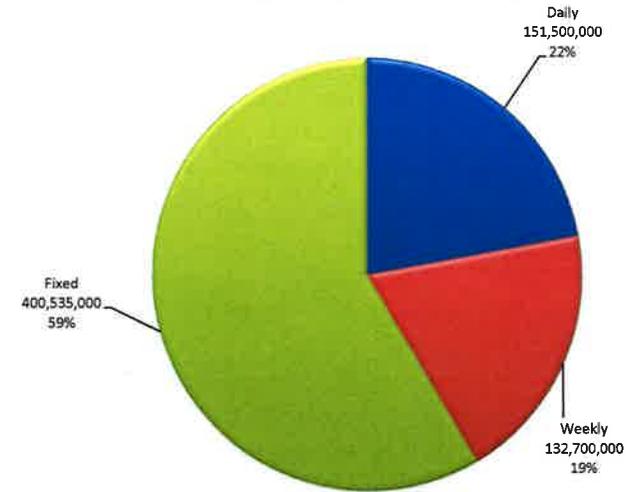
Current Debt Mix By Type



Letters of Credit / Support



Current Debt Rate Reset



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining		Letter of Credit	Rmkt Agent	Mode	Reset
			Principal	Percent				
Series 1993	05/19/93	04/01/33	\$31,500,000	4.60%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$49,500,000	7.23%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$49,920,000	7.29%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$33,280,000	4.86%	IRWD	Morgan	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$60,000,000	8.76%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$60,000,000	8.76%	B of A	Goldman	Variable	Daily
2010 Refunding Cops	02/23/10	03/01/20	\$5,390,000	0.79%	N/A	N/A	Fixed	Fixed
2016 COPS	09/01/16	03/01/46	\$116,745,000	17.05%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	25.56%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	15.10%	N/A	N/A	Fixed	Fixed
<b>Total</b>			<b>\$684,735,000</b>	<b>100.00%</b>				

IRVINE RANCH WATER DISTRICT  
SUMMARY OF FIXED & VARIABLE RATE DEBT

November-17

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION							TRUSTEE INFORMATION							
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee	
SERIES 1993	05/19/93	04/01/33	APR 1 (2014)	5th Bus Day	\$36,300,000	\$31,500,000	US BANK	05/07/15	11/07/18	Aa3/VMIG1	AA-/A-1+	N/R	\$31,924,603	0.3300%	\$105,351	BAML	DAILY	0.10%	\$31,500	BANK OF NY	
SERIES 2008-A Refunding	04/24/08	07/01/35	JUL 1	5th Bus Day	\$60,215,000	\$49,500,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/F1	\$50,232,329	0.3150%	\$158,232	BAML	WED	0.07%	\$34,650	BANK OF NY	
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus Day	\$60,545,000	\$49,920,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$62,400	BANK OF NY	
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus Day	\$40,370,000	\$33,280,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Morgan S	WED	0.13%	\$41,600	BANK OF NY	
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus Day	\$75,000,000	\$60,000,000	US BANK	04/01/11	12/22/20	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$60,670,685	0.4100%	\$248,750	US Bank	DAILY	0.07%	\$42,000	US BANK	
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus Day	\$75,000,000	\$60,000,000	B of A	04/01/11	07/15/19	A1/VMIG 1	A/A-1	A1/F1+	\$60,670,685	0.4000%	\$242,683	Goldman	DAILY	0.10%	\$60,000	US BANK	
					<b>\$349,430,000</b>	<b>\$284,200,000</b>	<b>SUB-TOTAL VARIABLE RATE DEBT</b>							<b>\$203,498,301</b>	<b>0.3711%</b>	<b>\$755,016</b>					
														(Wt. Avg)			(Wt. Avg)				
FIXED RATE ISSUES																					
2010 REFUNDING COPS	02/23/10	03/01/20	Mar -1	MAR/SEPT	\$85,145,000	\$5,390,000	N/A	N/A	N/A	Aa1	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	MAY (2025)	MAY/NOV	\$175,000,000	\$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
2016 COPS	09/01/16	03/01/46	Mar - 1	MAR/SEPT	\$116,745,000	\$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
SERIES 2016	10/12/16	02/01/46	Feb - 1	FEB/AUG	\$103,400,000	\$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
					<b>\$480,290,000</b>	<b>\$400,535,000</b>	<b>SUB-TOTAL FIXED RATE DEBT</b>														
					<b>\$829,720,000</b>	<b>\$684,735,000</b>	<b>TOTAL - FIXED &amp; VARIABLE RATE DEBT</b>														

Remarketing Agents			GO VS COP's		
Goldman	109,920,000	39%	GO:	562,600,000	82%
Morgan Stanley	33,280,000	12%	COPS:	122,135,000	18%
BAML	81,000,000	29%	Total	<b>684,735,000</b>	
US Bank	60,000,000	21%			
	<b>284,200,000</b>				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	49,500,000	Daily Issues	151,500,000 22%
BANK OF AMERICA	60,000,000	Weekly Issues	49,500,000 7%
US BANK	91,500,000	ITN Issues	83,200,000 12%
	<b>201,000,000</b>	Sub-Total	<b>284,200,000</b>
		Fixed Rate Issues	400,535,000 58%
		Sub-Total - Fixed	<b>400,535,000</b>
		TOTAL DEBT	
		FIXED & VAR.	<b>684,735,000 100%</b>

IRVINE RANCH WATER DISTRICT  
SUMMARY OF DEBT RATES  
Nov-17

Rmkt Agent	GOLDMAN DAILY	GOLDMAN WEEKLY	MORGAN STANLEY WEEKLY	MERRILL LYNCH DAILY	MERRILL LYNCH WEEKLY	US BANK DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	1993	2008-A	2009-A
Par Amount	60,000,000	49,920,000	33,280,000	31,500,000	49,500,000	60,000,000
Bank	BOFA	(SIFMA+7)	(SIFMA+7)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday		Wednesday	
11/1/2017	0.79%	0.99%	0.99%	0.76%	0.85%	0.80%
11/2/2017	0.77%	0.99%	0.99%	0.76%	0.83%	0.78%
11/3/2017	0.77%	0.99%	0.99%	0.72%	0.83%	0.76%
11/4/2017	0.77%	0.99%	0.99%	0.72%	0.83%	0.76%
11/5/2017	0.77%	0.99%	0.99%	0.72%	0.83%	0.76%
11/6/2017	0.72%	0.99%	0.99%	0.75%	0.83%	0.76%
11/7/2017	0.74%	0.99%	0.99%	0.75%	0.83%	0.74%
11/8/2017	0.74%	0.99%	0.99%	0.77%	0.83%	0.74%
11/9/2017	0.74%	0.99%	0.99%	0.78%	0.85%	0.75%
11/10/2017	0.74%	0.99%	0.99%	0.79%	0.85%	0.77%
11/11/2017	0.74%	0.99%	0.99%	0.79%	0.85%	0.77%
11/12/2017	0.74%	0.99%	0.99%	0.79%	0.85%	0.77%
11/13/2017	0.78%	0.99%	0.99%	0.80%	0.85%	0.77%
11/14/2017	0.80%	0.99%	0.99%	0.80%	0.85%	0.80%
11/15/2017	0.81%	0.99%	0.99%	0.84%	0.85%	0.81%
11/16/2017	0.81%	1.01%	1.01%	0.83%	0.86%	0.82%
11/17/2017	0.82%	1.01%	1.01%	0.82%	0.86%	0.82%
11/18/2017	0.82%	1.01%	1.01%	0.82%	0.86%	0.82%
11/19/2017	0.82%	1.01%	1.01%	0.82%	0.86%	0.82%
11/20/2017	0.82%	1.01%	1.01%	0.82%	0.86%	0.82%
11/21/2017	0.82%	1.01%	1.01%	0.81%	0.86%	0.82%
11/22/2017	0.81%	1.01%	1.01%	0.80%	0.86%	0.82%
11/23/2017	0.81%	1.03%	1.03%	0.80%	0.88%	0.82%
11/24/2017	0.81%	1.03%	1.03%	0.80%	0.88%	0.82%
11/25/2017	0.81%	1.03%	1.03%	0.80%	0.88%	0.82%
11/26/2017	0.81%	1.03%	1.03%	0.80%	0.88%	0.82%
11/27/2017	0.80%	1.03%	1.03%	0.83%	0.88%	0.82%
11/28/2017	0.79%	1.03%	1.03%	0.83%	0.88%	0.82%
11/29/2017	0.82%	1.03%	1.03%	0.84%	0.88%	0.80%
11/30/2017	0.82%	1.04%	1.04%	0.83%	0.89%	0.83%
<b>Avg Interest Rates</b>	<b>0.79%</b>	<b>1.01%</b>	<b>1.01%</b>	<b>0.79%</b>	<b>0.86%</b>	<b>0.79%</b>
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.40%			0.33%	0.32%	0.41%
<b>All-In Rate</b>	<b>1.29%</b>	<b>1.13%</b>	<b>1.13%</b>	<b>1.22%</b>	<b>1.24%</b>	<b>1.28%</b>
Par Amount		109,920,000	33,280,000		81,000,000	60,000,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	53.31%	151,500,000	1.27%	0.79%
Weekly	46.69%	132,700,000	1.17%	0.95%
<b>Fixed</b>	<b>100.00%</b>	<b>\$ 284,200,000</b>	<b>1.22%</b>	<b>0.87%</b>
COPS 2010	1.35%	5,390,000	3.82%	
COPS 2016	29.15%	116,745,000	2.90%	
BABS 2010	43.69%	175,000,000	4.46%	(1)
SERIES 2016	25.82%	103,400,000	3.32%	
	<b>100.00%</b>	<b>\$ 400,535,000</b>	<b>3.70%</b>	
<b>All-In Debt Rate Including \$130 Million Notional Amount of Swaps</b>				<b>3.63%</b>

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 6.8%

**IRVINE RANCH WATER DISTRICT  
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL  
November 30, 2017**

Exhibit "C"

								Prior Mo.	Current Mo.	12-Mo Avg					
								LIBOR Avg %	1.24%	1.29%	1.05%				
Current Fiscal Year Active Swaps								Cash Flow				(Since 6/06)	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		
<b>Fixed Payer Swaps - By Effective Date</b>															
6/4/2006	6/4/2019	1.5	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(88,301)	(79,206)	\$ (412,294)	\$ (11,335,587)	\$ 18,693,780	\$ (1,306,220)		
6/4/2006	6/4/2019	1.5	CG	20,000,000	FXP	LIBOR	6.200%	(88,301)	(79,206)	(412,294)	(11,335,587)	18,694,498	(1,305,502)		
6/17/2006	6/17/2019	1.5	CG	30,000,000	FXP	LIBOR	6.140%	(130,789)	(117,149)	(610,448)	(16,813,105)	28,025,196	(1,974,804)		
3/10/2007	3/10/2029	11.3	ML	30,000,000	FXP	LIBOR	5.687%	(118,720)	(106,377)	(554,599)	(15,160,406)	20,097,921	(9,902,079)		
3/10/2007	3/10/2029	11.3	CG	30,000,000	FXP	LIBOR	5.687%	(118,720)	(106,377)	(554,599)	(15,160,406)	20,097,551	(9,902,449)		
Totals/Weighted Avgs		6.0		\$ 130,000,000			5.949%	\$ (544,831)	\$ (488,316)	\$ (2,544,234)	\$ (69,805,090)	\$ 105,608,946	\$ (24,391,054)		
<b>Total Current Year Active Swaps</b>				\$ 130,000,000				\$ (544,831)	\$ (488,316)	\$ (2,544,234)	\$ (69,805,090)	\$ 105,608,946	\$ (24,391,054)		

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
<b>Total Current Year Terminated Swaps</b>								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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
<b>Total Current Year Active &amp; Terminated Swaps</b>				\$ 130,000,000				\$ (544,831)	\$ (488,316)	\$ (2,544,234)	\$ (69,805,090)	\$ 105,608,946	\$ (24,391,054)

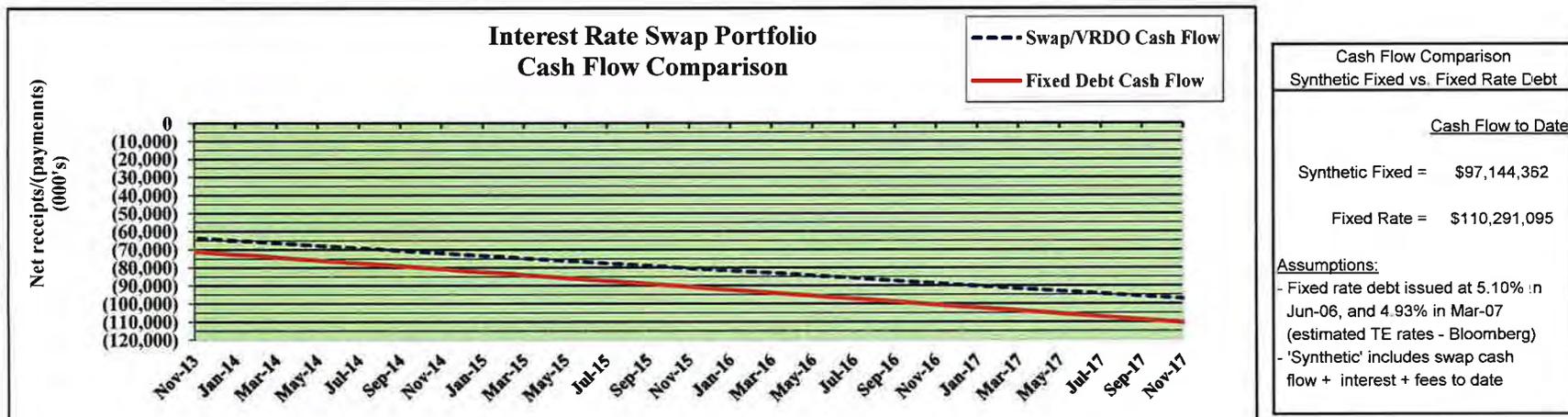


Exhibit "D"

IRWD Ledger Upgrade

Void Payment Register

Report Date: 04-DEC-2017 07:41

Include Zero Amount Payments: Yes  
 Display Payee Address: No

Period From: 01-NOV-17

Page: 1  
 To: 30-NOV-17  
 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						
378948	20-JUL-17	ROBBINS, MARY	PAY		16.87	13-NOV-17
378990	20-JUL-17	YANG, TINA	PAY		51.75	13-NOV-17
379092	27-JUL-17	LU, YAN ZHENG	PAY		716.33	13-NOV-17
379099	27-JUL-17	MENG, LILI	PAY		17.51	13-NOV-17
379165	27-JUL-17	YOON, MEENA	PAY		44.85	13-NOV-17
381867	09-NOV-17	LUKASH, ELENA	PAY		73.38	10-NOV-17
381994	16-NOV-17	ATHENS SERVICES	LOS ANGELES		1,954.50	21-NOV-17

Payment Document Subtotal 2,875.19

Bank Account Subtotal 2,875.19

Report Total 2,875.19

Report Count: 7

Voids

\*\*\* End of Report \*\*\*

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381564		02-NOV-17	Akiyoshi, Eric S (Eric)		34.12	02-NOV-17	34.12	Reconciled
381565		02-NOV-17	Compton, Christine A		282.16			Negotiable
381566		02-NOV-17	Cortez, Malcolm A (Malcolm)		90.60	06-NOV-17	90.60	Reconciled
381567		02-NOV-17	Daniel, Matthew (Matthew)		105.00	08-NOV-17	105.00	Reconciled
381568		02-NOV-17	Dillman, Tyler		168.00	07-NOV-17	168.00	Reconciled
381569		02-NOV-17	Duffert, Dominic		300.00	03-NOV-17	300.00	Reconciled
381570		02-NOV-17	Hatch, Lauren		190.00			Negotiable
381571		02-NOV-17	Jacobson, Robert C (Rob)		43.13			Negotiable
381572		02-NOV-17	Marshall, Matt I (Matt)		105.00	07-NOV-17	105.00	Reconciled
381573		02-NOV-17	Nash, Joel		68.48	06-NOV-17	68.48	Reconciled
381574		02-NOV-17	Oldewage, Lars D (Lars)		96.49	07-NOV-17	96.49	Reconciled
381575		02-NOV-17	Saini, Mohit		713.06	02-NOV-17	713.06	Reconciled
381576		02-NOV-17	Schreiner, Terrance M Jr (Terrance)		42.52			Negotiable
381577		02-NOV-17	Torres, Richard P (Richard)		95.00	13-NOV-17	95.00	Reconciled
381578		02-NOV-17	Wang, Peter (Peter)		262.55	07-NOV-17	262.55	Reconciled
381579		02-NOV-17	A & Y ASPHALT CONTRACTORS INC		15,777.00	13-NOV-17	15,777.00	Reconciled
381580		02-NOV-17	ADS LLC		12,747.30	13-NOV-17	12,747.30	Reconciled
381581		02-NOV-17	AEGIS ENGINEERING MANAGEMENT, INC.		10,368.75	13-NOV-17	10,368.75	Reconciled
381582		02-NOV-17	AIR TECHNOLOGY LABORATORIES		503.00	15-NOV-17	503.00	Reconciled
381583		02-NOV-17	AIRGAS, INC.		1,842.01	06-NOV-17	1,842.01	Reconciled
381584		02-NOV-17	ALEXANDER'S CONTRACT SERVICES, INC.		115,730.48	14-NOV-17	115,730.48	Reconciled
381585		02-NOV-17	ALLIANT INSURANCE SERVICES, INC		9,591.33	09-NOV-17	9,591.33	Reconciled
381586		02-NOV-17	ALMUHAITHIF, ZIYAD		13.79			Negotiable
381587		02-NOV-17	ALOMAR, HALA		193.65	30-NOV-17	193.65	Reconciled
381588		02-NOV-17	ALPHA TRAFFIC SERVICES, INC.		570.00	07-NOV-17	570.00	Reconciled
381589		02-NOV-17	ANTONIA R. MONZON		1,950.00	06-NOV-17	1,950.00	Reconciled
381590		02-NOV-17	AT&T		52.44	08-NOV-17	52.44	Reconciled
381591		02-NOV-17	AT&T		307.49	08-NOV-17	307.49	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381592		02-NOV-17	BANK OF AMERICA		24,213.85	13-NOV-17	24,213.85	Reconciled
381593		02-NOV-17	BANK OF NEW YORK MELLON TRUST COMPANY NA		1,500.00	08-NOV-17	1,500.00	Reconciled
381594		02-NOV-17	BARRIOS, ROBERT		47.82	06-NOV-17	47.82	Reconciled
381595		02-NOV-17	BATTERIES PLUS AND BATTERIES PLUS BULBS		1,171.89	07-NOV-17	1,171.89	Reconciled
381596		02-NOV-17	BEE EMERGENCY RESPONSE TEAM		525.00	07-NOV-17	525.00	Reconciled
381597		02-NOV-17	BEN'S ASPHALT, INC.		1,626.97	13-NOV-17	1,626.97	Reconciled
381598		02-NOV-17	BEST DRILLING AND PUMP, INC.		16,000.00	13-NOV-17	16,000.00	Reconciled
381599		02-NOV-17	BILL'S SWEEPING SERVICE INC		750.00	09-NOV-17	750.00	Reconciled
381600		02-NOV-17	BLACK & VEATCH CORPORATION		267,853.92	14-NOV-17	267,853.92	Reconciled
381601		02-NOV-17	BOWIE, ARNESON, WILES & GIANNONE		4,942.00	15-NOV-17	4,942.00	Reconciled
381602		02-NOV-17	BRITHINEE ELECTRIC		20,098.14	13-NOV-17	20,098.14	Reconciled
381603		02-NOV-17	BROWN AND CALDWELL		1,752.90	06-NOV-17	1,752.90	Reconciled
381604		02-NOV-17	C WELLS PIPELINE MATERIALS INC		1,245.59	10-NOV-17	1,245.59	Reconciled
381605		02-NOV-17	CALIFORNIA BARRICADE RENTAL, INC.		6,057.50	06-NOV-17	6,057.50	Reconciled

381606	02-NOV-17	CALSENSE	781.19	08-NOV-17	781.19	Reconciled
381607	02-NOV-17	CANON SOLUTIONS AMERICA, INC.	1,084.26	06-NOV-17	1,084.26	Reconciled
381608	02-NOV-17	CHANG, CHUN	14.73	13-NOV-17	14.73	Reconciled
381609	02-NOV-17	CHAPMAN UNIVERSITY	1,295.00	28-NOV-17	1,295.00	Reconciled
381610	02-NOV-17	CHEM TECH INTERNATIONAL INC	2,365.00	20-NOV-17	2,365.00	Reconciled
381611	02-NOV-17	CHO, SUNG	8.63			Negotiable
381612	02-NOV-17	CITY OF NEWPORT BEACH	960.00	09-NOV-17	960.00	Reconciled
381613	02-NOV-17	CITY OF NEWPORT BEACH	432.08	08-NOV-17	432.08	Reconciled
381614	02-NOV-17	CITY OF ORANGE	146.33	07-NOV-17	146.33	Reconciled
381615	02-NOV-17	CITY OF TUSTIN	286,723.66	06-NOV-17	286,723.66	Reconciled
381616	02-NOV-17	CLA-VAL COMPANY	23,989.55	14-NOV-17	23,989.55	Reconciled
381617	02-NOV-17	COUNTY OF ORANGE	81,834.38	13-NOV-17	81,834.38	Reconciled
381618	02-NOV-17	COUNTY OF RIVERSIDE	5,164.66	09-NOV-17	5,164.66	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381619		02-NOV-17	COX COMMUNICATIONS, INC.		253.25	06-NOV-17	253.25	Reconciled
381620		02-NOV-17	CPI-INTERNATIONAL, INC		519.60	06-NOV-17	519.60	Reconciled
381621		02-NOV-17	CR & R INCORPORATED		101.84	08-NOV-17	101.84	Reconciled
381622		02-NOV-17	CULLIGAN OF SANTA ANA		9,025.65	07-NOV-17	9,025.65	Reconciled
381623		02-NOV-17	DATASITE INC		6,012.00	13-NOV-17	6,012.00	Reconciled
381624		02-NOV-17	DC FROST ASSOCIATES, INC.		3,960.54	07-NOV-17	3,960.54	Reconciled
381625		02-NOV-17	DENALI WATER SOLUTIONS LLC		6,556.73	06-NOV-17	6,556.73	Reconciled
381626		02-NOV-17	DIRECTV INC		118.53	09-NOV-17	118.53	Reconciled
381627		02-NOV-17	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY		2,502.48	07-NOV-17	2,502.48	Reconciled
381628		02-NOV-17	DMS FACILITY SERVICES, INC.		18,251.93	13-NOV-17	18,251.93	Reconciled
381629		02-NOV-17	EAGLE AERIAL PHOTOGRAPHY, INC.		9,850.00	06-NOV-17	9,850.00	Reconciled
381630		02-NOV-17	EI&C ENGINEERING INC		47,135.00	27-NOV-17	47,135.00	Reconciled
381631		02-NOV-17	EL PASEO OWNERS ASSOCIATION		7,637.84	30-NOV-17	7,637.84	Reconciled
381632		02-NOV-17	ELECTRICAL SYSTEMS ENGINEERING CO		2,500.00	08-NOV-17	2,500.00	Reconciled
381633		02-NOV-17	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		6,738.75	07-NOV-17	6,738.75	Reconciled
381634		02-NOV-17	ENVIRONMENTAL EQUIPMENT SUPPLY		164.97	06-NOV-17	164.97	Reconciled
381635		02-NOV-17	ENVIRONMENTAL SCIENCE ASSOCIATES		11,478.35	14-NOV-17	11,478.35	Reconciled
381636		02-NOV-17	EXECUTIVE LIGHTING & ELECTRIC		7,029.00	07-NOV-17	7,029.00	Reconciled
381637		02-NOV-17	FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC. INC.		18,110.00	14-NOV-17	18,110.00	Reconciled
381638		02-NOV-17	FARRELL & ASSOCIATES		243.18	07-NOV-17	243.18	Reconciled
381639		02-NOV-17	FEDEX		454.63	07-NOV-17	454.63	Reconciled
381640		02-NOV-17	FELLING TRAILERS, INC.		4,747.92	07-NOV-17	4,747.92	Reconciled
381641		02-NOV-17	FIERRO, SERGIO D		3,324.99	10-NOV-17	3,324.99	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381642		02-NOV-17	FIRST CHOICE SERVICES		1,390.03	08-NOV-17	1,390.03	Reconciled
381643		02-NOV-17	FISHER SCIENTIFIC COMPANY LLC		1,530.19	06-NOV-17	1,530.19	Reconciled
381644		02-NOV-17	FREEWAY MACHINE & WELDING SHOP		446.25	08-NOV-17	446.25	Reconciled
381645		02-NOV-17	FRONTIER CALIFORNIA INC.		270.94	13-NOV-17	270.94	Reconciled
381646		02-NOV-17	FUSCOE		1,450.00	08-NOV-17	1,450.00	Reconciled

381647	02-NOV-17	ENGINEERING, INC.	2,487.23	08-NOV-17	2,487.23	Reconciled
381648	02-NOV-17	GANAHL LUMBER CO.	1,292.58	06-NOV-17	1,292.58	Reconciled
381649	02-NOV-17	GAYDOS, TERRI	701.12	08-NOV-17	701.12	Reconciled
381650	02-NOV-17	GARZA INDUSTRIES, INC	7,836.01	08-NOV-17	7,836.01	Reconciled
381651	02-NOV-17	GENTERRA	1,676.00	06-NOV-17	1,676.00	Reconciled
381652	02-NOV-17	CONSULTANTS INC	15,753.42	14-NOV-17	15,753.42	Reconciled
381653	02-NOV-17	GOLDMAN, SACHS & CO. LLC	3,844.04	06-NOV-17	3,844.04	Reconciled
381654	02-NOV-17	GRAINGER	2,904.21	06-NOV-17	2,904.21	Reconciled
381655	02-NOV-17	GRAYBAR ELECTRIC COMPANY	23.63	07-NOV-17	23.63	Reconciled
381656	02-NOV-17	HAAKER EQUIPMENT COMPANY	338.31	09-NOV-17	338.31	Reconciled
381657	02-NOV-17	HAAKER EQUIPMENT COMPANY	10.83			Negotiable
381658	02-NOV-17	HARBINGER HOMES INC.	551.06	22-NOV-17	551.06	Reconciled
381659	02-NOV-17	HATHAWAY DINWIDDIE HDR ENGINEERING INC	2,410.00	06-NOV-17	2,410.00	Reconciled
381660	02-NOV-17	HELP/SYSTEMS, LLC	9,500.00	06-NOV-17	9,500.00	Reconciled
381661	02-NOV-17	HELPMATES STAFFING SERVICES	21,847.00	13-NOV-17	21,847.00	Reconciled
381662	02-NOV-17	HILL BROTHERS CHEMICAL COMPANY	9,063.51	07-NOV-17	9,063.51	Reconciled
381663	02-NOV-17	HINSILBLON LTD	1,810.00	16-NOV-17	1,810.00	Reconciled
381664	02-NOV-17	HOME DEPOT USA INC	1,587.81	07-NOV-17	1,587.81	Reconciled
381665	02-NOV-17	IDEXX	8,450.68	06-NOV-17	8,450.68	Reconciled
381666	02-NOV-17	DISTRIBUTION, INC	293,137.10	16-NOV-17	293,137.10	Reconciled
381667	02-NOV-17	IRVINE COMMUNITY DEVELOPMENT COMPANY LLC	5,893.97	06-NOV-17	5,893.97	Reconciled
		IRVINE PIPE & SUPPLY INC				

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381668		02-NOV-17	JAMES, ADAM		5.15	13-NOV-17	5.15	Reconciled
381669		02-NOV-17	JAMS, INC.		1,700.00	07-NOV-17	1,700.00	Reconciled
381670		02-NOV-17	KAESER		2,954.14	06-NOV-17	2,954.14	Reconciled
381671		02-NOV-17	COMPRESSORS, INC.		8,520.00	09-NOV-17	8,520.00	Reconciled
381672		02-NOV-17	KAYUGA SOLUTION INC		1,207.50	07-NOV-17	1,207.50	Reconciled
381673		02-NOV-17	KENT & AMY DAHLBERG		34,368.15			Negotiable
381674		02-NOV-17	KERN COUNTY TREASURER TAX COLLECTOR		1,831.53	06-NOV-17	1,831.53	Reconciled
381675		02-NOV-17	KIMBALL MIDWEST		26.27	24-NOV-17	26.27	Reconciled
381676		02-NOV-17	KINGSTON KOHR		12,913.00	15-NOV-17	12,913.00	Reconciled
381677		02-NOV-17	LA HABRA FENCE COMPANY INC		1,697.87	16-NOV-17	1,697.87	Reconciled
381678		02-NOV-17	LAGUNA BEACH COUNTY WATER DISTRICT		10.95	09-NOV-17	10.95	Reconciled
381679		02-NOV-17	LAI, JUYIN		61,862.85	13-NOV-17	61,862.85	Reconciled
381680		02-NOV-17	LANCER SALES USA, INC.		320.00	10-NOV-17	320.00	Reconciled
381681		02-NOV-17	LEWIS BRISBOIS BISGAARD AND SMITH, LLP		11.94			Negotiable
381682		02-NOV-17	MARTINEZ, ALICIA MC FADDEN-DALE INDUSTRIAL		281.87	07-NOV-17	281.87	Reconciled
381683		02-NOV-17	MC GREW, CAROLYN		1,542.96	03-NOV-17	1,542.96	Reconciled
381684		02-NOV-17	MC MASTER CARR SUPPLY CO		313.07	06-NOV-17	313.07	Reconciled
381685		02-NOV-17	MICHAEL BAKER INTERNATIONAL, INC.		41,937.34	14-NOV-17	41,937.34	Reconciled
381686		02-NOV-17	MILLER, BENJAMIN		145.36	07-NOV-17	145.36	Reconciled
381687		02-NOV-17	MOBILE MODULAR MANAGEMENT CORPORATION		1,018.24	06-NOV-17	1,018.24	Reconciled
381688		02-NOV-17	MOON, JI		151.94	07-NOV-17	151.94	Reconciled
381689		02-NOV-17	MR CRANE INC		1,219.00	06-NOV-17	1,219.00	Reconciled
381690		02-NOV-17	MUN, ROBERT		74.76	21-NOV-17	74.76	Reconciled
381691		02-NOV-17	MUN, ROBERT		2,605.40	06-NOV-17	2,605.40	Reconciled
381692		02-NOV-17	MYERS & SONS HI-WAY SAFETY, INC.		1,188.13	06-NOV-17	1,188.13	Reconciled
381693		02-NOV-17	NATIONAL READY MIXED CONCRETE CO.		700.96	07-NOV-17	700.96	Reconciled
381694		02-NOV-17	NCH CORPORATION		2,623.50	06-NOV-17	2,623.50	Reconciled
		02-NOV-17	NINYO & MOORE		2,623.50	06-NOV-17	2,623.50	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31

BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 6  
 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								
381695		02-NOV-17	NMG GEOTECHNICAL INC		620.00	17-NOV-17	620.00	Reconciled
381696		02-NOV-17	NOREX, INC.		3,910.00	07-NOV-17	3,910.00	Reconciled
381697		02-NOV-17	NORMAN A. OLSSON CONSTRUCTION, INC.		26,193.50	15-NOV-17	26,193.50	Reconciled
381698		02-NOV-17	O'HAREN GOVERNMENT RELATIONS		6,500.00	07-NOV-17	6,500.00	Reconciled
381699		02-NOV-17	OLIN CORPORATION		15,929.05	14-NOV-17	15,929.05	Reconciled
381700		02-NOV-17	ON CALL EVENT RENTALS		886.50	06-NOV-17	886.50	Reconciled
381701		02-NOV-17	ONESOURCE DISTRIBUTORS LLC		2,586.70	06-NOV-17	2,586.70	Reconciled
381702		02-NOV-17	ORANGE COUNTY CURRENT AFFAIRS FORUM		1,000.00			Negotiable
381703		02-NOV-17	ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT		9,058.93	09-NOV-17	9,058.93	Reconciled
381704		02-NOV-17	ORANGE COUNTY SANITATION DISTRICT		527,003.87	13-NOV-17	527,003.87	Reconciled
381705		02-NOV-17	ORANGE COUNTY TREASURER		66.95	08-NOV-17	66.95	Reconciled
381706		02-NOV-17	PACIFIC COAST BOLT CORP		591.40	08-NOV-17	591.40	Reconciled
381707		02-NOV-17	PACIFIC HYDROTECH CORPORATION		57,618.17	14-NOV-17	57,618.17	Reconciled
381708		02-NOV-17	PACIFIC HYDROTECH CORPORATION		3,032.54	07-NOV-17	3,032.54	Reconciled
381709		02-NOV-17	PALO VERDE IRRIGATION DISTRICT		3,247.86	22-NOV-17	3,247.86	Reconciled
381710		02-NOV-17	PARKHOUSE TIRE INC		2,090.06	07-NOV-17	2,090.06	Reconciled
381711		02-NOV-17	PASCAL & LUDWIG CONSTRUCTORS		220,948.63	14-NOV-17	220,948.63	Reconciled
381712		02-NOV-17	PASCAL & LUDWIG CONSTRUCTORS		50,464.00	14-NOV-17	50,464.00	Reconciled
381713		02-NOV-17	PASCAL & LUDWIG CONSTRUCTORS		11,628.87	13-NOV-17	11,628.87	Reconciled
381714		02-NOV-17	PASCAL & LUDWIG CONSTRUCTORS		2,656.00	07-NOV-17	2,656.00	Reconciled
381715		02-NOV-17	POWERS BROS. MACHINE, INC.		4,154.84	13-NOV-17	4,154.84	Reconciled
381716		02-NOV-17	PRAXAIR DISTRIBUTION INC		223.71	07-NOV-17	223.71	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381717		02-NOV-17	PRC BUILDERS, INC.		972.98			Negotiable
381718		02-NOV-17	PREMIER PAVING INC.		1,475.49	06-NOV-17	1,475.49	Reconciled
381719		02-NOV-17	PROCARE WORK INJURY CENTER		1,092.47	07-NOV-17	1,092.47	Reconciled
381720		02-NOV-17	PSOMAS		113,947.27	13-NOV-17	113,947.27	Reconciled
381721		02-NOV-17	QASYMPHONY, INC.		4,140.00	08-NOV-17	4,140.00	Reconciled
381722		02-NOV-17	R&B AUTOMATION, INC.		800.00	08-NOV-17	800.00	Reconciled
381723		02-NOV-17	RAM AIR ENGINEERING INC		10,296.45	13-NOV-17	10,296.45	Reconciled
381724		02-NOV-17	REFRIGERATION SUPPLIES DISTRIBUTOR		110.99	06-NOV-17	110.99	Reconciled
381725		02-NOV-17	RELIANCE STANDARD LIFE INSURANCE COMPANY		26,788.26	13-NOV-17	26,788.26	Reconciled
381726		02-NOV-17	RESPONSE ENVELOPE, INC		2,841.91	07-NOV-17	2,841.91	Reconciled
381727		02-NOV-17	RHINO SAFETY SOLUTIONS, INC		42,234.03	14-NOV-17	42,234.03	Reconciled
381728		02-NOV-17	RICHMOND AMERICAN HOMES OF MARYLAND, INC		277.67			Negotiable
381729		02-NOV-17	RINCON TRUCK CENTER INC.		210.80	06-NOV-17	210.80	Reconciled
381730		02-NOV-17	RMS ENGINEERING & DESIGN, INC.		800.00	07-NOV-17	800.00	Reconciled

381731	02-NOV-17	RODEO HOMES, INC		893.26	13-NOV-17	893.26	Reconciled
381732	02-NOV-17	SANTA ANA BLUE PRINT		380.25	09-NOV-17	380.25	Reconciled
381733	02-NOV-17	SCHINDLER ELEVATOR CORPORATION		202.95	08-NOV-17	202.95	Reconciled
381734	02-NOV-17	SCHINDLER, WALTER L		3,067.19	07-NOV-17	3,067.19	Reconciled
381735	02-NOV-17	SCIENCE OF THE SOUL		1,543.52	13-NOV-17	1,543.52	Reconciled
381736	02-NOV-17	SERRANO WATER DISTRICT		25,910.24	16-NOV-17	25,910.24	Reconciled
381737	02-NOV-17	SHAMROCK SUPPLY CO INC		174.48	07-NOV-17	174.48	Reconciled
381738	02-NOV-17	SIMPSON, ASHLEY FE		22.21			Negotiable
381739	02-NOV-17	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		1,011.48	15-NOV-17	1,011.48	Reconciled

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

Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 Account: Checking AP and PR Page: 8  
 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								
381740		02-NOV-17	SOUTH COAST ANSWERING SERVICE		617.86	06-NOV-17	617.86	Reconciled
381741		02-NOV-17	SOUTH COAST WATER DISTRICT		2,496.00	07-NOV-17	2,496.00	Reconciled
381742		02-NOV-17	SOUTH ORANGE COUNTY WASTEWATER AUTHORITY		95,436.00	15-NOV-17	95,436.00	Reconciled
381743		02-NOV-17	SOUTHERN CALIFORNIA EDISON COMPANY		482,915.37	06-NOV-17	482,915.37	Reconciled
381744		02-NOV-17	SOUTHERN COUNTIES LUBRICANTS LLC		1,582.47	07-NOV-17	1,582.47	Reconciled
381745		02-NOV-17	SOUTHERN PAINTING, INC.		1,367.01	08-NOV-17	1,367.01	Reconciled
381746		02-NOV-17	STANTEC CONSULTING SERVICES INC.		25,798.50	13-NOV-17	25,798.50	Reconciled
381747		02-NOV-17	STATER BROS. MARKETS		1,210.03			Negotiable
381748		02-NOV-17	STEGMAIER, TAMARA		299.87	13-NOV-17	299.87	Reconciled
381749		02-NOV-17	SUKLE ADVERTISING INC.		5,780.00	16-NOV-17	5,780.00	Reconciled
381750		02-NOV-17	TECTA AMERICA SOUTHERN CALIFORNIA, INC.		8,904.00	06-NOV-17	8,904.00	Reconciled
381751		02-NOV-17	THE IRVINE COMPANY		2,312.21	07-NOV-17	2,312.21	Reconciled
381752		02-NOV-17	THE NAIL BAR		3,401.86	14-NOV-17	3,401.86	Reconciled
381753		02-NOV-17	TOTAL RESOURCE MANAGEMENT, INC.		280,080.00	21-NOV-17	280,080.00	Reconciled
381754		02-NOV-17	TREVINO, EDUARDO		32.61			Negotiable
381755		02-NOV-17	TROPICAL PLAZA NURSERY INC		12,388.25	13-NOV-17	12,388.25	Reconciled
381756		02-NOV-17	TRUCPARCO		1,678.80	09-NOV-17	1,678.80	Reconciled
381757		02-NOV-17	UCT, LLC		643.77	07-NOV-17	643.77	Reconciled
381758		02-NOV-17	ULTRA SCIENTIFIC		314.35	15-NOV-17	314.35	Reconciled
381759		02-NOV-17	UNITED PARCEL SERVICE INC		95.31	08-NOV-17	95.31	Reconciled
381760		02-NOV-17	UNITED SITE SERVICES OF CALIFORNIA INC		478.06	08-NOV-17	478.06	Reconciled
381761		02-NOV-17	UNITED STATES POST OFFICE		25,000.00	09-NOV-17	25,000.00	Reconciled
381762		02-NOV-17	UNITED WATER WORKS, INC.		33.40	07-NOV-17	33.40	Reconciled
381763		02-NOV-17	USA PORTOLA PROP LLC		12.02	09-NOV-17	12.02	Reconciled

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

Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 Account: Checking AP and PR Page: 9  
 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								
381764		02-NOV-17	VERIZON WIRELESS SERVICES LLC		4,093.13	08-NOV-17	4,093.13	Reconciled
381765		02-NOV-17	VWR INTERNATIONAL, LLC		127.17	07-NOV-17	127.17	Reconciled
381766		02-NOV-17	WACO FILTERS CORPORATION		1,680.91	07-NOV-17	1,680.91	Reconciled
381767		02-NOV-17	WARD, WILLIAM P JR.		1,226.00	13-NOV-17	1,226.00	Reconciled
381768		02-NOV-17	WARE MALCOMB		13,684.04	06-NOV-17	13,684.04	Reconciled
381769		02-NOV-17	WASTE MANAGEMENT OF ORANGE COUNTY		2,136.10	07-NOV-17	2,136.10	Reconciled

381770	02-NOV-17	WAXIE'S ENTERPRISES, INC	3,464.33	08-NOV-17	3,464.33	Reconciled
381771	02-NOV-17	WEST COAST SAFETY SUPPLY INC	1,310.12	07-NOV-17	1,310.12	Reconciled
381772	02-NOV-17	WEST YOST ASSOCIATES, INC	8,349.75	07-NOV-17	8,349.75	Reconciled
381773	02-NOV-17	WESTERN EXTERMINATOR COMPANY	36,810.00	09-NOV-17	36,810.00	Reconciled
381774	02-NOV-17	WESTERN WEATHER GROUP INC	2,998.00	14-NOV-17	2,998.00	Reconciled
381775	02-NOV-17	WHITE CAP CONSTRUCTION SUPPLY	1,720.70	07-NOV-17	1,720.70	Reconciled
381776	02-NOV-17	WIRELESS WATCHDOGS, LLC	632.00	09-NOV-17	632.00	Reconciled
381777	02-NOV-17	YALE/CHASE EQUIPMENT AND SERVICES, INC.	15.50	07-NOV-17	15.50	Reconciled
381778	02-NOV-17	YANG, STEPHANIE	48.86			Negotiable
381779	02-NOV-17	ZEE MEDICAL SERVICE CO	445.78	06-NOV-17	445.78	Reconciled
381780	02-NOV-17	ZHANG, YINGZI	31.00	08-NOV-17	31.00	Reconciled
381781	02-NOV-17	ZHAO, WEI	13.13			Negotiable
381782	07-NOV-17	IRWD-PETTY CASH IRVINE	1,405.86	07-NOV-17	1,405.86	Reconciled
381783	09-NOV-17	CUSTODIAN Borowski, Michael (Mike)	277.19	14-NOV-17	277.19	Reconciled
381784	09-NOV-17	Carlos, Alex	68.36	17-NOV-17	68.36	Reconciled
381785	09-NOV-17	Estrada, Robert C	1,750.94			Negotiable
381786	09-NOV-17	Lewis, Lyndy R	79.18	21-NOV-17	79.18	Reconciled
381787	09-NOV-17	Martin, Didene J (De)	197.55			Negotiable
381788	09-NOV-17	Navarro, Hector R	500.00			Negotiable

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381789		09-NOV-17	COUNTY OF RIVERSIDE	PO BOX 12005	30,293.60	21-NOV-17	30,293.60	Reconciled
381790		09-NOV-17	A&A WIPING CLOTH CO		1,249.90	13-NOV-17	1,249.90	Reconciled
381791		09-NOV-17	ACCURATE AIR ENGINEERING INC		1,012.55	14-NOV-17	1,012.55	Reconciled
381792		09-NOV-17	ADT SECURITY SERVICES INC		412.47	16-NOV-17	412.47	Reconciled
381793		09-NOV-17	AIRGAS, INC.		110.56	13-NOV-17	110.56	Reconciled
381794		09-NOV-17	ALPHA TRAFFIC SERVICES, INC.		2,175.00	17-NOV-17	2,175.00	Reconciled
381795		09-NOV-17	AMERICAN WATER CHEMICALS, INC.		5,000.00	13-NOV-17	5,000.00	Reconciled
381796		09-NOV-17	APCO INTERNATIONAL, INC.		210.00	28-NOV-17	210.00	Reconciled
381797		09-NOV-17	ARCHROCK SERVICES, L.P.		11,926.69	20-NOV-17	11,926.69	Reconciled
381798		09-NOV-17	ASHFORD, WALT		613.64	15-NOV-17	613.64	Reconciled
381799		09-NOV-17	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA		33,568.49	17-NOV-17	33,568.49	Reconciled
381800		09-NOV-17	AT&T		3,909.54	15-NOV-17	3,909.54	Reconciled
381801		09-NOV-17	AUTOZONE PARTS, INC.		204.43	20-NOV-17	204.43	Reconciled
381802		09-NOV-17	BIOMAGIC INC		14,907.48	15-NOV-17	14,907.48	Reconciled
381803		09-NOV-17	BRENNTAG PACIFIC INC		17,907.19	15-NOV-17	17,907.19	Reconciled
381804		09-NOV-17	BROWN AND CALDWELL		10,180.97	15-NOV-17	10,180.97	Reconciled
381805		09-NOV-17	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		392.03	13-NOV-17	392.03	Reconciled
381806		09-NOV-17	BUSH & ASSOCIATES INC		1,016.00			Negotiable
381807		09-NOV-17	CABELA'S MARKETING AND BRAND MANAGEMENT INC		19.44	15-NOV-17	19.44	Reconciled
381808		09-NOV-17	CALIFORNIA BARRICADE RENTAL, INC.		7,897.48	14-NOV-17	7,897.48	Reconciled
381809		09-NOV-17	CANON FINANCIAL SERVICES, INC		446.16	13-NOV-17	446.16	Reconciled
381810		09-NOV-17	CANON SOLUTIONS AMERICA, INC.		489.96	13-NOV-17	489.96	Reconciled
381811		09-NOV-17	CHAPMAN UNIVERSITY		76.84	15-NOV-17	76.84	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381812		09-NOV-17	CHARLES P CROWLEY COMPANY INC		5,664.91	28-NOV-17	5,664.91	Reconciled
381813		09-NOV-17	CHEM SERVICE INC.		76.40	13-NOV-17	76.40	Reconciled
381814		09-NOV-17	CHEM TECH INTERNATIONAL INC		11,880.54	20-NOV-17	11,880.54	Reconciled
381815		09-NOV-17	CHO DESIGN ASSOCIATES, INC		14,544.00	16-NOV-17	14,544.00	Reconciled
381816		09-NOV-17	CITY OF IRVINE		436.51	15-NOV-17	436.51	Reconciled
381817		09-NOV-17	CITY OF NEWPORT BEACH		921.22	15-NOV-17	921.22	Reconciled
381818		09-NOV-17	CLA-VAL COMPANY		7,079.77	14-NOV-17	7,079.77	Reconciled
381819		09-NOV-17	COAST PLUMBING HEATING AND AIR, INC		45.00	13-NOV-17	45.00	Reconciled
381820		09-NOV-17	CONNEXUS INDUSTRIES INC.		3,287.61	24-NOV-17	3,287.61	Reconciled
381821		09-NOV-17	CORE & MAIN LP		18,255.54	17-NOV-17	18,255.54	Reconciled
381822		09-NOV-17	COUNTY OF ORANGE		75.00			Negotiable
381823		09-NOV-17	COUNTY OF RIVERSIDE		126,732.62	21-NOV-17	126,732.62	Reconciled
381824		09-NOV-17	CRESCENT CHEMICAL CO.		242.36	14-NOV-17	242.36	Reconciled
381825		09-NOV-17	CULLIGAN OF SANTA ANA		10,028.50	17-NOV-17	10,028.50	Reconciled
381826		09-NOV-17	DCSE, INC.		33,840.00	14-NOV-17	33,840.00	Reconciled
381827		09-NOV-17	DE VAUL PAINT COMPANY		399.47	15-NOV-17	399.47	Reconciled
381828		09-NOV-17	DELGADILLO, WENDELIN		4.84	14-NOV-17	4.84	Reconciled
381829		09-NOV-17	DEMARIA ELECTRIC MOTOR SERVICES, INC.		2,773.28	16-NOV-17	2,773.28	Reconciled
381830		09-NOV-17	DISCOUNT COURIER SERVICE		158.50	15-NOV-17	158.50	Reconciled
381831		09-NOV-17	ELECTRICAL SYSTEMS ENGINEERING CO		2,500.00	14-NOV-17	2,500.00	Reconciled
381832		09-NOV-17	EMEDCO		233.95	14-NOV-17	233.95	Reconciled
381833		09-NOV-17	EMPLOYEE BENEFIT SPECIALIST, INC		1,285.00	14-NOV-17	1,285.00	Reconciled
381834		09-NOV-17	ENVIRONMENTAL EXPRESS INC		2,066.21	14-NOV-17	2,066.21	Reconciled
381835		09-NOV-17	EXECUTIVE LIGHTING & ELECTRIC		923.87	14-NOV-17	923.87	Reconciled
381836		09-NOV-17	FARRELL & ASSOCIATES		2,899.39	14-NOV-17	2,899.39	Reconciled
IRWD Ledger Upgrade								
BANK: Bank of America N.A.			Branch : Los Angeles			Payment Register For 01-NOV-17 To 30-NOV-17		Report Date: 04-DEC-2017 07:31
Bank Account Currency: USD ( US Dollar )			Payment Currency: USD ( US Dollar )			Account: Checking AP and PR		Page: 12
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								
381837		09-NOV-17	FEDEX NATIONAL LTL, INC		202.63	14-NOV-17	202.63	Reconciled
381838		09-NOV-17	FIDELITY SECURITY LIFE INSURANCE COMPANY		6,688.05	15-NOV-17	6,688.05	Reconciled
381839		09-NOV-17	FISHER SCIENTIFIC COMPANY LLC		2,712.54	13-NOV-17	2,712.54	Reconciled
381840		09-NOV-17	FREEWAY MACHINE & WELDING SHOP		5,458.62	14-NOV-17	5,458.62	Reconciled
381841		09-NOV-17	GHD INC.		9,559.50	14-NOV-17	9,559.50	Reconciled
381842		09-NOV-17	GRAINGER		11,762.96	16-NOV-17	11,762.96	Reconciled
381843		09-NOV-17	GREAT PACIFIC EQUIPMENT INC		2,835.00	14-NOV-17	2,835.00	Reconciled
381844		09-NOV-17	HAAKER EQUIPMENT COMPANY		1,963.91	14-NOV-17	1,963.91	Reconciled
381845		09-NOV-17	HACH COMPANY		10,913.82	16-NOV-17	10,913.82	Reconciled
381846		09-NOV-17	HAMILTON, KURT		1,109.44	17-NOV-17	1,109.44	Reconciled
381847		09-NOV-17	HAMKINS, STEVE		93.99			Negotiable
381848		09-NOV-17	HARRINGTON INDUSTRIAL PLASTICS LLC		8,135.09	13-NOV-17	8,135.09	Reconciled
381849		09-NOV-17	HAYS, SHAWN		14.18	20-NOV-17	14.18	Reconciled
381850		09-NOV-17	HDR ENGINEERING INC		11,911.25	16-NOV-17	11,911.25	Reconciled
381851		09-NOV-17	HELP/SYSTEMS, LLC		30,838.00	16-NOV-17	30,838.00	Reconciled
381852		09-NOV-17	HELPMATES STAFFING SERVICES		5,132.75	13-NOV-17	5,132.75	Reconciled
381853		09-NOV-17	HENRY PRATT COMPANY, LLC		7,200.93	14-NOV-17	7,200.93	Reconciled
381854		09-NOV-17	HILL BROTHERS CHEMICAL COMPANY		5,311.55	14-NOV-17	5,311.55	Reconciled
381855		09-NOV-17	HOME DEPOT USA INC		436.37	15-NOV-17	436.37	Reconciled
381856		09-NOV-17	INDUSTRIAL METAL		200.52	14-NOV-17	200.52	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
381857	09-NOV-17		SUPPLY CO		22,880.00	16-NOV-17	22,880.00	Reconciled
381858	09-NOV-17		INFOSYS LIMITED		355.44	14-NOV-17	355.44	Reconciled
381859	09-NOV-17		IRVINE PIPE & SUPPLY INC		799.15	14-NOV-17	799.15	Reconciled
381860	09-NOV-17		IRWD-PETTY CASH CUSTODIAN		246.62	13-NOV-17	246.62	Reconciled
381861	09-NOV-17		JOHNSTONE SUPPLY		23,760.00	16-NOV-17	23,760.00	Reconciled
381862	09-NOV-17		KAYUGA SOLUTION INC		1,230.00	14-NOV-17	1,230.00	Reconciled
381863	09-NOV-17		KENT & AMY DAHLBERG		3,972.00	15-NOV-17	3,972.00	Reconciled
			LA HABRA FENCE COMPANY INC					

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 13  
 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								
381864	09-NOV-17		LAGUNA BEACH COUNTY WATER DISTRICT		5,316.79	16-NOV-17	5,316.79	Reconciled
381865	09-NOV-17		LCS TECHNOLOGIES, INC.		2,970.00	13-NOV-17	2,970.00	Reconciled
381866	09-NOV-17		LEONARD CHAIDEZ TREE SERVICE		5,410.00	14-NOV-17	5,410.00	Reconciled
381867	09-NOV-17		LUKASH, ELENA		73.38			Voided
381868	09-NOV-17		MC FADDEN-DALE INDUSTRIAL		204.77	14-NOV-17	204.77	Reconciled
381869	09-NOV-17		MC MASTER CARR SUPPLY CO		244.99	13-NOV-17	244.99	Reconciled
381870	09-NOV-17		MCR TECHNOLOGIES INC		652.68	15-NOV-17	652.68	Reconciled
381871	09-NOV-17		MICHAEL BAKER INTERNATIONAL, INC.		6,695.00	14-NOV-17	6,695.00	Reconciled
381872	09-NOV-17		MOTION INDUSTRIES INC		253.76	13-NOV-17	253.76	Reconciled
381873	09-NOV-17		MUNICIPAL MAINTENANCE EQUIPMENT INC		9,376.38	13-NOV-17	9,376.38	Reconciled
381874	09-NOV-17		NATURES IMAGE INC		1,137.30	14-NOV-17	1,137.30	Reconciled
381875	09-NOV-17		NEPTUNE TECHNOLOGY GROUP, INC.		158,263.20	16-NOV-17	158,263.20	Reconciled
381876	09-NOV-17		NEW PIG CORPORATION		381.32	14-NOV-17	381.32	Reconciled
381877	09-NOV-17		NINYO & MOORE		4,651.00	13-NOV-17	4,651.00	Reconciled
381878	09-NOV-17		NORTHWOOD PLACE APTS		427.86	17-NOV-17	427.86	Reconciled
381879	09-NOV-17		O.C. SUPERIOR CUSTOM CLEANING SERVICES		1,040.00	13-NOV-17	1,040.00	Reconciled
381880	09-NOV-17		OLIN CORPORATION		16,016.11	17-NOV-17	16,016.11	Reconciled
381881	09-NOV-17		ON CALL EVENT RENTALS		205.20	13-NOV-17	205.20	Reconciled
381882	09-NOV-17		ONESOURCE DISTRIBUTORS LLC		8,732.37	13-NOV-17	8,732.37	Reconciled
381883	09-NOV-17		ORACLE AMERICA, INC.		15,704.10	15-NOV-17	15,704.10	Reconciled
381884	09-NOV-17		ORANGE COUNTY SANITATION DISTRICT		4,846.65	13-NOV-17	4,846.65	Reconciled
381885	09-NOV-17		PACIFIC COAST BOLT CORP		911.11	15-NOV-17	911.11	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 14  
 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								
381886	09-NOV-17		PAPER DEPOT DOCUMENT DESTRUCTION LLC		434.15	17-NOV-17	434.15	Reconciled
381887	09-NOV-17		PASCAL & LUDWIG CONSTRUCTORS		284,567.75	16-NOV-17	284,567.75	Reconciled
381888	09-NOV-17		PASCAL & LUDWIG CONSTRUCTORS		14,977.25	15-NOV-17	14,977.25	Reconciled
381889	09-NOV-17		PAYNE & FEARS LLP		8,667.92	14-NOV-17	8,667.92	Reconciled
381890	09-NOV-17		PELLETIER & ASSOCIATES, INC.		1,045.00	13-NOV-17	1,045.00	Reconciled
381891	09-NOV-17		PERKINELMER HEALTH SCIENCES INC		566.99	13-NOV-17	566.99	Reconciled
381892	09-NOV-17		PHAM, TERRY		174.20	17-NOV-17	174.20	Reconciled
381893	09-NOV-17		PRAXAIR DISTRIBUTION INC		508.91	14-NOV-17	508.91	Reconciled

381894	09-NOV-17	PROCARE WORK INJURY CENTER	112.47	14-NOV-17	112.47	Reconciled
381895	09-NOV-17	PSOMAS	13,065.09	16-NOV-17	13,065.09	Reconciled
381896	09-NOV-17	PTI SAND & GRAVEL INC	2,030.80	14-NOV-17	2,030.80	Reconciled
381897	09-NOV-17	QUICKEL PAVING INC	475.00	13-NOV-17	475.00	Reconciled
381898	09-NOV-17	R&B AUTOMATION, INC.	4,544.57	15-NOV-17	4,544.57	Reconciled
381899	09-NOV-17	RAM AIR ENGINEERING INC	10,057.27	16-NOV-17	10,057.27	Reconciled
381900	09-NOV-17	RANCHO ALISAL APTS	16.00	17-NOV-17	16.00	Reconciled
381901	09-NOV-17	REACH EMPLOYEE ASSISTANCE INC	971.60	15-NOV-17	971.60	Reconciled
381902	09-NOV-17	RED HAWK FIRE & SECURITY (CA) LLC	925.00	14-NOV-17	925.00	Reconciled
381903	09-NOV-17	RED WING SHOE STORE	125.00	14-NOV-17	125.00	Reconciled
381904	09-NOV-17	RICHARD C. SLADE & ASSOCIATES LLC	6,490.20	21-NOV-17	6,490.20	Reconciled
381905	09-NOV-17	RINCON TRUCK CENTER INC.	2,709.43	13-NOV-17	2,709.43	Reconciled
381906	09-NOV-17	RINGCLEAR LLC	89.88	15-NOV-17	89.88	Reconciled
381907	09-NOV-17	ROBINSON, ERIK	336.71	15-NOV-17	336.71	Reconciled
381908	09-NOV-17	ROSSI, STACY	10,914.28	14-NOV-17	10,914.28	Reconciled
381909	09-NOV-17	SAFETY-KLEEN SYSTEMS, INC	291.25	14-NOV-17	291.25	Reconciled
381910	09-NOV-17	SANTA ANA BLUE PRINT	14,920.15	17-NOV-17	14,920.15	Reconciled
381911	09-NOV-17	SANTA ANA COUNTRY CLUB	963.30			Negotiable

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
381912		09-NOV-17	SANTA MARGARITA FORD		2,251.49	14-NOV-17	2,251.49	Reconciled
381913		09-NOV-17	SECURITAS SECURITY SERVICES USA, INC.		41,334.05	15-NOV-17	41,334.05	Reconciled
381914		09-NOV-17	SHAMROCK SUPPLY CO INC		2,152.45	14-NOV-17	2,152.45	Reconciled
381915		09-NOV-17	SITEONE LANDSCAPE SUPPLY, LLC		1,972.26	14-NOV-17	1,972.26	Reconciled
381916		09-NOV-17	SITMATIC		1,402.72	13-NOV-17	1,402.72	Reconciled
381917		09-NOV-17	SMOG TIME		59.75	20-NOV-17	59.75	Reconciled
381918		09-NOV-17	SOFTWAREONE INC		12,561.15	16-NOV-17	12,561.15	Reconciled
381919		09-NOV-17	SOUTH COAST WATER CO.		40.00	14-NOV-17	40.00	Reconciled
381920		09-NOV-17	SOUTH COAST WATER CO.		151.66	14-NOV-17	151.66	Reconciled
381921		09-NOV-17	SOUTHERN CALIFORNIA EDISON COMPANY		12,096.95	13-NOV-17	12,096.95	Reconciled
381922		09-NOV-17	SPX CORP		3,163.74	13-NOV-17	3,163.74	Reconciled
381923		09-NOV-17	STANDARD REGISTER, INC.		1,288.43	13-NOV-17	1,288.43	Reconciled
381924		09-NOV-17	STANFORD COURT APARTMENTS		44.56	17-NOV-17	44.56	Reconciled
381925		09-NOV-17	STATE BOARD OF EQUALIZATION		4,869.00	15-NOV-17	4,869.00	Reconciled
381926		09-NOV-17	SUNSTATE EQUIPMENT CO		3,098.21	14-NOV-17	3,098.21	Reconciled
381927		09-NOV-17	TAJBAKHSH, NIMA		103.69	16-NOV-17	103.69	Reconciled
381928		09-NOV-17	TAO, YINGLEI		39.02	29-NOV-17	39.02	Reconciled
381929		09-NOV-17	TESTAMERICA LABORATORIES, INC		52.50	14-NOV-17	52.50	Reconciled
381930		09-NOV-17	THE FURMAN GROUP, INC.		12,540.00	21-NOV-17	12,540.00	Reconciled
381931		09-NOV-17	THE GAS COMPANY		660.35	15-NOV-17	660.35	Reconciled
381932		09-NOV-17	THE MCCAFFERY CORPORATION		1,547.40			Negotiable
381933		09-NOV-17	THYSSENKRUPP ELEVATOR CORPORATION		185.84	14-NOV-17	185.84	Reconciled
381934		09-NOV-17	TIC-SPECTRUM OFFICE		506.66	14-NOV-17	506.66	Reconciled
381935		09-NOV-17	TRIPAC MARKETING INC		448.11	13-NOV-17	448.11	Reconciled
381936		09-NOV-17	TROPICAL PLAZA NURSERY INC		5,323.02	13-NOV-17	5,323.02	Reconciled
381937		09-NOV-17	TRUCPARCO		1,939.50	17-NOV-17	1,939.50	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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
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Payment Document : IRWD CHECK

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
381938		09-NOV-17	ULTRA SCIENTIFIC		224.35	21-NOV-17	224.35	Reconciled
381939		09-NOV-17	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA		1,433.95	22-NOV-17	1,433.95	Reconciled
381940		09-NOV-17	USA BLUEBOOK		2,440.69	17-NOV-17	2,440.69	Reconciled
381941		09-NOV-17	VHG LABS, INC		131.00	13-NOV-17	131.00	Reconciled
381942		09-NOV-17	VRIDE INC		2,335.08	13-NOV-17	2,335.08	Reconciled
381943		09-NOV-17	VULCAN MATERIALS COMPANY		1,406.12	13-NOV-17	1,406.12	Reconciled
381944		09-NOV-17	W.M. LYLES CO		1,392.80	13-NOV-17	1,392.80	Reconciled
381945		09-NOV-17	W.M. LYLES CO		26,463.20	15-NOV-17	26,463.20	Reconciled
381946		09-NOV-17	WARD, WILLIAM P JR.		613.00	16-NOV-17	613.00	Reconciled
381947		09-NOV-17	WASTE MANAGEMENT OF ORANGE COUNTY		2,798.76	14-NOV-17	2,798.76	Reconciled
381948		09-NOV-17	WATERLINE TECHNOLOGIES INC		5,680.00	13-NOV-17	5,680.00	Reconciled
381949		09-NOV-17	WAXIE'S ENTERPRISES, INC		298.19	14-NOV-17	298.19	Reconciled
381950		09-NOV-17	WECK LABORATORIES INC		3,110.00	20-NOV-17	3,110.00	Reconciled
381951		09-NOV-17	WEST COAST SAFETY SUPPLY INC		2,126.70	17-NOV-17	2,126.70	Reconciled
381952		09-NOV-17	WEST YOST ASSOCIATES, INC		1,781.00	14-NOV-17	1,781.00	Reconciled
381953		09-NOV-17	WESTERN AV		2,940.63	13-NOV-17	2,940.63	Reconciled
381954		09-NOV-17	WOODBRIIDGE WILLOWS APARTMENTS		2.72	17-NOV-17	2.72	Reconciled
381955		09-NOV-17	YALE/CHASE EQUIPMENT AND SERVICES, INC.		46.73	13-NOV-17	46.73	Reconciled
381956		09-NOV-17	VECCHIO REAL ESTATE	ORANGE	91.99			Negotiable
381957		09-NOV-17	JOHN MICHAEL COVASPO BOX 421		191.70	17-NOV-17	191.70	Reconciled
381958		10-NOV-17	SCAP ENCINITAS		105.00			Negotiable
381959		10-NOV-17	JCI JONES CHEMICALS INC	TAMPA	5,255.25	15-NOV-17	5,255.25	Reconciled
381960		10-NOV-17	PERS LONG TERM CARE	PASADENA	675.35	28-NOV-17	675.35	Reconciled
381961		10-NOV-17	IRWD EMPLOYEE ASSOCIATION	15600 SC	1,310.00	17-NOV-17	1,310.00	Reconciled
381962		10-NOV-17	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	62.50	27-NOV-17	62.50	Reconciled
381963		10-NOV-17	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	465.97	27-NOV-17	465.97	Reconciled

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

Payment Register For 01-NOV-17 To 30-NOV-17  
 Account: Checking AP and PR  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Report Date: 04-DEC-2017 07:31  
 Page: 17

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
381964		10-NOV-17	CLEARINGHOUSE	PHOENIX	477.67	20-NOV-17	477.67	Reconciled
381965		10-NOV-17	AFLAC	1932	6,990.16	17-NOV-17	6,990.16	Reconciled
381966		10-NOV-17	AFLAC	WYNNTON RD PO BOX 84069	203.12	20-NOV-17	203.12	Reconciled
381967		10-NOV-17	PRE-PAID LEGAL SERVICES INC	PO BOX 2629	1,302.56	22-NOV-17	1,302.56	Reconciled
381968		10-NOV-17	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	ATLANTA	85.70	20-NOV-17	85.70	Reconciled
381969		10-NOV-17	COLONIAL LIFE & ACCIDENT INSURANCE CO.	COLUMBIA	1,089.68	17-NOV-17	1,089.68	Reconciled
381970		14-NOV-17	EAST ORANGE COUNTY WATER DISTRICT	ORANGE	61,429.24	15-NOV-17	61,429.24	Reconciled
381971		16-NOV-17	Bennett, Ray R (Ray)		125.00	20-NOV-17	125.00	Reconciled
381972		16-NOV-17	Cole, David F (David)		45.09			Negotiable
381973		16-NOV-17	Daniel, Matthew (Matthew)		90.00	17-NOV-17	90.00	Reconciled
381974		16-NOV-17	Kanady, Jacob		25.68			Negotiable
381975		16-NOV-17	Lao, Richard S		184.98	21-NOV-17	184.98	Reconciled
381976		16-NOV-17	Martinez, Diego		90.00			Negotiable
381977		16-NOV-17	Pizanie, Nicholas B		235.00	20-NOV-17	235.00	Reconciled
381978		16-NOV-17	Smyth, Jeffrey S (Jeff)		120.89	24-NOV-17	120.89	Reconciled
381979		16-NOV-17	Tremontozzi, Cody		220.00			Negotiable
381980		16-NOV-17	Welch, Kelly A (Kellie)		40.00	16-NOV-17	40.00	Reconciled
381981		16-NOV-17	COUNTY OF ORANGE	PO BOX 1438	21,192.80	27-NOV-17	21,192.80	Reconciled
381982		16-NOV-17	Muncy, Jessie A	HOME	2,214.54	16-NOV-17	2,214.54	Reconciled
381983		16-NOV-17	A STITCH ON		942.25	21-NOV-17	942.25	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
381984		16-NOV-17	TIME.COM		496.20	29-NOV-17	496.20	Reconciled
381985		16-NOV-17	ACCUSOURCE, INC.		1,185.00	21-NOV-17	1,185.00	Reconciled
381986		16-NOV-17	ALPHA TRAFFIC SERVICES, INC.					
381987		16-NOV-17	ANTONIA R. MONZON		1,950.00	20-NOV-17	1,950.00	Reconciled
381988		16-NOV-17	APCO GRAPHICS INC		200.87	22-NOV-17	200.87	Reconciled
381989		16-NOV-17	ARC-ZONE.COM, INC		143.71	22-NOV-17	143.71	Reconciled
381990		16-NOV-17	ARCADIS U.S., INC.		108,352.38	27-NOV-17	108,352.38	Reconciled
381991		16-NOV-17	ARMORCAST PRODUCTS COMPANY		5,551.47	20-NOV-17	5,551.47	Reconciled
381991		16-NOV-17	AT&T		8,842.31	27-NOV-17	8,842.31	Reconciled

IRWD Ledger Upgrade  
 BANK: Bank of America N.A. Branch: Los Angeles Account: Checking AP and PR Report Date: 04-DEC-2017 07:31  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar ) Page: 18  
 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								
381992		16-NOV-17	AT&T		1,834.48	21-NOV-17	1,834.48	Reconciled
381993		16-NOV-17	AT&T		48.99	27-NOV-17	48.99	Reconciled
381994		16-NOV-17	ATHENS SERVICES		1,954.50			Voided
381995		16-NOV-17	ATHENS SERVICES		7,225.64	21-NOV-17	7,225.64	Reconciled
381996		16-NOV-17	AUTOZONE PARTS, INC.		257.19	29-NOV-17	257.19	Reconciled
381997		16-NOV-17	B.C. HAULING AND DEMOLITION INC		2,100.00			Negotiable
381998		16-NOV-17	BANK OF NEW YORK MELLON TRUST COMPANY NA		1,126.00	22-NOV-17	1,126.00	Reconciled
381999		16-NOV-17	BC WIRE ROPE & RIGGING		668.47	20-NOV-17	668.47	Reconciled
382000		16-NOV-17	BDC SPECIAL WASTE		579.20	22-NOV-17	579.20	Reconciled
382001		16-NOV-17	BEHRENS AND ASSOCIATES, INC.		37,811.18	27-NOV-17	37,811.18	Reconciled
382002		16-NOV-17	BORCHARD SURVEYING & MAPPING, INC.		10,490.00	30-NOV-17	10,490.00	Reconciled
382003		16-NOV-17	BSI SERVICES AND SOLUTIONS (WEST), INC.		1,480.00	24-NOV-17	1,480.00	Reconciled
382004		16-NOV-17	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		318.92	20-NOV-17	318.92	Reconciled
382005		16-NOV-17	BUSH & ASSOCIATES INC		17,648.00			Negotiable
382006		16-NOV-17	BUTLER BOX & STAKE INC		1,387.82	21-NOV-17	1,387.82	Reconciled
382007		16-NOV-17	CALIFORNIA BARRICADE RENTAL, INC.		3,952.50	20-NOV-17	3,952.50	Reconciled
382008		16-NOV-17	CALIFORNIA PACIFIC HOMES		71.04	27-NOV-17	71.04	Reconciled
382009		16-NOV-17	CAPTIVE AUDIENCE MARKETING INC.		116.71	21-NOV-17	116.71	Reconciled
382010		16-NOV-17	CASCADE TECHNICAL SERVICES LLC		1,498.76			Negotiable
382011		16-NOV-17	CHEM TECH INTERNATIONAL INC		21,227.15	29-NOV-17	21,227.15	Reconciled
382012		16-NOV-17	CHEN, FANGI		62.45	24-NOV-17	62.45	Reconciled
382013		16-NOV-17	CITY CIRCUIT BREAKERS		1,804.54	28-NOV-17	1,804.54	Reconciled
382014		16-NOV-17	CITY OF IRVINE		516.00	20-NOV-17	516.00	Reconciled
382015		16-NOV-17	CLA-VAL COMPANY		10,061.94	22-NOV-17	10,061.94	Reconciled
382016		16-NOV-17	CNC ENGINEERING		1,472.50	20-NOV-17	1,472.50	Reconciled

IRWD Ledger Upgrade  
 BANK: Bank of America N.A. Branch: Los Angeles Account: Checking AP and PR Report Date: 04-DEC-2017 07:31  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar ) Page: 19  
 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								
382017		16-NOV-17	COASTAL IGNITION & CONTROLS, INC		785.36	30-NOV-17	785.36	Reconciled
382018		16-NOV-17	COFFELT, MARILYN		64.77			Negotiable
382019		16-NOV-17	CONTROLLED KEY SYSTEMS INC		249.00	21-NOV-17	249.00	Reconciled
382020		16-NOV-17	COUNTY OF ORANGE		10,493.54	27-NOV-17	10,493.54	Reconciled
382021		16-NOV-17	CR & R INCORPORATED		486.32	22-NOV-17	486.32	Reconciled
382022		16-NOV-17	CROWN CAPTIVE		207.65			Negotiable
382023		16-NOV-17	CULLIGAN OF SANTA ANA		5,014.25	21-NOV-17	5,014.25	Reconciled
382024		16-NOV-17	D & G SIGNS		10,773.01	27-NOV-17	10,773.01	Reconciled
382025		16-NOV-17	DATASITE INC		21,117.00	30-NOV-17	21,117.00	Reconciled
382026		16-NOV-17	DAVIS, JUDITH		1,073.14	24-NOV-17	1,073.14	Reconciled
382027		16-NOV-17	DEE JASPAR & ASSOCIATES, INC.		10,796.62	30-NOV-17	10,796.62	Reconciled
382028		16-NOV-17	DELAMORE, DENNIS M		64.81	29-NOV-17	64.81	Reconciled

382029	16-NOV-17	DEMARIA ELECTRIC MOTOR SERVICES, INC.	4,322.07	22-NOV-17	4,322.07	Reconciled
382030	16-NOV-17	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY	4,700.94	20-NOV-17	4,700.94	Reconciled
382031	16-NOV-17	DUBON, JACQUELINE	204.80	29-NOV-17	204.80	Reconciled
382032	16-NOV-17	DUDLEY RIDGE WATER DISTRICT	91,142.35	21-NOV-17	91,142.35	Reconciled
382033	16-NOV-17	DUONG, ALLISON	16.47			Negotiable
382034	16-NOV-17	EARTH MECHANICS, INC.	3,059.87	22-NOV-17	3,059.87	Reconciled
382035	16-NOV-17	EISEL ENTERPRISES INC	1,467.28	21-NOV-17	1,467.28	Reconciled
382036	16-NOV-17	EL CAMINO ASPHALT PAVING CORP.	1,171.85	20-NOV-17	1,171.85	Reconciled
382037	16-NOV-17	EXCEL PAVING CO.	1,603.29			Negotiable
382038	16-NOV-17	EXECUTIVE LIGHTING & ELECTRIC	301.09	20-NOV-17	301.09	Reconciled
382039	16-NOV-17	FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC. INC.	18,110.00	27-NOV-17	18,110.00	Reconciled
382040	16-NOV-17	FEDEX	449.73	21-NOV-17	449.73	Reconciled
382041	16-NOV-17	FEDEX NATIONAL LTL, INC	221.27	22-NOV-17	221.27	Reconciled
382042	16-NOV-17	FISHER SCIENTIFIC COMPANY LLC	1,877.44	20-NOV-17	1,877.44	Reconciled
382043	16-NOV-17	FLEET SOLUTIONS LLC	4,821.10	20-NOV-17	4,821.10	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
382044		16-NOV-17	FRONTIER CALIFORNIA INC.		51.61	24-NOV-17	51.61	Reconciled
382045		16-NOV-17	GHD INC.		2,547.00	22-NOV-17	2,547.00	Reconciled
382046		16-NOV-17	GM SAGER CONSTRUCTION CO, INC.		42,838.38	27-NOV-17	42,838.38	Reconciled
382047		16-NOV-17	GORAN, ERAN		155.75	20-NOV-17	155.75	Reconciled
382048		16-NOV-17	GRAINGER		376.12	22-NOV-17	376.12	Reconciled
382049		16-NOV-17	GREAT PACIFIC EQUIPMENT INC		5,245.00	21-NOV-17	5,245.00	Reconciled
382050		16-NOV-17	H2O INNOVATION USA INC		3,292.06	22-NOV-17	3,292.06	Reconciled
382051		16-NOV-17	HAAKER EQUIPMENT COMPANY		526.65	21-NOV-17	526.65	Reconciled
382052		16-NOV-17	HACH COMPANY		14,145.89	27-NOV-17	14,145.89	Reconciled
382053		16-NOV-17	HANNA INSTRUMENTS UNITED STATES, INC		176.71	27-NOV-17	176.71	Reconciled
382054		16-NOV-17	HASLER INC.		5,010.00	27-NOV-17	5,010.00	Reconciled
382055		16-NOV-17	HDR ENGINEERING INC		72,525.52	27-NOV-17	72,525.52	Reconciled
382056		16-NOV-17	HECK, MARCEA		39.99			Negotiable
382057		16-NOV-17	HELPMATES STAFFING SERVICES		26,355.38	22-NOV-17	26,355.38	Reconciled
382058		16-NOV-17	HENRY, JEROME		14.68			Negotiable
382059		16-NOV-17	HERITAGE FIELDS EL TORO, LLC		3,647.96	29-NOV-17	3,647.96	Reconciled
382060		16-NOV-17	HOME DEPOT USA INC		850.82	22-NOV-17	850.82	Reconciled
382061		16-NOV-17	HSU, SHUELEN		41.54	24-NOV-17	41.54	Reconciled
382062		16-NOV-17	HUANG, YUNGTA		55.54			Negotiable
382063		16-NOV-17	HWANG, HYUNG JUN		26.60			Negotiable
382064		16-NOV-17	INDUSTRIAL ELECTRIC MACHINERY LLC		384.54	20-NOV-17	384.54	Reconciled
382065		16-NOV-17	INDUSTRIAL NETWORKING SOLUTIONS		1,934.80	21-NOV-17	1,934.80	Reconciled
382066		16-NOV-17	IRON MOUNTAIN INFORMATION MANAGEMENT INC		1,465.08	20-NOV-17	1,465.08	Reconciled
382067		16-NOV-17	IRVINE PIPE & SUPPLY INC		1,739.10	20-NOV-17	1,739.10	Reconciled
382068		16-NOV-17	IRVINE UNIFIED SCHOOL DISTRICT		2,781.50	30-NOV-17	2,781.50	Reconciled
382069		16-NOV-17	IRWD-PETTY CASH CUSTODIAN		606.96	20-NOV-17	606.96	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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
Payment Document : IRWD CHECK								

382070	16-NOV-17	JACKSON TIDUS, A LAW CORPORATION	924.00	20-NOV-17	924.00	Reconciled
382071	16-NOV-17	JAISWAL, SANJEEV	69.53			Negotiable
382072	16-NOV-17	JOHNSON, DAMON	110.23	27-NOV-17	110.23	Reconciled
382073	16-NOV-17	K HOVNANIAN HOMES	816.59	30-NOV-17	816.59	Reconciled
382074	16-NOV-17	KAESER COMPRESSORS, INC.	203.33	22-NOV-17	203.33	Reconciled
382075	16-NOV-17	KAYUGA SOLUTION INC	9,840.00	27-NOV-17	9,840.00	Reconciled
382076	16-NOV-17	KIEWIT INFRASTRUCTURE WEST CO.	991.86			Negotiable
382077	16-NOV-17	KILL-N-BUGS TERMITE AND PEST CONTROL SERVICES	1,200.00	21-NOV-17	1,200.00	Reconciled
382078	16-NOV-17	KIM, YOUNG HWAN	36.54			Negotiable
382079	16-NOV-17	KING, DEBORAH	35.93	21-NOV-17	35.93	Reconciled
382080	16-NOV-17	KINGS COUNTY TAX COLLECTOR	25,552.58	30-NOV-17	25,552.58	Reconciled
382081	16-NOV-17	KLAS, ALLISON	86.70			Negotiable
382082	16-NOV-17	KOELLER NEBEKER CARLSON & HALUCK, LLP	1,040.00	21-NOV-17	1,040.00	Reconciled
382083	16-NOV-17	KOPPL PIPELINE SERVICES, INC.	33,804.00	28-NOV-17	33,804.00	Reconciled
382084	16-NOV-17	LANDCARE HOLDINGS, INC.	65,879.00	27-NOV-17	65,879.00	Reconciled
382085	16-NOV-17	LE, LYNDI	36.94	30-NOV-17	36.94	Reconciled
382086	16-NOV-17	LEATHERWOOD CONSTRUCTION INC	576.19	27-NOV-17	576.19	Reconciled
382087	16-NOV-17	LEE & RO, INC.	61,053.03	29-NOV-17	61,053.03	Reconciled
382088	16-NOV-17	LEE, TED	55.59	27-NOV-17	55.59	Reconciled
382089	16-NOV-17	LIU, TAIMING	25.28	21-NOV-17	25.28	Reconciled
382090	16-NOV-17	LU, KHANG	16.25			Negotiable
382091	16-NOV-17	MAILFINANCE INC	10,909.74	28-NOV-17	10,909.74	Reconciled
382092	16-NOV-17	MANUR, VASUKI	52.57	28-NOV-17	52.57	Reconciled
382093	16-NOV-17	MC MASTER CARR SUPPLY CO	128.80	22-NOV-17	128.80	Reconciled
382094	16-NOV-17	MISSION COMMUNICATIONS, LLC	3,511.80	24-NOV-17	3,511.80	Reconciled
382095	16-NOV-17	MOHAMADZAI, BIBI	18.19	24-NOV-17	18.19	Reconciled
382096	16-NOV-17	MORGAN, STEWART	50.00			Negotiable
382097	16-NOV-17	MOULTON NIGUEL WATER DISTRICT	44,043.00			Negotiable

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
382098		16-NOV-17	MUNICIPAL MAINTENANCE EQUIPMENT INC		3,683.77	21-NOV-17	3,683.77	Reconciled
382099		16-NOV-17	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		37,097.77	22-NOV-17	37,097.77	Reconciled
382100		16-NOV-17	NATIONAL READY MIXED CONCRETE CO.		4,827.89	22-NOV-17	4,827.89	Reconciled
382101		16-NOV-17	NATURALWELL, LLC		1,127.50	20-NOV-17	1,127.50	Reconciled
382102		16-NOV-17	NGUYEN, MICHELLE		80.57			Negotiable
382103		16-NOV-17	NINYO & MOORE		7,463.25	20-NOV-17	7,463.25	Reconciled
382104		16-NOV-17	OCEAN BLUE ENVIRONMENTAL SERVICES INC		5,385.34	29-NOV-17	5,385.34	Reconciled
382105		16-NOV-17	OCHOA ALMEIDA, AMAYRANI		66.48	22-NOV-17	66.48	Reconciled
382106		16-NOV-17	OLIN CORPORATION		6,649.07	21-NOV-17	6,649.07	Reconciled
382107		16-NOV-17	ONESOURCE		2,590.97	20-NOV-17	2,590.97	Reconciled
382108		16-NOV-17	DISTRIBUTORS LLC ORANGE COUNTY SANITATION DISTRICT		329,394.82	22-NOV-17	329,394.82	Reconciled
382109		16-NOV-17	ORANGE COUNTY TREASURER		200.85	20-NOV-17	200.85	Reconciled
382110		16-NOV-17	ORANGE COUNTY WATER DISTRICT		2,020,878.50	22-NOV-17	2,020,878.50	Reconciled
382111		16-NOV-17	OSBORN, AMY CORONATO		31.45	28-NOV-17	31.45	Reconciled
382112		16-NOV-17	OTAY MESA SALES, INC		14,002.11	27-NOV-17	14,002.11	Reconciled
382113		16-NOV-17	PALO VERDE IRRIGATION DISTRICT		46.62	22-NOV-17	46.62	Reconciled
382114		16-NOV-17	PARKHOUSE TIRE INC		3,224.33	21-NOV-17	3,224.33	Reconciled
382115		16-NOV-17	PAULUS ENGINEERING, INC.		14,339.32	27-NOV-17	14,339.32	Reconciled
382116		16-NOV-17	PILLSBURY WINTHROP SHAW PITTMAN LLP		496.00	20-NOV-17	496.00	Reconciled

382117	16-NOV-17	PMC ENGINEERING LLC.	6,884.50	24-NOV-17	6,884.50	Reconciled
382118	16-NOV-17	PRAXAIR DISTRIBUTION INC	533.42	21-NOV-17	533.42	Reconciled
382119	16-NOV-17	PROCARE WORK INJURY CENTER	2,174.62	21-NOV-17	2,174.62	Reconciled
382120	16-NOV-17	PRUDENTIAL OVERALL SUPPLY	5,482.28	20-NOV-17	5,482.28	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
382121		16-NOV-17	PRUFTECHNIK INC		22,012.68	24-NOV-17	22,012.68	Reconciled
382122		16-NOV-17	PSOMAS		1,767.50	21-NOV-17	1,767.50	Reconciled
382123		16-NOV-17	PTI SAND & GRAVEL INC		2,083.69	22-NOV-17	2,083.69	Reconciled
382124		16-NOV-17	QIAO, JINGJING		56.30			Negotiable
382125		16-NOV-17	QUIROGA, TIFFANY		20.45	27-NOV-17	20.45	Reconciled
382126		16-NOV-17	R & S SOIL PRODUCTS INC		840.45	24-NOV-17	840.45	Reconciled
382127		16-NOV-17	RAINBOW DISPOSAL CO INC		357.36	28-NOV-17	357.36	Reconciled
382128		16-NOV-17	RALPHS GROCERY COMPANY		19,285.00	30-NOV-17	19,285.00	Reconciled
382129		16-NOV-17	RAM AIR ENGINEERING INC		2,948.10	20-NOV-17	2,948.10	Reconciled
382130		16-NOV-17	REAL WATER CONSULTANTS INC.		20,698.00	28-NOV-17	20,698.00	Reconciled
382131		16-NOV-17	RED WING SHOE STORE		4,594.82	20-NOV-17	4,594.82	Reconciled
382132		16-NOV-17	RESPONSE ENVELOPE, INC		226.28	21-NOV-17	226.28	Reconciled
382133		16-NOV-17	RINCON TRUCK CENTER INC.		559.65	20-NOV-17	559.65	Reconciled
382134		16-NOV-17	RMC WATER AND ENVIRONMENT		3,203.35	21-NOV-17	3,203.35	Reconciled
382135		16-NOV-17	ROSEEN BUILDERS, INC		66.37			Negotiable
382136		16-NOV-17	ROY ALLAN SLURRY SEAL, INC		2,336.68	21-NOV-17	2,336.68	Reconciled
382137		16-NOV-17	ROYAL WHOLESALE ELECTRIC		7,471.61	20-NOV-17	7,471.61	Reconciled
382138		16-NOV-17	SANTA ANA BLUE PRINT		4,828.00	21-NOV-17	4,828.00	Reconciled
382139		16-NOV-17	SANTA MARGARITA FORD		107.89	20-NOV-17	107.89	Reconciled
382140		16-NOV-17	SEAL ANALYTICAL INC		1,354.21	22-NOV-17	1,354.21	Reconciled
382141		16-NOV-17	SEO, JIEUN		152.33			Negotiable
382142		16-NOV-17	SERRANO WATER DISTRICT		32,236.29	28-NOV-17	32,236.29	Reconciled
382143		16-NOV-17	SHAMROCK SUPPLY CO INC		1,638.95	21-NOV-17	1,638.95	Reconciled
382144		16-NOV-17	SHEA HOMES, LIMITED PARTNERSHIP		125.28			Negotiable
382145		16-NOV-17	SHOETERIA		318.93	22-NOV-17	318.93	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
382146		16-NOV-17	SIMI VALLEY LANDFILL AND RECYCLING CENTER		429.30	22-NOV-17	429.30	Reconciled
382147		16-NOV-17	SIRIUS COMPUTER SOLUTIONS INC		2,491.14	22-NOV-17	2,491.14	Reconciled
382148		16-NOV-17	SKAHAN, MONIQUE		160.50	22-NOV-17	160.50	Reconciled
382149		16-NOV-17	SKORUZ TECHNOLOGIES INC		19,224.00	28-NOV-17	19,224.00	Reconciled
382150		16-NOV-17	SONG, CHAENON		61.59	30-NOV-17	61.59	Reconciled
382151		16-NOV-17	SOUTH BAY FOUNDRY, INC		6,389.58	21-NOV-17	6,389.58	Reconciled
382152		16-NOV-17	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		2,652.06	29-NOV-17	2,652.06	Reconciled
382153		16-NOV-17	SOUTHERN CALIFORNIA EDISON COMPANY		285,959.21	20-NOV-17	285,959.21	Reconciled
382154		16-NOV-17	SOUTHERN CALIFORNIA SECURITY CENTERS,		1,118.67	29-NOV-17	1,118.67	Reconciled

382155	16-NOV-17	INC.		4,800.00	21-NOV-17	4,800.00	Reconciled
382156	16-NOV-17	SPATIAL WAVE, INC. SS MECHANICAL CONSTRUCTION CORP		77,250.00	22-NOV-17	77,250.00	Reconciled
382157	16-NOV-17	STANTEC CONSULTING SERVICES INC.		9,696.00	22-NOV-17	9,696.00	Reconciled
382158	16-NOV-17	STATHAKIS, DIANE		294.40			Negotiable
382159	16-NOV-17	STETSON ENGINEERS INC.		15,389.06	27-NOV-17	15,389.06	Reconciled
382160	16-NOV-17	STRADLING YOCCA CARLSON & RAUTH		84.00	21-NOV-17	84.00	Reconciled
382161	16-NOV-17	SUKLE ADVERTISING INC.		34,803.42			Negotiable
382162	16-NOV-17	T & D SERVICES, INC.		425.67	30-NOV-17	425.67	Reconciled
382163	16-NOV-17	TELEDYNE INSTRUMENTS, INC.		317.86	22-NOV-17	317.86	Reconciled
382164	16-NOV-17	THE GAS COMPANY		4,885.19	22-NOV-17	4,885.19	Reconciled
382165	16-NOV-17	TRAN, DUC		257.77	20-NOV-17	257.77	Reconciled
382166	16-NOV-17	TRI COUNTY PUMP COMPANY		72,700.47	27-NOV-17	72,700.47	Reconciled
382167	16-NOV-17	TROPICAL PLAZA NURSERY INC		6,320.50	20-NOV-17	6,320.50	Reconciled
382168	16-NOV-17	TRUCPARCO		2,489.26	27-NOV-17	2,489.26	Reconciled
382169	16-NOV-17	ULTRA SCIENTIFIC		334.35	30-NOV-17	334.35	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
382170		16-NOV-17	UNITED PARCEL SERVICE INC		110.72	22-NOV-17	110.72	Reconciled
382171		16-NOV-17	UNITED RENTALS NORTHWEST INC		3,625.58	20-NOV-17	3,625.58	Reconciled
382172		16-NOV-17	UNITED SITE SERVICES OF CALIFORNIA INC		152.29	22-NOV-17	152.29	Reconciled
382173		16-NOV-17	USA BLUEBOOK		2,424.21	29-NOV-17	2,424.21	Reconciled
382174		16-NOV-17	VERIZON WIRELESS SERVICES LLC		699.33	20-NOV-17	699.33	Reconciled
382175		16-NOV-17	VULCAN MATERIALS COMPANY		1,410.66	20-NOV-17	1,410.66	Reconciled
382176		16-NOV-17	WALTERS WHOLESALE ELECTRIC		122.82	21-NOV-17	122.82	Reconciled
382177		16-NOV-17	WASTE MANAGEMENT OF ORANGE COUNTY		697.05	22-NOV-17	697.05	Reconciled
382178		16-NOV-17	WATERSMART SOFTWARE, INC		13,597.50	27-NOV-17	13,597.50	Reconciled
382179		16-NOV-17	WAXIE'S ENTERPRISES, INC		497.45	21-NOV-17	497.45	Reconciled
382180		16-NOV-17	WESTAMERICA COMMUNICATIONS, INC.		3,307.00	20-NOV-17	3,307.00	Reconciled
382181		16-NOV-17	WIDDNER, WARREN		73.60			Negotiable
382182		16-NOV-17	WILLIAM LYON HOMES, INC.		60.08	29-NOV-17	60.08	Reconciled
382183		16-NOV-17	WILLIAMS, FRITZIE		58.90			Negotiable
382184		16-NOV-17	WIRELESS WATCHDOGS, LLC		784.00	22-NOV-17	784.00	Reconciled
382185		16-NOV-17	XIE, YI		33.17			Negotiable
382186		16-NOV-17	YP LLC		125.00	22-NOV-17	125.00	Reconciled
382187		16-NOV-17	ZHENG, JIANG HONG		86.71	24-NOV-17	86.71	Reconciled
382188		20-NOV-17	CALIFORNIA DEPT OFFO BOX PUBLIC HEALTH 997435		473.00			Negotiable
382189		20-NOV-17	ORANGE COUNTY SANITATION DISTRICT	FOUNTAIN VALLEY	1,570.00	21-NOV-17	1,570.00	Reconciled
382190		20-NOV-17	ECOMOTION, INC.	LOS ANGELES	2,340.00			Negotiable
382191		20-NOV-17	JCI JONES CHEMICALS INC	TAMPA	4,846.69	27-NOV-17	4,846.69	Reconciled
382192		20-NOV-17	AT&T	2872806429	13.44	27-NOV-17	13.44	Reconciled
382193		20-NOV-17	JCI JONES CHEMICALS INC	41 TAMPA	3,385.51	27-NOV-17	3,385.51	Reconciled

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
382194		29-NOV-17	ATHENS SERVICES	LOS ANGELES	1,954.50			Negotiable
382195		29-NOV-17	Burton, Kevin L		3.77			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
			(Kevin)					
382196		29-NOV-17	Gallo, Dilcia E		44.52			Negotiable
382197		29-NOV-17	LaMar, Steven E		491.38			Negotiable
382198		29-NOV-17	Llewellyn, Shana W		120.00	30-NOV-17	120.00	Reconciled
382199		29-NOV-17	Norman, Tammy		175.76			Negotiable
382200		29-NOV-17	Oldewage, Lars D (Lars)		2,743.52			Negotiable
382201		29-NOV-17	Pan, Jenny W (Jenny)		450.46			Negotiable
382202		29-NOV-17	Swan, Peer		1,013.62			Negotiable
382203		29-NOV-17	ACCURATE MEASUREMENT SYSTEMS INC		1,771.54			Negotiable
382204		29-NOV-17	ADAM'S FALCONRY SERVICE, LLC		2,860.00			Negotiable
382205		29-NOV-17	ALEXANDER'S CONTRACT SERVICES, INC.		125.00			Negotiable
382206		29-NOV-17	ALL AMERICAN SEWER TOOLS		440.05			Negotiable
382207		29-NOV-17	ALL STAR GLASS		587.53			Negotiable
382208		29-NOV-17	ALLEN, SUKKYUNG		284.37			Negotiable
382209		29-NOV-17	ALLIED ELECTRONICS INC		473.57			Negotiable
382210		29-NOV-17	ALPHA TRAFFIC SERVICES, INC.		1,140.00			Negotiable
382211		29-NOV-17	ALSTON & BIRD LLP		5,148.00			Negotiable
382212		29-NOV-17	ALVAREZ, OSCAR R		286.65			Negotiable
382213		29-NOV-17	AMERICAN TRAINING RESOURCES, INC		1,076.68			Negotiable
382214		29-NOV-17	ANDERSONPENNA PARTNERS, INC.		55,996.00			Negotiable
382215		29-NOV-17	ANTHEM BLUE CROSS		546.33			Negotiable
382216		29-NOV-17	ANTHEM BLUE CROSS		546.33			Negotiable
382217		29-NOV-17	ANTHEM BLUE CROSS		208.43			Negotiable
382218		29-NOV-17	ANTHEM BLUE CROSS		281.97			Negotiable
382219		29-NOV-17	ANTHONY N. LARSEN		200.00			Negotiable
382220		29-NOV-17	ANTONIA R. MONZON		975.00			Negotiable
382221		29-NOV-17	AQUA BEN CORPORATION		20,609.13			Negotiable
382222		29-NOV-17	ASSOCIATION OF CALIFORNIA CITIES		4,000.00			Negotiable
382223		29-NOV-17	AT&T		6,935.11			Negotiable

IRWD Ledger Upgrade      Payment Register For 01-NOV-17 To 30-NOV-17      Report Date: 04-DEC-2017 07:31  
 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								
382224		29-NOV-17	AT&T		13,403.70			Negotiable
382225		29-NOV-17	AUTOZONE PARTS, INC.		666.40			Negotiable
382226		29-NOV-17	AVALON BAY COMMUNITIES, INC.		253.72			Negotiable
382227		29-NOV-17	AVISTA TECHNOLOGIES, INC		16,956.25			Negotiable
382228		29-NOV-17	BANNON, COLLIN		37.23			Negotiable
382229		29-NOV-17	BARTEL ASSOCIATES, LLC		118.80			Negotiable
382230		29-NOV-17	BATTERIES PLUS AND BATTERIES PLUS BULBS		903.70			Negotiable
382231		29-NOV-17	BECERRA, DARLINDA		24.33			Negotiable
382232		29-NOV-17	BEST DRILLING AND PUMP, INC.		12,950.00			Negotiable
382233		29-NOV-17	BIGWIG MONSTER, LLC		8,700.00			Negotiable
382234		29-NOV-17	BILL'S SWEEPING SERVICE INC		460.00			Negotiable
382235		29-NOV-17	BIO-ACOUSTICAL CORP.		2,015.00			Negotiable
382236		29-NOV-17	BIOMAGIC INC		14,466.25			Negotiable
382237		29-NOV-17	BLACK & VEATCH CORPORATION		335,384.69			Negotiable
382238		29-NOV-17	BOWIE, ARNESON, WILES & GIANNONE		8,099.00			Negotiable
382239		29-NOV-17	BRITHINEE ELECTRIC		1,108.30			Negotiable
382240		29-NOV-17	BROOKFIELD RESIDENTIAL		508.13			Negotiable
382241		29-NOV-17	BTF PRECISE MICROBIOLOGY INC.		545.65			Negotiable
382242		29-NOV-17	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		134.58			Negotiable
382243		29-NOV-17	C WELLS PIPELINE MATERIALS INC		24,049.88			Negotiable
382244		29-NOV-17	CALIFORNIA BARRICADE RENTAL, INC.		17,395.48			Negotiable
382245		29-NOV-17	CANON FINANCIAL		8,996.59			Negotiable

382246 29-NOV-17 SERVICES, INC 5,805.00 Negotiable  
 382247 29-NOV-17 CAROLLO ENGINEERS, INC 3,431.97 Negotiable  
 IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 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								
382248		29-NOV-17	CHARLES P CROWLEY COMPANY INC		244.81			Negotiable
382249		29-NOV-17	CITY OF NEWPORT BEACH		1,282.46			Negotiable
382250		29-NOV-17	CITY OF SANTA ANA		131.10			Negotiable
382251		29-NOV-17	CIVILSOURCE, INC.		15,362.50			Negotiable
382252		29-NOV-17	CLA-VAL COMPANY		58,374.68			Negotiable
382253		29-NOV-17	CLARIS STRATEGY INC.		7,425.50			Negotiable
382254		29-NOV-17	CLEARINGHOUSE		477.67			Negotiable
382255		29-NOV-17	CNC ENGINEERING		1,320.00			Negotiable
382256		29-NOV-17	COMMERCIAL DOOR OF ORANGE COUNTY, INC.		6,640.00			Negotiable
382257		29-NOV-17	COX COMMUNICATIONS, INC.		3,370.90			Negotiable
382258		29-NOV-17	D & H WATER SYSTEMS INC.		6,090.47			Negotiable
382259		29-NOV-17	DAILY, MONIQUE		53.70			Negotiable
382260		29-NOV-17	DAMATO ASSOCIATES, INC		267.37			Negotiable
382261		29-NOV-17	DATA CLEAN CORPORATION		534.00			Negotiable
382262		29-NOV-17	DE LONG, DANA		61.62			Negotiable
382263		29-NOV-17	DELL MARKETING LP		2,360.51			Negotiable
382264		29-NOV-17	DHL EXPRESS (USA INC.)		17.82			Negotiable
382265		29-NOV-17	DIRECTV INC		121.98			Negotiable
382266		29-NOV-17	DIRECTV INC		118.53			Negotiable
382267		29-NOV-17	DISCOUNT COURIER SERVICE		67.47			Negotiable
382268		29-NOV-17	DLT SOLUTIONS LLC		14,609.24			Negotiable
382269		29-NOV-17	DRA ARCHITECTS, A CALIFORNIA CORPORATION		13,168.50			Negotiable
382270		29-NOV-17	DUROCHER, KEN		167.49			Negotiable
382271		29-NOV-17	ECO SERVICES LLC		4,785.66			Negotiable
382272		29-NOV-17	ENTERPRISE RIDESHARE		11,296.66			Negotiable
382273		29-NOV-17	ENTERPRISE SECURITY, INC		28,127.31			Negotiable
382274		29-NOV-17	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		17,626.25			Negotiable
IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31 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								
382275		29-NOV-17	ENVIRONMENTAL EXPRESS INC		3,723.83			Negotiable
382276		29-NOV-17	EXECUTIVE LIGHTING & ELECTRIC		9,964.34			Negotiable
382277		29-NOV-17	FARRELL & ASSOCIATES		243.18			Negotiable
382278		29-NOV-17	FEDEX		523.61			Negotiable
382279		29-NOV-17	FERGUSON ENTERPRISES, INC.		7,333.46			Negotiable
382280		29-NOV-17	FERREIRA, JOYCE		113.24			Negotiable
382281		29-NOV-17	FIRST CHOICE SERVICES		807.22			Negotiable
382282		29-NOV-17	FISERV		19,990.84			Negotiable
382283		29-NOV-17	FISHER SCIENTIFIC COMPANY LLC		3,575.74			Negotiable
382284		29-NOV-17	FRONTIER CALIFORNIA INC.		576.79			Negotiable
382285		29-NOV-17	FUSCOE ENGINEERING, INC.		605.00			Negotiable
382286		29-NOV-17	GANAHL LUMBER CO.		755.25			Negotiable
382287		29-NOV-17	GEI CONSULTANTS INC		20,494.50			Negotiable
382288		29-NOV-17	GENTERRA CONSULTANTS INC		5,006.00			Negotiable

382289	29-NOV-17	GEORGE HILLS COMPANY, INC.	272.00	Negotiable
382290	29-NOV-17	GIBSON, DAVID A	26.78	Negotiable
382291	29-NOV-17	GLANVILLE, MICHAEL	37.02	Negotiable
382292	29-NOV-17	GRAINGER	6,558.86	Negotiable
382293	29-NOV-17	GRAYBAR ELECTRIC COMPANY	477.86	Negotiable
382294	29-NOV-17	GREAT PACIFIC EQUIPMENT INC	3,120.00	Negotiable
382295	29-NOV-17	GUO, HAOXIANG	32.21	Negotiable
382296	29-NOV-17	HAAKER EQUIPMENT COMPANY	271.33	Negotiable
382297	29-NOV-17	HABITAT RESTORATION SCIENCES, INC.	300.00	Negotiable
382298	29-NOV-17	HACH COMPANY	6,717.95	Negotiable
382299	29-NOV-17	HAN, CASPER	45.33	Negotiable
382300	29-NOV-17	HDR ENGINEERING INC	47,785.06	Negotiable
382301	29-NOV-17	HELPMATES STAFFING SERVICES	10,748.32	Negotiable
382302	29-NOV-17	HENNIG, NATALIE	14.02	Negotiable

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 30  
 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								
382303		29-NOV-17	HERITAGE FIELDS EL TORO, LLC		343,951.77			Negotiable
382304		29-NOV-17	HIGHLAND PRODUCTS GROUP, LLC		611.19			Negotiable
382305		29-NOV-17	HILL BROTHERS CHEMICAL COMPANY		5,214.64			Negotiable
382306		29-NOV-17	HOME DEPOT USA INC		605.97			Negotiable
382307		29-NOV-17	HSU, KEYEE		71.93			Negotiable
382308		29-NOV-17	HURD, SHARON		55.70			Negotiable
382309		29-NOV-17	IBM CORPORATION		5,114.00			Negotiable
382310		29-NOV-17	IDEXX DISTRIBUTION, INC		3,424.51			Negotiable
382311		29-NOV-17	INDUSTRIAL NETWORKING SOLUTIONS		913.79			Negotiable
382312		29-NOV-17	INGERSOLL RAND CO		2,335.92			Negotiable
382313		29-NOV-17	IRWD EMPLOYEE ASSOCIATION		1,325.00			Negotiable
382314		29-NOV-17	JUST ENERGY SOLUTIONS INC.		257.29			Negotiable
382315		29-NOV-17	KESTERSON, AYDE		55.03			Negotiable
382316		29-NOV-17	KLEINFELDER, INC.		27,768.65			Negotiable
382317		29-NOV-17	KOELLER NEBEKER CARLSON & HALUCK, LLP		1,357.34			Negotiable
382318		29-NOV-17	LANDCARE HOLDINGS, INC.		4,468.23			Negotiable
382319		29-NOV-17	LEW, RACHEL		49.36			Negotiable
382320		29-NOV-17	LI, RONG		29.00			Negotiable
382321		29-NOV-17	LINNELL, HARRY T		188.74			Negotiable
382322		29-NOV-17	LUBRICATION ENGINEERS, INC.		8,776.68			Negotiable
382323		29-NOV-17	MAOUD PARSA AND MARZIEH TABIBI		55.66			Negotiable
382324		29-NOV-17	MARVIN GARDENS LLC		3,187.62			Negotiable
382325		29-NOV-17	MAYES, GEOFF		10.25			Negotiable
382326		29-NOV-17	MBC APPLIED ENVIRONMENTAL SCIENCES		1,300.00			Negotiable
382327		29-NOV-17	MC FADDEN-DALE INDUSTRIAL		320.54			Negotiable
382328		29-NOV-17	MC MASTER CARR SUPPLY CO		317.66			Negotiable
382329		29-NOV-17	MCBEE, MATTHEW		31.27			Negotiable
382330		29-NOV-17	MCR TECHNOLOGIES INC		6,684.58			Negotiable

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 31  
 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								
382331		29-NOV-17	MICHAEL BAKER INTERNATIONAL, INC.		7,182.32			Negotiable
382332		29-NOV-17	MOHAGHEGH, OMID		47.73			Negotiable
382333		29-NOV-17	MORGAN COMPANY		221.38			Negotiable



382377 29-NOV-17 SYSTEMS, INC 10.06 Negotiable  
 382378 29-NOV-17 SAN LEON APTS 850.25 Negotiable  
 IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 33  
 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								
382379		29-NOV-17	SAN REMO APTS		240.18			Negotiable
382380		29-NOV-17	SANTA ANA BLUE PRINT		553.47			Negotiable
382381		29-NOV-17	SANTA MARGARITA FORD		5,263.32			Negotiable
382382		29-NOV-17	SANTA MARGARITA WATER DISTRICT		24,913.72			Negotiable
382383		29-NOV-17	SCHINDLER ELEVATOR CORPORATION		202.95			Negotiable
382384		29-NOV-17	SEO, KYUNGA		78.00			Negotiable
382385		29-NOV-17	SHAMROCK SUPPLY CO INC		1,270.20			Negotiable
382386		29-NOV-17	SHEIKH, FAUZIA		38.86			Negotiable
382387		29-NOV-17	SITEONE LANDSCAPE SUPPLY, LLC		548.77			Negotiable
382388		29-NOV-17	SLOCUM, DAVID		44.68			Negotiable
382389		29-NOV-17	SMARTCOVER SYSTEMS		769.73			Negotiable
382390		29-NOV-17	SOFTWAREONE INC		4,197.55			Negotiable
382391		29-NOV-17	SOUTH COAST ANSWERING SERVICE		554.80			Negotiable
382392		29-NOV-17	SOUTH COAST WATER DISTRICT		1,288.27			Negotiable
382393		29-NOV-17	SOUTHERN CALIFORNIA EDISON COMPANY		32.08			Negotiable
382394		29-NOV-17	SOUTHERN CALIFORNIA EDISON COMPANY		311,508.55			Negotiable
382395		29-NOV-17	SOUTHERN COUNTIES LUBRICANTS LLC		888.30			Negotiable
382396		29-NOV-17	SPARKLETTS		294.54			Negotiable
382397		29-NOV-17	SPATIAL WAVE, INC.		8,494.00			Negotiable
382398		29-NOV-17	STANDARD REGISTER, INC.		1,299.71			Negotiable
382399		29-NOV-17	STANTEC CONSULTING SERVICES INC.		15,104.00			Negotiable
382400		29-NOV-17	SUNSTATE EQUIPMENT CO		3,098.21			Negotiable
382401		29-NOV-17	TAYLOR MORRISON		18.88			Negotiable
382402		29-NOV-17	TESTAMERICA LABORATORIES, INC		192.15			Negotiable
382403		29-NOV-17	TETRA TECH, INC		53,362.83			Negotiable
382404		29-NOV-17	THE GAS COMPANY		198.15			Negotiable
382405		29-NOV-17	THERMO ELECTRON NORTH AMERICA LLC		12,141.00			Negotiable
382406		29-NOV-17	TIC-IPG-COMMON		258.02			Negotiable
IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31								
BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 34								
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								
382407		29-NOV-17	TIC-OFFICE PROPERTIES		333.89			Negotiable
382408		29-NOV-17	TIC-RETAIL PROPERTIES		125.97			Negotiable
382409		29-NOV-17	TIC-SPECTRUM OFFICE		65.96			Negotiable
382410		29-NOV-17	TOTAL RESOURCE MANAGEMENT, INC.		95,147.00			Negotiable
382411		29-NOV-17	TRIPAC MARKETING INC		1,335.52			Negotiable
382412		29-NOV-17	TROPICAL PLAZA NURSERY INC		54,592.52			Negotiable
382413		29-NOV-17	TRUCPARCO		526.23			Negotiable
382414		29-NOV-17	UNITED WATER WORKS, INC.		260.11			Negotiable
382415		29-NOV-17	UNIVERSITY OF CALIFORNIA		1,250.00			Negotiable
382416		29-NOV-17	US BANK NAT'L ASSOCIATION NORTH DAKOTA		120,417.30			Negotiable
382417		29-NOV-17	USDA FOREST SERVICE		273.64			Negotiable
382418		29-NOV-17	VAUGHAN'S INDUSTRIAL REPAIR		23,339.42			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
382419		29-NOV-17	CO INC VERIZON WIRELESS SERVICES LLC		9,873.27			Negotiable
382420		29-NOV-17	VWR INTERNATIONAL, LLC		8,400.37			Negotiable
382421		29-NOV-17	WALTERS WHOLESALE ELECTRIC		18,879.92			Negotiable
382422		29-NOV-17	WARMINGTON RESIDENTIAL		105.68			Negotiable
382423		29-NOV-17	WATER ENVIRONMENT & REUSE FOUNDATION (WE&RF)		14,280.00			Negotiable
382424		29-NOV-17	WATERLINE TECHNOLOGIES INC		2,598.60			Negotiable
382425		29-NOV-17	WATERWISE CONSULTING, INC.		850.00			Negotiable
382426		29-NOV-17	WAXIE'S ENTERPRISES, INC		3,378.47			Negotiable
382427		29-NOV-17	WECK LABORATORIES INC		115.00			Negotiable
382428		29-NOV-17	WEEKS & FALCONE CONSTRUCTION		281.38			Negotiable

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 35  
 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								
382429		29-NOV-17	WET SEAL, LLC		24.43			Negotiable
382430		29-NOV-17	WISCONSIN STATE LABORATORY OF HYGENE		630.00			Negotiable
382431		29-NOV-17	WONG, MARGARET		41.18			Negotiable
382432		29-NOV-17	WOODBRIIDGE VILLAS		456.37			Negotiable
382433		29-NOV-17	ZAMANLI, PARHAM		27.17			Negotiable
382434		29-NOV-17	ZHU, KAREN		858.77			Negotiable
382435		30-NOV-17	IRWD-PETTY CASH CUSTODIAN	IRVINE	1,160.34			Negotiable
382436		30-NOV-17	CIVILSOURCE, INC.	IRVINE 1	19,210.00			Negotiable
382437		30-NOV-17	ORANGE COUNTY SANITATION DISTRICT	FOUNTAIN VALLEY	1,500.00			Negotiable
382438		30-NOV-17	TURCIOS, CARLOS	MONTCLAIR	75.00			Negotiable
382439		30-NOV-17	BRITHINEE ELECTRIC	PAY	16,563.78			Negotiable
382440		30-NOV-17	KPMG LLP	PO BOX 120970	230,798.00			Negotiable
382441		30-NOV-17	TUSTIN RANCH GOLF CLUB	EL SEGUNDO	129,514.41			Negotiable
Payment Document Subtotal:					14,904,275.95		9,280,053.79	

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12322		10-NOV-17	FILANC-BALFOUR BEATTY JV	ACT 4427724347	1,859,061.92			Negotiable
12323		10-NOV-17	FILANC-BALFOUR BEATTY JV	ESR 211084000	34,876.90			Negotiable
12324		10-NOV-17	CALPERS	SACRAMENTO 1	461,387.76			Negotiable
12325		10-NOV-17	CALPERS	SACRAMENTO 1	2,867.15			Negotiable
12326		10-NOV-17	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	44,928.50			Negotiable
12327		15-NOV-17	CALPERS	SACRAMENTO	177,737.42			Negotiable
12328		15-NOV-17	CALPERS	SACRAMENTO	1,241.13			Negotiable
12329		15-NOV-17	CALPERS	SACRAMENTO	177,813.16			Negotiable
12330		17-NOV-17	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	11,425.82			Negotiable
12331		22-NOV-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	12,160.26			Negotiable

IRWD Ledger Upgrade Payment Register For 01-NOV-17 To 30-NOV-17 Report Date: 04-DEC-2017 07:31  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 36  
 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								
12332		22-NOV-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	86,190.53			Negotiable
12333		22-NOV-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	142,680.27			Negotiable
12334		22-NOV-17	U.S. BANK NATIONAL	ST. LOUIS	9,134.74			Negotiable

12335	27-NOV-17	ASSOCIATION BANK OF NEW YORK NEWARK MELLON TRUST COMPANY NA	NEWARK	67,517.37	Negotiable
12336	27-NOV-17	U.S. BANK NATIONALST. LOUIS ASSOCIATION		39,369.91	Negotiable
12337	27-NOV-17	U.S. BANK NATIONALST. LOUIS ASSOCIATION		20,686.44	Negotiable
12338	27-NOV-17	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	35,626.44	Negotiable
12339	27-NOV-17	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	28,750.00	Negotiable
12340	27-NOV-17	INTERNAL REVENUE SERVICE	FRESNO	249,325.79	Negotiable
12341	27-NOV-17	FRANCHISE TAX BOARD	SACRAMENTO	70,071.54	Negotiable
12342	27-NOV-17	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	10,214.02	Negotiable
12343	27-NOV-17	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR	230.77	Negotiable
12344	27-NOV-17	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	1,811.53	Negotiable
12345	27-NOV-17	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	158,589.09	Negotiable
12346	27-NOV-17	BANK OF AMERICA	SAN FRANCISCO	39,959.00	Negotiable
12347	28-NOV-17	YORK INSURANCE SERVICES GROUP INC	PAY	8,615.44	Negotiable
12348	28-NOV-17	YORK INSURANCE SERVICES GROUP INC	PAY - CA	22,024.07	Negotiable

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

Payment Register For 01-NOV-17 To 30-NOV-17  
 Account: Checking AP and PR  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Report Date: 04-DEC-2017 07:31  
 Page: 37

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12349		28-NOV-17	INTERNAL REVENUE SERVICE	FRESNO	209,774.26			Negotiable
12350		28-NOV-17	FRANCHISE TAX BOARD	SACRAMENTO	58,898.56			Negotiable
12351		28-NOV-17	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	8,296.53			Negotiable
12352		28-NOV-17	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR	230.77			Negotiable
12353		28-NOV-17	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	1,811.53			Negotiable
12354		28-NOV-17	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	12,085.07			Negotiable
12355		29-NOV-17	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	122,571.07			Negotiable
12356		29-NOV-17	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	254.17			Negotiable
12357		30-NOV-17	CALPERS	SACRAMENTO	653.55			Negotiable
12358		30-NOV-17	CALPERS	SACRAMENTO	178,578.99			Negotiable
12359		30-NOV-17	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	1,541.67			Negotiable

Payment Document Subtotal: 4,368,993.14

Bank Account Subtotal : 19,273,269.09 9,280,053.79

Report Count : 916 Report Total: 19,273,269.09 9,280,053.79

Disbursements

\*\*\* End of Report \*\*\*

\$ 19,273,269.09 Disbursements  
 <2,875.19> Voids  
 \$ 19,270,393.90 Total Voids and Disbursements

Exhibit "E"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

November  
2017

	AMOUNT	VENDOR	PURPOSE
11/10/2017	1,089,469.87	BANK OF AMERICA	ACH Payments for Payroll
11/24/2017	907,513.34	BANK OF AMERICA	ACH Payments for Payroll
	<u><u>\$1,996,983.21</u></u>		

## Exhibit "F"

### 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-NOV-17 to 30-NOV-17

NAME	CHECK NO.	CHECK	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Bennett, Ray	381971	16-Nov-17	125.00	Membership Renewal	Groundwater Resources Association of California membership renewal
Compton, Christine	381565	2-Nov-17	216.76	Lodging	ACWA Regulatory Summit meeting, Sacramento, CA - Oct. 16, 2017
Daniel, Matthew	381567	2-Nov-17	105.00	Certification Renewal	Water Distribution Operator Grade IV certificate renewal
Dillman, Tyler	381568	2-Nov-17	168.00	Certification Renewal	Water Distribution Operator Grade III certificate renewal
Duffert, Dominic	381569	2-Nov-17	180.00	Membership Renewal	CWEA membership renewal
Hatch, Lauren	381570	2-Nov-17	100.00	Certification Renewal	Water Distribution Operator Grade III certificate renewal
LaMar, Steve	382197	29-Nov-17	171.64	Lodging	ACWA Board of Directors' Budget Workshop, Sacramento, CA - Sept. 29, 2017
Lao, Richard	381975	16-Nov-17	139.00	Membership Renewal	CWEA membership renewal
Marshall, Matt	381572	2-Nov-17	105.00	Certification Renewal	Water Distribution Operator Grade IV certificate renewal
Martin, Didene	381787	9-Nov-17	197.55	Other(Misc)	Safety Shoe Allowance
Navarro, Hector	381788	9-Nov-17	500.00	Other(Misc)	Meeting supplies
Norman, Tammy	382199	29-Nov-17	126.78	Other(Misc)	Meeting supplies
Oldewage, Lars	382200	29-Nov-17	317.38	Airfare	AWWA 2017 Water Quality Technology Conf., Portland, OR - Nov. 12-16, 2017
Oldewage, Lars	382200	29-Nov-17	1,035.00	Registration Fees	AWWA 2017 Water Quality Technology Conf., Portland, OR - Nov. 12-16, 2017
Oldewage, Lars	382200	29-Nov-17	187.94	Lodging	AWWA 2017 Water Quality Technology Conf., Portland, OR - Nov. 12, 2017
Oldewage, Lars	382200	29-Nov-17	187.94	Lodging	AWWA 2017 Water Quality Technology Conf., Portland, OR - Nov. 13, 2017
Oldewage, Lars	382200	29-Nov-17	187.94	Lodging	AWWA 2017 Water Quality Technology Conf., Portland, OR - Nov. 14, 2017
Oldewage, Lars	382200	29-Nov-17	187.94	Lodging	AWWA 2017 Water Quality Technology Conf., Portland, OR - Nov. 15, 2017
Oldewage, Lars	382200	29-Nov-17	187.94	Lodging	AWWA 2017 Water Quality Technology Conf., Portland, OR - Nov. 16, 2017
Pan, Jenny	382201	29-Nov-17	264.18	Lodging	IOFM 2017 Conference, Las Vegas, NV - Nov. 13, 2017
Pizanie, Nicholas	381977	16-Nov-17	130.00	Certification Renewal	Water Distribution Operator Grade IV exam fee
Pizanie, Nicholas	381977	16-Nov-17	105.00	Certification Renewal	Water Distribution Operator Grade IV certificate renewal
Saini, Mohit	381575	2-Nov-17	415.11	Lodging	Oracle Conference in San Francisco, CA - Oct. 4, 2017
Saini, Mohit	381575	2-Nov-17	144.99	Airfare	Oracle Conference in San Francisco, CA - Oct. 4-5, 2017
Smyth, Jeff	381978	16-Nov-17	115.00	Membership Renewal	PE license renewal
Swan, Peer	382202	29-Nov-17	535.95	Airfare	Water Education Foundation Headwaters Tour, Sacramento, CA - Sept. 12-14, 2017
Swan, Peer	382202	29-Nov-17	135.01	Lodging	Water Education Foundation Headwaters Tour, Sacramento, CA - Sept. 12, 2017
Tremontozzi, Cody	381979	16-Nov-17	100.00	Certification Renewal	Water Distribution Operator Grade III exam fee
Tremontozzi, Cody	381979	16-Nov-17	120.00	Certification Renewal	Water Distribution Operator Grade III certificate renewal
Wang, Peter	381578	2-Nov-17	117.55	Certification Renewal	Water Distribution Operator Grade II certificate renewal
<b>Total Amount:</b>			<b>\$6,609.60</b>		

December 11, 2017

Prepared and

Submitted by: K. Burton

Approved by: Paul A. Cook



## ACTION CALENDAR

### TERMINATION OF JOINT SERVICES AT THE CHIQUITA AND LOS ALISOS WATER RECYCLING PLANTS

#### SUMMARY:

IRWD and Santa Margarita Water District (SMWD) both currently have unutilized and unneeded capacity ownership in the other District's facilities for conveyance and treatment of sewage. Both agencies are in the process of evaluating options for modernizing their respective sewage treatment plants. Since these modernizations will require capital outlay from each District for the other District's facilities, staff from the two District's worked cooperatively to determine the best path forward to terminate the capacity ownership that each District holds in the other District's facilities. A Term Sheet for termination of joint services at the Chiquita and Los Alisos Water Recycling Plants has been developed. An agreement based on the terms outlined in the Term Sheet will be prepared over the next few months. Staff requests that the Board approve the Term Sheet, subject to non-substantive changes, and authorize the General Manager to execute an agreement based on the Term Sheet.

#### BACKGROUND:

##### Chiquita Water Recycling Plant:

In 1989, part of the Portola Hills development was annexed into IRWD. Prior to this, water and sewer service for the development was provided by Santa Ana Mountains County Water District (now Trabuco Canyon Water District (TCWD)). As a result of the annexation, IRWD began providing domestic water and sewer service to existing residential and proposed residential and commercial customers. Roughly half of the existing Portola Hills development continued as customers of TCWD, while the remaining half, plus new development, became IRWD customers.

Sewage from the Portola Hills area (both TCWD and IRWD customers) was conveyed via TCWD's El Toro Road Trunk Sewer System (the El Toro System) into SMWD's Chiquita System for treatment and disposal. The annexation resulted in agreements between IRWD, SMWD, and TCWD for conveyance, treatment and disposal of sewage generated by IRWD customers. One of these, the "Agreement Between Irvine Ranch Water District and Santa Margarita Water District Regarding Collection, Treatment and Disposal of Wastewater to the Chiquita System and El Toro Road Trunk Sewer System", dated February 27, 1989, obligates IRWD to pay common costs and operating and treatment costs for SMWD's Chiquita System which includes three lift stations, several miles of force mains and gravity mains, and the Chiquita Water Recycling Plant. Common costs are allocated to IRWD based on its proportional capacity ownership in each element of the El Toro Sewer System and the Chiquita System. Treatment and operating costs are allocated based on the proportional number of equivalent dwelling units each agency has connected to the El Toro Sewer System.

IRWD currently has 0.642 million gallons per day (MGD) capacity ownership in the El Toro Sewer System and Chiquita System and an average daily sewage flow of approximately 0.08 MGD. IRWD's average daily flow declined from approximately 0.23 MGD in 2014 when IRWD constructed a new gravity sewer to serve the majority of Portola Hills and eliminated the Portola Hills Lift Station which originally conveyed the majority of IRWD's Portola Hills sewage to the El Toro Sewer System and Chiquita System. There is no termination provision within the existing agreements so IRWD continues to be financially responsible for operating and treatment costs associated with its daily sewage flow of 0.1 MGD and common costs associated with 0.642 MGD capacity ownership in both the El Toro Sewer System and the Chiquita System.

#### Los Alisos Water Recycling Plant:

In 1999, SMWD purchased 0.7 MGD capacity ownership through the secondary treatment process in the Los Alisos Water Recycling Plant (LAWRP) from the Los Alisos Water District (which was consolidated with IRWD in 2000). The capacity ownership purchase allowed SMWD to eliminate an old lift station and divert the sewage from English Canyon by gravity to IRWD's Lake Forest Sewer System and then to the LAWRP. SMWD currently diverts approximately 0.63 MGD to LAWRP. In 2016, SMWD acquired treatment capacity in Moulton Niguel Water District's Plant 3A Water Recycling Plant and has evaluated the option of diverting their English Canyon sewage flow to the Plant 3A Water Recycling Plant to increase their production of recycled water. There is no termination provision in the agreement so if SMWD diverts the English Canyon sewage flow away from LAWRP, it would continue to be financially responsible for the common costs associated with its 0.7 MGD capacity ownership in LAWRP.

A schematic of the sewage flow and capacity ownership of the current El Toro Sewer System, Chiquita System and LAWRP is attached as Exhibit "A".

#### Termination of Joint Services:

IRWD and SMWD are each in the process of evaluating options for modernizing their respective sewage treatment plants. Since these modernizations will require capital outlay from IRWD for the Chiquita System and from SMWD for the LAWRP, staff from the two District's worked cooperatively for the last year to determine the best path forward to terminate the unutilized and unneeded capacity ownership that each District holds in the other District's facilities. A Term Sheet that is agreeable to staff from both Districts for termination of joint services at Chiquita and LAWRP has been developed and is attached as Exhibit "B". The proposed terms allow for each District to be relieved of its capacity ownership in the other District's conveyance and treatment facilities at no cost commencing July 1, 2018, provides that SMWD will assume responsibility for IRWD's remaining 0.1 MGD sewage flow from the Portola Hills area, and that SMWD will assume responsibility for 0.1 MGD of IRWD's capacity ownership in TCWD's El Toro Sewer System. IRWD's remaining 0.542 MGD capacity ownership in TCWD's El Toro Sewer System will remain the responsibility of IRWD until a possible future agreement can be negotiated with TCWD.

An agreement based on the terms outlined in the Term Sheet will be prepared over the next few months. Staff recommends that the Board approve the Term Sheet subject to non-substantive changes, and authorize the General Manager to execute an agreement based on the Term Sheet. Santa Margarita recently indicated that it will be taking this same term sheet to its Board this month with an identical recommendation to approve.

**FISCAL IMPACTS:**

IRWD's 0.642 MGD capacity ownership in the Chiquita System is less than SMWD's 0.7 MGD capacity ownership in LAWRP, but since the Chiquita System includes many more miles of pipeline and lift stations, the common costs are similar on an annual basis. Execution of an agreement will result in no transfer of funds between the Districts, therefore there is no expected fiscal impact.

**ENVIRONMENTAL COMPLIANCE:**

This project is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15061 (b) (3), in that CEQA applies only to projects that may result in a direct physical change in the environment or reasonably foreseeable indirect physical change in the environment.

**COMMITTEE STATUS:**

Board representatives from IRWD and SMWD met on November 9, 2017 to review the Term Sheet.

**RECOMMENDATION:**

**THAT THE BOARD APPROVE THE TERM SHEET SUBJECT TO NON-SUBSTANTIVE CHANGES, AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE AN AGREEMENT BASED ON THE TERM SHEET.**

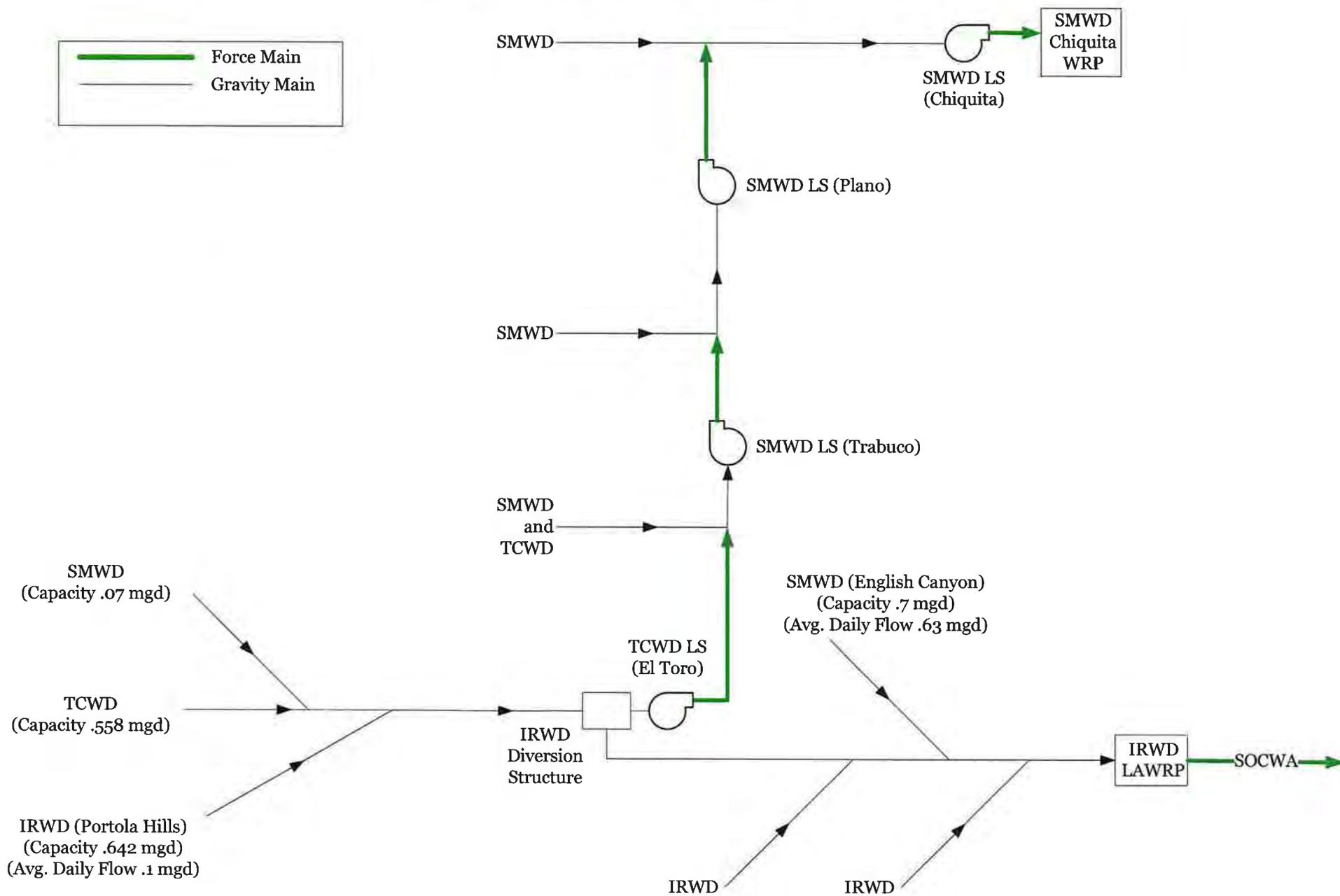
**LIST OF EXHIBITS:**

Exhibit "A" – Schematic of Flow and Capacity Ownership

Exhibit "B" – Term Sheet for Termination of Joint Services at Chiquita and LAWRP

# EXHIBIT "A"

## IRWD/SMWD/TCWD Joint Sewage Collection and Treatment



## **EXHIBIT “B”**

### **IRWD/SMWD**

#### **Term Sheet for Termination of Joint Services at Chiquita and LAWRP**

September 5, 2017

1. IRWD'S .642 mgd capacity in the SMWD's Chiquita System is estimated to be the same value as SMWD's .7 mgd capacity in IRWD's LAWRP System. No transfer of money is required to balance the transfer of capacity in the two systems. SMWD's remaining payment for historical LAWRP upgrades is included in the calculation and considered paid with the capacity transfer.
2. Capacity transfer to be effective July 1, 2018.
3. SMWD may continue to send English Canyon sewage to LAWRP until July 1, 2020. SMWD would be responsible for its portion of IRWD's LAWRP System O&M related charges per the current LAWRP Agreement. SMWD would not be responsible for any portion of major LAWRP System Capital Improvements effective July 1, 2018. The 2020 date can be extended based on mutual agreement.
4. SMWD would be responsible for necessary improvements to divert English Canyon sewage to Plant 3A WRP.
5. IRWD's Portola Hills sewage, approximately .1 mgd, would become the responsibility of SMWD at the entrance to the TCWD El Toro Road Sewage Lift Station. SMWD would be responsible for the common and operating costs of the pumping and treatment of the sewage and would retain the recycled water produced at Chiquita WRP.
6. IRWD would be responsible for .542 mgd fixed capacity charge (.642 mgd capacity minus the diverted .1 mgd average daily flow) from TCWD for the El Toro Road Trunk Sewage Lift Station. SMWD's capacity ownership would increase .1 mgd.
7. IRWD's Sewage Diversion Structure would remain in place and serve as an emergency diversion structure for the TCWD El Toro Road Trunk Sewage Lift Station.

December 11, 2017  
Prepared by: J. Dayer  
Submitted by: P. Shields  
Approved by: Paul A. Cook 

## ACTION CALENDAR

### THREE-YEAR JANITORIAL SERVICES CONTRACT AWARD

#### SUMMARY:

Staff recommends that the Board authorize the General Manager to execute a three-year janitorial services contract with American Building Maintenance, Inc. in the amount of \$730,932.71 with its term ending December 31, 2020.

#### BACKGROUND:

IRWD's Sand Canyon Headquarters, Operations Center, Los Alisos Water Recycling Plant, and 22 satellite facilities totaling 116,500 square feet require ongoing janitorial services. A contract for the services was awarded to DMS Facilities Services, Inc. on January 1, 2014 in the amount of \$590,784 which expires on December 31, 2017.

#### Contractor Selection:

A Request for Proposal with an added scope of work to include one new facility, the Baker Water Treatment Plant was distributed to American Building Maintenance, DMS Facilities Services, Inc., Priority Building Services, and Sunset Property Services. A bid opening was held with bids received from these contractors with the lowest responsive bid received from American Building Maintenance, Inc. with a bid of \$730,932.71. This bid represents an increase of \$140,148 over the previous contract due to the additional scope of services and increased labor costs. American Building Maintenance, Inc. provided several references which received satisfactory responses.

#### FISCAL IMPACTS:

Sufficient funding for janitorial services through June 30, 2018 is included in the FY 2017-18 Operating Budget. Staff will request additional funding in future Operating Budgets to incorporate these costs.

#### ENVIRONMENTAL COMPLIANCE:

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

#### COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on December 5, 2017.

Action Calendar: Three-Year Janitorial Services Contract.  
December 11, 2017  
Page 2

RECOMMENDATION:

AUTHORIZE THE GENERAL MANAGER TO EXECUTE A THREE-YEAR JANITORIAL SERVICES CONTRACT WITH AMERICAN BUILDING MAINTENANCE, INC., IN THE AMOUNT OF \$730,932.71 WITH ITS TERM ENDING DECEMBER 31, 2020.

LIST OF EXHIBITS:

Exhibit "A" – 2018 Three-Year Janitorial Contract Bid Summary

**EXHIBIT “A”**

**Three-Year Janitorial Services Contract Bid Summary**

**December 5, 2018**

<b>Contractor</b>	<b>Area 1 Headquarters and Operations Center</b>	<b>Area 2 Community Room</b>	<b>Area 3 Marsh Campus</b>	<b>Area 4 Baker Water Treatment Plant</b>	<b>Area 5 Los Alisos Water Recycling Plant</b>	<b>Three Year Lump Sum</b>
American Building Maintenance	\$514,604.57	\$32,191.16	\$107,292.28	\$52,159.94	\$24,684.76	\$730,932.71
DMS Facilities Services, Inc.	\$589,534.00	\$28,284.00	\$53,780.00	\$74,109.00	\$17,654.00	\$763,361.00
Priority Building Services	\$626,304.00	\$36,228.00	\$61,992.00	\$37,836.00	\$15,408.00	\$777,768.00
Sunset Property Services	Not submitted	Not submitted	Not submitted	Not submitted	Not submitted	\$879,435.00

**Low Bid Three-Year Contract Total = \$730,932.76**

**Schedule for California Minimum Wage Rate 2016-2020**

<b>Date</b>	<b>Minimum Wage</b>	<b>Increase</b>
January 1, 2016	\$10.00/hour	N/A
January 1, 2017	\$10.50/hour	5.0%
January 1, 2018	\$11.00/hour	4.8%
January 1, 2019	\$12.00/hour	9.1%
January 1, 2020	\$13.00/hour	8.3%
Net Change		27.2%

December 11, 2017

Prepared by: S. Malloy

Submitted by: K. Burton

Approved by: Paul A. Cook

## ACTION CALENDAR

### MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES CONTRACT CHANGE ORDER NO. 68

#### 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. 68 includes costs for several mechanical, electrical, instrumentation, and controls items. Staff recommends that the Board approve CCO No. 68 in the amount of \$569,553.19 with FBB.

#### BACKGROUND:

Construction of the Biosolids Project was awarded to FBB in March 2013 in the amount of \$163,465,940. The Biosolids Project will provide biosolids digestion, dewatering, energy production, and on-site sludge drying. The project includes excavation for subsurface structures; installation of foundation piles; three egg-shaped digesters; a state-of-the-art odor control system; a biogas conditioning system and power generation using microturbines; a fats, oil and grease (FOG) receiving station; and new utility services. These facilities are being constructed on the land north of IRWD's Operations Center, maintenance shops, water quality laboratory, and warehouse.

#### CCO No. 68:

Staff negotiated with FBB and agrees to the labor and material costs contained in CCO No. 68, which contains the following items:

- *FOG Modifications in the amount of \$83,648.47* – To enhance the FOG receiving, storage, and mixing system operation, piping modifications and additional control features were requested by staff. These modifications will (1) provide three modes of operation for FOG receiving (heating, receiving, and flushing); (2) provide three modes of operation for the FOG storage tanks (receiving, off-line, and transfer); (3) allow for mode selection and status indication on the FOG control panel; (4) allow a human/machine control function for the described mode selection; (5) provide better control from the FOG mixing pumps discharge header to the FOG fill lines; and (6) provide better control from the heated reclaimed water to the FOG fill lines during the flushing operation. This item is for the labor and materials to make the necessary modifications.
- *Additional Electrical Outlets and Circuits in the Solids Handling Building in the amount of \$44,054.83* – After review of operational needs, staff determined that additional electrical outlets and circuits are required in several areas in the Solids Handling

Building. These areas include the control room, the lab sample analysis room, and the break room. This item is for the labor and materials to install the additional electrical outlets and circuits.

- *Control Panel Modifications in the Methane Digester Complex in the amount of \$55,414.03* – After review of the electrical code requirements, it was determined that the three sump pump control panels in the basement of the methane digester complex need to be relocated for proper clearance from an explosive gas environment. Remaining in the original location would require modifications resulting in higher costs and time spent in order to meet more stringent codes. This item includes the labor and material for additional conduit and cabling to accommodate the new panel locations.
- *Additional Electrical, Instrumentation, and Controls for the Heat Dryer System in the amount of \$386,435.86* – During the submittal process, the dryer manufacturer, Andritz, disclosed that over 400 additional points were required for electrical, instrumentation, and controls of the dryer system. These points were not disclosed by Andritz during design of the dryer system. This item is for labor and material to provide the additional electrical, instrumentation, and controls.

Staff recommends that the Board approve CCO No. 68 in the amount of \$569,553.19 with FBB, which is attached as Exhibit “A”. Items that do not claim or grant additional time are considered full compensation for those items. If items require additional time, the items included in this change order are full compensation except for time impacts. The Contractor reserves the right to claim time impacts, but the Contractor must show any time impacts to the project's critical path and how IRWD is responsible for these time impacts. Resolution of these time impacts is scheduled for a later date. CCO No. 68 does not extend any of the milestone completion dates.

The construction change order summary is attached as Exhibit “B”. The following is a summary of categories of the change orders:

Category	Total Amount	% of Original Contract
A - District Convenience/Initiation - Project Related	\$ 2,704,603.70	1.65%
B - Differing Site Conditions	\$12,285,279.55	7.52%
C - Design Oversight	\$ 3,111,286.84	1.90%
D - District Convenience/Initiation - Non-Project Related	\$ -	0.00%
E - Contractor Convenience/Initiation	\$ 98,302.54	0.06%
F - Contractor Requested Inspection Overtime	\$ (249,810.00)	-0.15%
TOTAL (All Items A - F)	\$17,949,662.63	10.98%

Action Calendar: Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities  
Contract Change Order No. 68  
December 11, 2017  
Page 3

FISCAL IMPACTS:

The MWRP Biosolids and Energy Recovery Facilities Project 04286 is included in the FY 2017-18 Capital Budget. The existing budget is sufficient to fund this change order.

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 December 5, 2017.

RECOMMENDATION:

THAT THE BOARD APPROVE CONTRACT CHANGE ORDER NO. 68 IN THE AMOUNT OF \$569,553.19 WITH FILANC/BALFOUR BEATTY FOR SEVERAL MECHANICAL, ELECTRICAL, INSTRUMENTATION, AND CONTROLS ITEMS FOR THE MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES, PROJECT 04286.

LIST OF EXHIBITS:

Exhibit "A" – Contract Change Order No. 68 with FBB  
Exhibit "B" – Construction Change Order Summary

**CONTRACT CHANGE ORDER**

**EXHIBIT "A"**



**Irvine Ranch Water District**

15600 Sand Canyon Avenue  
 P.O. Box 57000  
 Irvine, CA 92619-7000  
 (949) 453-5300

C.O. No. 68  
 Final  
 Project No. 04286

MWRP Biosolids and Energy Recovery Facilities

Project Title

Date: 11/14/2017

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Fats, Oil, and Grease (FOG) Modification (CR-223) PR 04286 Task 5.30	\$83,648.47	\$0.00	See Notes
2. Additional Electrical Outlets and Circuits in the Solids Handling Building (CR-453) PR 04286 Task 5.30	\$44,054.83	\$0.00	See Notes
3. Control Panel Modifications in the Methane Digester Complex (CR-545) PR 04286 Task 5.30	\$55,414.03	\$0.00	See Notes
4. Additional Electrical, Instrumentation, and Controls for the Heat Dryer System (CR-270 and CR-471A through CR-471G, CR-496, and CR-555) PR 04286 Task 5.30	\$386,435.86	\$0.00	See Notes
Notes: 1. For all items noted above, the Contractor reserves the right to compensable and/or excusable time extensions provided that time impacts to the Project's critical path are demonstrated to be beyond the Contractor's control. 2. Contractor reserves any and all rights it has and otherwise does not waive or release any claims it may have for additional compensation related to impact, including but not limited to the cumulative effect of the number, nature, or extent of any changes or design clarifications. 3. The project completion date of October 31, 2017 per CCO No. 45 is unchanged by this Change Order.			
<b>TOTAL</b>	\$569,553.19	\$0.00	0

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 Change 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 Change Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=	\$569,553.19	0
2. ORIGINAL CONTRACT AMOUNT	=	\$163,465,940.00	1,278
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	\$17,380,109.44	368
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	\$180,846,049.44	1,646
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$181,415,602.63	1,646

We hereby agree to make the above change subject to the terms of this change order for the sum of: \_\_\_\_\_  
 -----Five Hundred Sixty-Nine Thousand Five Hundred Fifty-Three and 19/100 -----Dollars

Date \_\_\_\_\_ Contractor Filanc/Balfour-Beatty By: Harry Cosmos, President

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
	11/29/17	Department Director Approval Required <input type="checkbox"/>
IRWD Engineer or Consulting Engineer	Date	Executive Director Approval Required <input type="checkbox"/>
Principal Engineer	11-29-17	General Manager Approval Required <input type="checkbox"/>
	Date	Board Approval Required <input checked="" type="checkbox"/>
Executive Director of Engineering & Water Quality	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 Change 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 Change Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

CSG-02

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

**EXHIBIT "B"**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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 1.1 Modifications to Road to Development Area - Delete AC to Triangle, add AB to Michelson (CR-004)	A	IRWD	\$ 20,202.42	\$20,202.42	\$0.00	\$20,202.42	0.01%	\$163,486,142.42	0	0	0	1,278	10/28/2016
2	Approved by Exe. Director of Engineering and Water Quality Approved on November 13, 2013 2.1 Street Light Conduit Modifications (CR-007)	B	IRWD	\$ 12,475.08	\$12,475.08	\$20,202.42	\$32,677.50	0.02%	\$163,498,617.50	0	0	0	1,278	10/28/2016
3	Approved by Board of Directors Approved on March 10, 2014 3.1 Bid Quantity Adjustment of Bid Item 8 6 Pre-Drill	B	FBB	\$ 745,503.00	\$745,503.00	\$32,677.50	\$778,180.50	0.48%	\$164,244,120.50	0	0	0	1,278	10/28/2016
4	Approved by Exe Dir of Eng & Water Quality Approved on March 14, 2014 4.1 Installation of Five Additional Groundwater Wells and Monitoring - (CR-006) PR 21146 (4286) Task 3505 4.2 Brace Bay Modifications at the FOG Station - (CR-015) PR 21146 (4286) Task 3505 4.3 Grounding Extension at Nitrogen and Mineral Oil System (CR-025) PR 21146 (4286) Task 3510	A	IRWD	\$11,047.81	\$23,029.22	\$778,180.50	\$801,209.72	0.49%	\$164,267,149.72	0	0	0	1,278	10/28/2016
5	Approved by Exe Dir of Eng & Water Quality Approved on March 14, 2014 5.1 Unidentified Utility - Meter Shop Discharge (CR-008) PR 21146 (4286) Task 3505 5.2 Connection Beam Modifications at Solids Handling Facility (CR-014) PR 21146 (4286) Task 3235 5.3 Increased Grating Thickness at Solids Handling Facility (CR-041) PR 21146 (4286) Task 3505	B	IRWD	\$15,225.75	\$24,851.73	\$801,209.72	\$826,061.45	0.51%	\$164,292,001.45	0	0	0	1,278	10/28/2016
6	Approved by General Manager Approved on March 20, 2014 6.1 Additional Costs to Install Piles to the Design Tip (CR-033) PR 21146 (4286) Task 3505	B	FBB	\$31,815.00	\$31,815.00	\$826,061.45	\$857,876.45	0.52%	\$164,323,816.45	0	0	0	1,278	10/28/2016

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
E - Contractor Convenience/Initiation  
F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
7	Approved by Exe Dir of Eng & Water Quality Approved on April 21, 2014				\$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				
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 (CR-Credit for Primavera 7.0 Project Portfolio Management Software (CR-002) PR 21146 (4286) Task 3235	A	IRWD	(\$14,611.00)						0				
8.2	Deletion of Concrete Pad near Development Area (CR-004A) PR 21146 (4286) Task 3235	A	IRWD	(\$3,865.00)						0				
8.3	Deletion of Ground Test Device (CR-034) PR 21146 (4286) Task 3210	A	IRWD	(\$15,579.00)						0				
8.4	Deletion of Existing T-4 Switchgear Level Indicating Switch (CR-035) PR 21146 (4286) Task 3210	A	IRWD	(\$9,167.00)						0				
8.5	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				

A - District Convenience/Initiation - Project Related  
B - Disturb Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
E - Contractor Convenience/Initiation  
F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date: 10/28/2016
				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	
	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				
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				

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
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F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
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 3,373.2 CY 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				
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				

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
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B - 4

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
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	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				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
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				

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
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**MWRP Biosolids and Energy Recovery Facilities  
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Construction Change Order Summary**

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Design Engineer: Black & Veatch

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				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
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				
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				

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**MWRP Biosolids and Energy Recovery Facilities  
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Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	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: \$163,465,940.00					Original Days: 1,278	10/28/2016
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 3510	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 21146 (4286) Task 3510	A	FBB	\$20,297.16						0					
26.4	FOG Flushing and Rock Trap Modifications per RFI-0534 (CR-101) PR 21146 (4286) Task 3510	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					
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					

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F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
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				

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**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
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 Deletion of Waterstops at Methane Digester Complex (CR-102) PR 21146 (4286) Task 3505	E	FBB		(\$81,948.33)					0				
30.5	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				
30.6	Electrical and Gas Modifications (CR-146) PR 21146 (4286) Task 3510	C	IRWD		\$363,978.41					0				
30.7	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				
30.8	Credit for Travel Cost of On-Site Inspection for Acid Phase Digester (CR-175) PR 21146 (4286) Task 3520	B	IRWD		(\$683.39)					0				
30.9	Heat Dryer I/O Modifications per RFI-0626 (CR-179) PR 21146 (4286) Task 3510	A	IRWD		\$11,191.41					0				
30.10	Decant Trough I/O Modifications per RFI-0979 (CR-202) PR 21146 (4286) Task 3510	A	IRWD		\$9,960.55					0				
30.11	Deletion of Interior Coating of Methane Digesters (CR-188) PR 21146 (4286) Task 3520	A	IRWD		(\$398,571.00)					0				
30.12	Piping Modifications and Addition of Carbon Canisters (CR-218) PR 21146 (4286) Task 3520	A	IRWD		\$88,076.01					0				
30.13	Pickling and Passivation of Sludge Mixers (CR-248) PR 21146 (4286) Task 3520	C	IRWD		\$73,997.23					0				
30.14	IRWD Costs Associated to Repairing the Pile and Installing Couplers (CR-139) PR 21146 (4286) Task 3505	E	FBB		(\$38,102.85)					0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

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Design Engineer: Black & Veatch

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				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
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	F	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				\$97,980.57	\$3,697,853.54	\$3,795,834.11	2.32%	\$167,261,774.11	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	\$9,027.03						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	\$3,795,834.11	\$3,881,841.61	2.37%	\$167,347,781.61	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				

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PR 21146 (4286)  
Construction Change Order Summary**

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				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
37	Approved by Exe. Director of Engineering and Water Quality Approved on January 21, 2016				\$47,446.49	\$3,881,841.61	\$3,929,288.10	2.40%	\$167,395,228.10	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				

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PR 21146 (4286)  
Construction Change Order Summary**

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				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
38	Approved by General Manager Approved on February 29, 2016				\$83,345.07	\$3,929,288.10	\$4,012,633.17	2.45%	\$167,478,573.17	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	\$4,012,633.17	\$4,110,639.63	2.51%	\$167,576,579.63	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	Approved by General Manager Approved on April 20, 2016				\$97,287.05	\$4,110,639.63	\$4,207,926.68	2.57%	\$167,673,866.68	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				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
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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
41	Approved By Board of Directors Approved on May 23, 2016				\$1,103,650.56	\$4,207,926.68	\$5,311,577.24	3.25%	\$168,777,517.24	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				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
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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	Contract Days				Original Completion Date:
										Change Order Days	Previous Change Orders	Cum Total C.O. days	Revised Total Contract Days	10/28/2016
Original Contract Amount: \$163,465,940.00									Original Days: 1,278				10/28/2016	
42	Approved By Board of Directors Approved on May 23, 2016				(\$199,771.09)	\$5,311,577.24	\$5,111,806.15	3.13%	\$168,577,746.15	0	0	0	1,278	10/28/2016
42.1	Value Engineering of Chemical Pump Systems (CR-054) PR 4286 Task 3520	E	FBB	(\$48,549.90)						0				
42.2	Change in Lightning Protection Installation for Egg-Shaped Digesters (CR-121A) PR 4286 Task 3510	E	FBB	(\$97,141.74)						0				
42.3	Deletion of Seal Water Stations and Seal Water Piping (CR-214) PR 4286 Task 3520	A	IRWD	(\$10,557.28)						0				
42.4	Deletion of Low Pressure Switches for Centrate Pumps (CR-257) PR 4286 Task 3510	A	IRWD	(\$1,748.17)						0				
42.5	Centrifuge Seismic Restraint Design Costs (CR-345) PR 4286 Task 1065	A	IRWD	(\$24,064.00)						0				
42.6	Credit for Overtime Inspection Hours From 6/1/2015 to Through 12/31/2015 (CR-089B) PR 4286 Task 1065	F	FBB	(\$17,710.00)						0				
43	Approved by Exe Director of Engineering and Water Quality Approved on May 31, 2016				\$74,731.69	\$5,111,806.15	\$5,186,537.84	3.17%	\$168,652,477.84	0	0	0	1,278	10/28/2016
43.1	Combustible Gas Detection System (CR-234) PR 21146 (4286) Task 3510	E	FBB	\$18,843.39						0				
43.2	Additional Wires and Cables Between MCC-4102 and PLC-4000 (CR-278) PR 21146 (4286) Task 3510	C	FBB	\$1,775.13						0				
43.3	SCADA Programming Modifications (CR-282) PR 21146 (4286) Task 3510	E	FBB	\$49,679.02						0				
43.4	Change of Waste Gas Burner Feeder Circuit Breaker (CR-344) PR 21146 (4286) Task 3510	B	FBB	\$4,434.15						0				
44	Approved by Exe Director of Engineering and Water Quality Approved on June 29, 2016				\$74,912.99	\$5,186,537.84	\$5,261,450.83	3.22%	\$168,727,390.83	0	0	0	1,278	10/28/2016
44.1	Electrical and Telephonic Modifications for Elevators for Solids Handling Building and Digester Control Building (CR-037A) PR 4286 Task 3510	C	FBB	\$38,882.06						0				
44.2	Odor Control Recirculation Pump Selector Switch SCADA Modifications (CR-343) PR 4286 Task 3510	A	IRWD	\$9,294.71						0				
44.3	SCADA Valve Matrix Tables Animation Clarification for Milestone 1 (CR-353) PR 4286 Task 3510	A	IRWD	\$9,195.86						0				
44.4	PLC Status Object Update (CR-234) PR 4286 Task 3510	B	FBB	\$4,783.14						0				
44.5	Elevator Safety Beam in the Digester Control Building (CR-302) PR 4286 Task 3505	C	FBB	\$3,830.95						0				
44.6	Masonry Changes to the North Retaining Wall (CR-365) PR 4286 Task 3505	B	IRWD	\$8,926.27						0				

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**MWRP Biosolids and Energy Recovery Facilities  
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														Original Contract Amount: \$163,465,940.00
45	Approved by Board of Directors Approved on July 25, 2016/December 20, 2016 45.1 Recovery Plan PR 4286 Task 3510	B	FBB	\$9,250,000.00	\$9,250,000.00	\$5,261,450.83	\$14,511,450.83	8.88%	\$177,977,390.83	368	0	368	1,646	10/31/2017
46	Approved by General Manager Approved on January 27, 2017				\$94,696.76	\$14,511,450.83	\$14,606,147.59	8.94%	\$178,072,087.59	0	368	368	1,646	10/31/2017
46.1	Additional Masonry Anchor in the Solids Handling Building (CR-200) PR 4286	C	IRWD	\$1,457.22						0				
46.2	Additional Auto Dialer (CR-234A) PR 4286 Task 3510	A	IRWD	\$6,081.90						0				
46.3	Grating and Handrail Modifications at Bulk Polymer Storage Platform (CR-300) PR 4286 Task 3505	A	IRWD	\$5,568.83						0				
46.4	SCADA IP Address Update (CR-309) PR 4286 Task 3510	A	IRWD	\$1,227.96						0				
46.5	Masonry Modifications at Solids Handling Building Stairwell (CR-324) PR 4286 Task 3505	C	FBB	\$5,939.45						0				
46.6	Change in Valve Operator at the Centrate Treatment Facility (CR-329) PR 4286 Task 3520	A	IRWD	\$4,824.29						0				
46.7	Boot Wash Landing Addition (CR-349) PR 4286 Task 3505	C	FBB	\$1,834.60						0				
46.8	Updating Valve Analog SCADA Template (CR-354) PR 4286 Task 3510	A	IRWD	\$692.72						0				
46.9	Additional Light Fixtures and Lamps (CR-355A) PR 4286 Task 3510	A	IRWD	\$8,508.46						0				
46.10	Addition of Rebate Angle in the FOG Unloading Sump Area (CR-363) PR 4286 Task 3505	A	IRWD	\$763.62						0				
46.11	MCC-4103 Hot Water Circulation Pump Breakers Change (CR-366) PR 4286 Task 3510	B	IRWD	\$2,316.03						0				
46.12	MCC-4100/4101 Cake Transfer Pump Breakers Change (CR-370) PR 4286 Task 3510	B	IRWD	\$23,720.61						0				
46.13	MCC-4102 Breaker Change (CR-374) PR 4286 Task 3510	B	IRWD	\$2,316.03						0				
46.14	SCADA Programming Modifications During Benchtest No 1 for Areas 1900 and 2000 (CR-376) PR 4286 Task 3510	A	IRWD	\$24,092.32						0				
46.15	Additional Light Fixture Above Door in Digester Control Building Gas Room (CR-399) PR 4286 Task 3510	A	IRWD	\$1,478.19						0				
46.16	Change in Size of Disconnect Switches for Digested Sludge Mixers (CR-408) PR 4286 Task 3510	B	FBB	\$1,290.10						0				
46.17	Additional Thickening Feed Grinder Control Panel Circuits (CR-438) PR 4286 Task 3510	B	IRWD	\$1,286.63						0				
46.18	Thickness and Glazing Change for Windows (CR-438) PR 4286 Task 3510	C	IRWD	\$1,297.80						0				

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F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
47	Approved by General Manager Approved on February 28, 2017				\$96,414.36	\$14,606,147.59	\$14,702,561.95	8.99%	\$178,168,501.95	0	368	368	1,646	10/31/2017
47.1	Relocation of Neutralization Tank Drainage Piping PR 4286 Task 3520	B	FBB	\$2,312.08						0				
47.2	Modifications to Digester Control Building Door and Piping Due to Heating Water Expansion Tank Pad Adjustment (CR-221) PR 4286 Task 3505	C	FBB	\$5,500.74						0				
47.3	PLC-3100 Changes (CR-284) PR 4286 Task 3510	C	FBB	\$1,070.38						0				
47.4	Additional Angle Support to Acid Phase Digester Bridges (CR-298) PR 4286 Task 3505	C	FBB	\$4,986.21						0				
47.5	Additional Potable Water Gate Valves (CR-332) PR 4286 Task 3520	A	IRWD	\$3,892.44						0				
47.6	T-4 Kirk Key Interlock Installation (CR-335) PR 4286 Task 3510	B	IRWD	\$6,924.69						0				
47.7	Solids Handling Building Dumpster Room Channel Frames Modifications (CR-338) PR 4286 Task 3505	C	FBB	\$5,093.87						0				
47.8	PCS Server Configuration Clarification (CR-352) PR 4286 Task 3510	A	IRWD	\$6,824.35						0				
47.9	Additional Anchorage Support for Ledgers of the Digester Control Building Roof (CR-361) PR 4286 Task 3505	C	FBB	\$13,794.95						0				
47.10	Change of MCC-4103 Hot Water Circulation Pump Breakers (CR-366B) PR 4286 Task 3510	A	IRWD	\$1,336.13						0				
47.11	Centrate Treatment Facility Pull Boxes Duct Bank Settlement (CR-383) PR 4286 Task 3510	B	FBB	\$3,300.13						0				
47.12	Modifications to the MCC-4100/4101/4102/4103 (CR-405) PR 4286 Task 3510	B	FBB	\$7,418.52						0				
47.13	Cake Storage Hopper Modifications (CR-421) PR 4286 Task 3510	C	FBB	\$2,250.67						0				
47.14	Removing Installed Lighting in the Solids Handling Building (CR-427) PR 4286 Task 3510	A	IRWD	\$8,947.37						0				
47.15	Electrical Changes for Generator MPC (CR-430) PR 4286 Task 3510	A	IRWD	\$10,950.14						0				
47.16	Electrical Modifications to MCC-4100 and 4103 (CR-431) PR 4286 Task 3510	A	FBB	\$4,500.00						0				
47.17	Occupancy Sensors in the Solids Handling Building Shower Areas (CR-444) PR 4286 Task 3510	C	FBB	\$1,601.36						0				
47.18	Digester Gas Pre-Treatment In-Slab Conduit Size Change (CR-454) PR 4286 Task 3510	C	FBB	\$5,710.33						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
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Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
48	Approved by Board of Directors Approved on March 13, 2017				\$728,237.74	\$14,702,561.95	\$15,430,799.69	9.44%	\$178,896,739.69	0	368	368	1,646	10/31/2017
48.1	Structural Modifications of the Elevator Shafts (CR-037) PR 4286 Task 3505200) PR 4286 Task 3505	B	FBB	\$58,705.90						0				
48.2	SCADA Programming Update of Polymer Feed and Storage System (CR-148A) PR 4286 Task 3510	A	FBB	\$23,685.14						0				
48.3	Stairs and Platform at SHB Load-Out Area (CR-149) PR 4286 Task 3505	C	FBB	\$39,622.65						0				
48.4	Additional Polymer Dilution Flow Meters and Associated Conduits and Cables (CR-159B) PR 4286 Task 3510	A	IRWD	\$38,978.70						0				
48.5	Miscellaneous Andritz Items (CR-205) PR 4286 Task 3520	A	IRWD	\$41,246.71						0				
48.6	RIO-4001 Changes (CR-286) PR 4286 Task 3510	A	IRWD	\$27,889.74						0				
48.7	RIO-3102 Changes (CR-310) PR 4286 Task 3510	A	IRWD	\$18,280.62						0				
48.8	Mini Power Center - Additional Outlet and Data Locations in the SHB (CR-419) PR 4286 Task 3510	A	IRWD	\$13,261.60						0				
48.9	New Lighting in the SHB First Floor Area (CR-427A) PR 4286 Task 3510	A	IRWD	\$102,503.46						0				
48.10	Additional Conduits and Cables for Thermocouples for Several Pumps (CR-424, CR-424A through CR-424F) PR 4286 Task 3510	B	FBB	\$54,982.68						0				
48.11	Additional Wall Panel Framework at the SHB (CR-445) PR 4286 Task 3505	C	FBB	\$128,000.00						0				
48.12	Changes in Uninterruptible Power Supply Units (CR-162/CR-162A) PR 4286 Task 3510	A	IRWD	\$128,052.94						0				
48.13	Addition of Circuit Breaker at Transformer T-14 (CR-474) PR 4286 Task 3510	A	IRWD	\$53,027.60						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
49	Approved by Board of Directors Approved on March 13, 2017				(\$47,099.20)	\$15,430,799.69	\$15,383,700.49	9.41%	\$178,849,640.49	0	368	368	1,646	10/31/2017
49.1	Related Mechanical Piping Modifications Due to Change in Chemical Pumps in CCO No. 42 (CR-054A) PR 4286 Task 3520	E	FBB		(\$23,897.73)					0				
49.2	Changing the Solids Handling Building Roofing from EPDM to PVC (CR-255) PR 4286 Task 3505	E	FBB		(\$9,000.00)					0				
49.3	Net Reduction of Scope of Work in CR-353 – SCADA Valve Matrix Tables Animation Clarifications (CR-353B/353C) PR 4286 Task 3510	A	IRWD		(\$4,429.09)					0				
49.4	Change in Starters for MCC-4100/4101 Cake Transfer Pump Breakers (CR-370A) PR 4286 Task 3510	A	IRWD		(\$4,047.43)					0				
49.5	Deletion of Insulation for the Solids Handling Building Foundation (CR-393) PR 4286 Task 3505	A	IRWD		(\$5,724.95)					0				
50	Approved by Executive Director of Engineering & Water Quality Approved on March 31, 2017				\$72,150.89	\$15,383,700.49	\$15,455,851.38	9.46%	\$178,921,791.38	0	368	368	1,646	10/31/2017
50.1	Electrical Modifications to FOG Local Control Panel 70-LCP-0710 (CR-304) PR 4286 Task 5.30	A	IRWD		\$6,614.77					0				
50.2	Condensate Modifications at Digester Gas Pre-Treatment Area (CR-312) PR 4286 Task 5.31	C	FBB		\$9,826.09					0				
50.3	Installation of Lindapters Instead of Eye Bolts (CR-413) PR 4286 Task 5.29	A	FBB		\$13,346.01					0				
50.4	T-5 Connection to Biosolids Switch-14 (CR-480) PR 4286 Task 5.30	A	IRWD		\$35,170.26					0				
50.5	Polymer Feeder Blender Skids Flow Element Grounding Conductor (CR-482) PR 4286 Task 5.30	C	IRWD		\$7,193.76					0				
51	Approved by Executive Director of Engineering & Water Quality Approved on March 31, 2017				(\$126,390.00)	\$15,455,851.38	\$15,329,461.38	9.38%	\$178,795,401.38	0	368	368	1,646	10/31/2017
51.1	Credit for Overtime Inspection Hours From 1/1/2016 to Through 12/31/2016 (CR-089C) PR 4286 Task 4.0	F	IRWD		(\$97,570.00)					0				
51.2	Credit for Overtime Inspection Hours From 1/1/2017 to Through 03/31/2017 (CR-089D) PR 4286 Task 4.0	E	IRWD		(\$28,820.00)					0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
52	Approved by General Manager Approved on April 28, 2017				\$98,342.16	\$15,329,461.38	\$15,427,803.54	9.44%	\$178,893,743.54	0	368	368	1,646	10/31/2017
52.1	Removal of Unsuitable Alluvium (CR-146H) PR 4286 Task 5.29	B	FBB	\$3,564.32						0				
52.2	Polymer Dilution Water Flowmeters (CR-159A) PR 4286 Task 5.31	A	IRWD	\$14,090.39						0				
52.3	Aluminum Handrail and Guardrail Modifications at Liquid Chemical and Polymer Areas (CR-171) PR 4286 Task 5.30	A	IRWD	\$13,765.20						0				
52.4	Modifications Due to Solids Handling Building Electrical Room Equipment Clearance Issues (CR-196) PR 4286 Task 5.30	C	FBB	\$9,382.01						0				
52.5	Data and Telephone Outlets in Solids Handling Building (CR-261) PR 4286 Task 5.30	A	IRWD	\$27,620.21						0				
52.6	HVAC Duct Modifications in Dewatering Feed Pump Station (CR-268) PR 4286 Task 5.31	C	FBB	\$16,023.50						0				
52.7	Coating of 8 Roll-up doors (CR-358) PR 4286 Task 5.29	A	IRWD	\$5,710.32						0				
52.8	Upsizing Wire Size of Dewatering Feed Pump Station Main Breaker Light Panel LP-3501 (CR-390) PR 4286 Task 5.30	A	IRWD	\$1,449.75						0				
52.9	Modifications to the Roofs of the Solids Handling Building and Digester Control Building (CR-528) PR 4286 Task 5.29	A	IRWD	\$6,736.46						0				
53	Exe. Director of Water Quality and Engineering Approved on June 5, 2017				\$42,281.96	\$15,427,803.54	\$15,470,085.50	9.46%	\$178,936,025.50	0	368	368	1,646	10/31/2017
53.1	Modifications to Regenerative Thermal Oxidizer (RTO) Drainage and Utility Water Piping (CR-267) PR 4286 Task 5.31	C	IRWD	\$33,814.80						0				
53.2	Modifications to Liquid Chemical Feed Control Panel Wiring (CR-396) per RFI-1602 PR 4286 Task 5.30	C	FBB	\$8,467.16						0				
54	Approved by General Manager Approved on June 19, 2017				\$44,210.51	\$15,470,085.50	\$15,514,296.01	9.49%	\$178,980,236.01	0	368	368	1,646	10/31/2017
54.1	Modifications to Thickening and Dewatering Platforms (CR-195) PR 4286 Task 5.29	C	FBB	\$44,210.51						0				
55	Approved by General Manager Approved on July 3, 2017				\$94,352.43	\$15,514,296.01	\$15,608,648.44	9.55%	\$179,074,588.44	0	368	368	1,646	10/31/2017
55.1	Additional Pipe Supports of 54-Inch Fiberglass Reinforced Air Duct (CR-106A) PR 4286 Task 5.29	C	FBB	\$14,211.18						0				
55.2	Natural Gas Step Down Manifolds and Gas Transition Piping (CR-146G) PR	B	IRWD	\$20,489.32						0				
55.3	Modifications to the West End Stair Landing of the Solids Handling Building	B	IRWD	\$5,622.11						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	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
				<b>Original Contract Amount: \$163,465,940.00</b>						<b>Original Days: 1,278</b>				10/28/2016
55.4	Regenerative Thermal Oxidizer (RTO) Pad Modifications (CR-400) PR 4286 Task 5.29	C	FBB	\$8,471.16						0				
55.5	Addition of Thin Client at the Dryer Facility (CR-485) PR 4286 Task 5.30	A	IRWD	\$36,874.10						0				
55.6	Change in Size to 2 Check Valves in the Digester Control Building (CR-514) PR 4286 Task 5.31	C	FBB	\$8,684.56						0				
56	Approved by Board Approved on July 24, 2017				\$201,744.33	\$15,608,648.44	\$15,810,392.77	9.67%	\$179,276,332.77	0	368	368	1,646	10/31/2017
56.1	Addition Of Stairs and Platform to RTO (CR-266) PR 4286 Task 5.29	A	IRWD	\$101,744.33						0				
56.2	Microturbine CLC (ESC Capstone) per RFI 1141 (CR-277) PR 4286 Task 5.30	B	FBB	\$100,000.00						0				
57	Approved by General Manager Approval on August 5, 2017				\$98,886.90	\$15,810,392.77	\$15,909,279.67	9.73%	\$179,375,219.67	0	368	368	1,646	10/31/2017
57.1	Additional Support at Digester Control Building (CR-342) PR 04286 Task 5.29	C	IRWD	\$2,522.47						0				
57.2	Pipe and Duct Hanger Modifications (CR-362) PR 04286 Task 5.29	C	IRWD	\$4,083.12						0				
57.3	Increase Wire Size of Main Breaker PP-3501 (CR-418) PR 04286 Task 5.30	C	FBB	\$696.66						0				
57.4	Roof Vent at DCB Elevator/Stair Tower (CR-437) PR 04286 Task 5.29	B	IRWD	\$8,563.72						0				
57.5	T-14 Fixed Type Manual Operator per Submittal 16443-0016A (CR-540) PR 04286 Task 5.31	C	IRWD	\$1,945.62						0				
57.6	Area Classification at Methane Digesters to meet NFPA Table 6.2(a) - Plug Valves Limit Switches (CR-557) PR 04286 Task 5.30	C	FBB	\$64,195.15						0				
57.7	Area Classification at Methane Digesters to meet NFPA Table 6.2(a) - Sump Pump Cable Retrofit PR 04286 Task 5.30	C	FBB	\$16,880.16						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: Black & Veatch

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				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
58	Approved by Board of Directors Approval on August 28, 2017				\$182,938.94	\$15,909,279.67	\$16,092,218.61	9.84%	\$179,558,158.61	0	368	368	1,646	10/31/2017
58.1	Concrete Cap over Shallow Pipe Crossings (CR-348) PR 04286 Task 5.31	B	FBB	\$7,923.00						0				
58.2	Additional Conduit and Wiring for Sludge Screen Moisture Sensors (CR-381) PR 04286 Task 5.30	C	FBB	\$8,355.32						0				
58.3	SCADA Programming Modifications (CR-433/476/546/547/551) PR 04286 Task 5.30	A	IRWD	\$15,758.38						0				
58.4	Polymer Storage Power Panels Wire and Breaker Modifications (CR-456) PR 04286 Task 5.30	C	FBB	\$24,238.65						0				
58.5	Odor Control Starter Modifications (CR-466) PR 04286 Task 5.30	B	FBB	\$41,436.09						0				
58.6	Odor Control Fan Remote Temperature Device Revisions (CR-522) PR 04286 Task 5.30	A	IRWD	\$52,484.50						0				
58.7	Re-location of Digester Control Building Gas Room Local Control Panels (CR-534) PR 04286 Task 5.30	A	FBB	\$32,743.00						0				
59	Approved by Exe. Director of Water Quality and Engineering Approval on September 6, 2017				\$98,988.68	\$16,092,218.61	\$16,191,207.29	9.90%	\$179,657,147.29	0	368	368	1,646	10/31/2017
59.1	Modifications to Building 101 (CR-212) PR 04286 Task 5.30	E	FBB	\$26,500.00						0				
59.2	Change in Conduit Size in Area 20 (CR-292) PR 04286 Task 5.10	C	FBB	\$1,946.70						0				
59.3	Centrifuge Discharge Cake Conveyors Schematic Modifications (CR-422) PR 04286 Task 5.10	C	FBB	\$6,410.04						0				
59.4	Power Monitor Programming Modifications (CR-539) PR 04286 Task 5.10	A	IRWD	\$2,595.60						0				
59.5	SCADA Programming Modifications (CR-547A) PR 04286 Task 5.10	A	IRWD	\$1,574.86						0				
59.6	Change in Area Classification at Methane Digesters to meet NFPA Standards - MOVs (CR-557B) PR 04286 Task 5.10	C	FBB	\$54,736.73						0				
59.7	FOG Heating Disconnect Switch Relocation (CR-559) PR 04286 Task 5.10	C	FBB	\$5,224.75						0				
60	Approved by Exe. Director of Water Quality and Engineering Approval on September 5, 2017				(\$34,540.00)	\$16,191,207.29	\$16,156,667.29	9.88%	\$179,622,607.29	0	368	368	1,646	10/31/2017
60.1	Credit for Overtime Inspection Hours From 4/1/2017 Through 6/30/2017 (CR-089E) PR 04286 Task 4.0	F	FBB	(\$34,540.00)						0				

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**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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61	Approved by Exe. Director of Water Quality and Engineering Approved on September 6, 2017 61.1 Credit for Bulk Polymer Storage Changes per RFI-0863 and Submittal 15140-013B (CR-168) PR 04286 Task 5.16	E	FBB	(\$1,752.39)	(\$1,752.39)	\$16,156,667.29	\$16,154,914.90	9.88%	\$179,620,854.90	0	368	368	1,646	10/31/2017
62	Approved by Board of Directors Approved on October 9, 2017 62.1 Fats, Oil, and Grease (FOG) Modifications (CR-223A) PR 04286 Task 5.30 62.2 Density Meter Conduit and Cabling Modifications (CR-326) PR 04286 Task 5.30 62.3 Fiber Optic Modifications (CR-356) PR 04286 Task 5.30 62.4 Sludge Screen Pneumatic Control Panel Conduit and Cabling (CR-380) PR 04286 Task 5.30 62.5 Additional Circuits for Control of the Thickening Centrifuges (CR-386) PR 04286 Task 5.30 62.6 Upsize of Power Panel PP-8001 Circuit Breaker (CR-414) PR 04286 Task 5.30 62.7 Electrical Power Feeders to Electric Water Heater (CR-426) PR 04286 Task 5.30 62.8 Chemical Sump Pump Control Panel Space Heater Wiring Modifications (CR-461) PR 04286 Task 5.30 62.9 Relocate Electrical Feeders to Generator Bus (CR-462) PR 04286 Task 5.30 62.10 Electrical and Instrumentation Related Components for the Installation of Thin Client at Dryer Facility (CR-485A) PR 04286 Task 5.30 62.11 Polymer Room Eye Wash Station Flow Switches (CR-535) PR 04286 Task 5.30 62.12 Chemical Storage and Feed Modifications (CR-563) PR 04286 Task 5.30 62.13 PLC Redundancy Hot Standby Status Register (CR-568) PR 04286 Task 5.30	A	IRWD	\$52,174.90	\$708,162.72	\$16,154,914.90	\$16,863,077.62	10.32%	\$180,329,017.62	0	368	368	1,646	10/31/2017

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**MWRP Biosolids and Energy Recovery Facilities  
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Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
63	Approved by General Manager Approved on October 2, 2017				\$91,766.09	\$16,863,077.62	\$16,954,843.71	10.37%	\$180,420,783.71	0	368	368	1,646	10/31/2017
63.1	Electrical Modifications to RIO-2001 (CR-269) PR 04286 Task 5.30	C	IRWD	\$30,563.48						0				
63.2	Modifications to RIO-4002 (CR-285) PR 04286 Task 5.30	C	FBB	\$14,563.39						0				
63.3	Cap for 12-Inch Storm Drain (CR-351) PR 04286 Task 5.16	B	FBB	\$2,394.54						0				
63.4	Access Hatch for Regenerative Thermal Oxidizer Pipe Chase (CR-473) PR 04286 Task 5.31	C	FBB	\$3,958.91						0				
63.5	Electrical Upgrades to RIO-4002 (CR-447) PR 04286 Task 5.30	A	FBB	\$40,285.77						0				
64	Approved by Board of Directors Approved on October 23, 2017				\$231,100.22	\$16,954,843.71	\$17,185,943.93	10.51%	\$180,651,883.93	0	368	368	1,646	10/31/2017
64.1	Modifications to Centrate Treatment Facility Stairs (CR-379) PR 04286 Task 5.29	B	FBB	\$9,758.16						0				
64.2	Modifications to Ductwork in Solids Handling Building (CR-401) PR 04286 Task 5.31	C	FBB	\$9,537.05						0				
64.3	Electrical Conduits and Wires for Additional Bridge Breakers for Cake Receiving Pumps (CR-416) PR 04286 Task 5.30	B	FBB	\$21,678.83						0				
64.4	Handrail Modifications at the Methane Digesters (CR-472) PR 04286 Task 5.29	B	FBB	\$22,154.53						0				
64.5	Electrical and Instrumentation Related Components for the Installation of Thin Client at Dryer Facility (CR-485B) PR 04286 Task 5.30	A	IRWD	\$53,090.84						0				
64.6	Electrical Modifications at the Motor Control Centers for the Acid Phase Sludge Heating Recirculation Pumps (CR-517) PR 04286 Task 5.30	A	IRWD	\$47,611.11						0				
64.7	FOG Receiving Pumps Thermocouple and Thermostat Wiring (CR-525) PR 04286 Task 5.30	C	FBB	\$37,826.58						0				
64.8	SCADA Programming Changes (CR-537/570/573/573A) PR 04286 Task 5.30	A	IRWD	\$23,694.13						0				
64.9	Change of Limit Switches for Buried Service (CR-560) PR 04286 Task 5.30	C	FBB	\$5,748.99						0				

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
E - Contractor Convenience/Initiation  
F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
65	Approved by Board of Directors Approved on October 23, 2017				\$149,591.14	\$17,185,943.93	\$17,335,535.07	10.60%	\$180,801,475.07	0	368	368	1,646	10/31/2017
65.1	Additional Conduits and Wires for the Engine Generator, Switchgear-16, and Switchgear-16 Programmable Logic Controller (CR-204) PR 04286 Task 5.30	C	FBB	\$100,000.00						0				
65.2	Modifications to Spirac Conveyor in the Solids Handling Building (CR-409) PR 04286 Task 5.31	B	FBB	\$13,641.00						0				
65.3	Additional Metal Bridge Walkway Structural Support Angles (CR-420) PR 04286 Task 5.29	B	FBB	\$35,950.14						0				
66	Pending approval by General Manager Pending Approval on November 27, 2017				\$98,201.20	\$17,335,535.07	\$17,433,736.27	10.67%	\$180,899,676.27	0	368	368	1,646	10/31/2017
66.1	SCADA Programming Modifications and Updates (CR-247A/CR-469/CR-485C/CR-571/CR-575A/CR-579/CR-580/CR-585) PR 04286 Task 5.30	A	IRWD	\$61,734.78						0				
66.2	Installation of Sump Pump Floats (CR-452) PR 04286 Task 5.31	A	IRWD	\$17,228.56						0				
66.3	Electrical Work Associated with Air Handling/Heating Units, Recycle Bin Feed Conveyor, and Recycle Bucket Elevator in the Solids Handling Building (CR-457/CR-529) PR 04286 Task 5.30	B	IRWD	\$11,003.85						0				
66.4	Additional Wires and Conduits for FOG Receiving Valves (CR-565) PR 04286 Task 5.30	B	FBB	\$6,368.21						0				
66.5	Additional Door Cover Plates for MCC-4100 and MCC-4101	B	IRWD	\$1,865.80						0				
67	Pending approval by Exe Dir of Engineering and Water Quality Pending Approval on November 27, 2017				(\$53,626.83)	\$17,433,736.27	\$17,380,109.44	10.63%	\$180,846,049.44	0	368	368	1,646	10/31/2017
67.1	Credit for Overtime Inspection Hours from 07/1/2017 to 09/30/2017 (CR-089F) PR 04286 Task 4.0	F	FBB	(\$19,140.00)						0				
67.2	Credit for Additional Conduits and Wires for the Engine Generator, Switchgear-16, and Switchgear-16 Programmable Logic Controller (CR-204A) PR 04286	E	FBB	(\$13,591.83)						0				
67.3	Deletion of Pavement Prime Coat (CR-331D) PR 04286 Task 5.29	A	IRWD	(\$20,895.00)						0				

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
E - Contractor Convenience/Initiation  
F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: F- Contractor Request - Overtime Hours  
Design Engineer: 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
68	Pending approval by Board of Directors				\$569,553.19	\$17,380,109.44	\$17,949,662.63	10.98%	\$181,415,602.63	0	368	368	1,646	10/31/2017
	Pending approval on December 11, 2017													
68.1	Fats, Oil, and Grease (FOG) Modifications (CR-223) PR 04286 Task 5.30	A	IRWD	\$83,648.47						0				
68.2	Additional Electrical Outlets and Circuits in the Solids Handling Building (CR-453) PR 04286 Task 5.30	A	IRWD	\$44,054.83						0				
68.3	Control Panel Modifications in the Methane Digester Complex (CR-545) PR 04286 Task 5.30	C	IRWD	\$55,414.03						0				
68.4	Additional Electrical, Instrumentation, and Controls for the Heat Dryer System (CR-270 and CR-471A through CR-471G, CR-496, and CR-555) PR 04286 Task 5.30	B	FBB	\$386,435.86						0				

Category	Total Amount	% of Original Contract
A - District Convenience/Initiation - Project Related	\$ 2,704,603.70	1.65%
B - Differing Site Conditions	\$ 12,285,279.55	7.52%
C - Design Oversight	\$ 3,111,286.84	1.90%
D - District Convenience/Initiation - Non-Project Related	\$ -	0.00%
E - Contractor Convenience/Initiation	\$ 98,302.54	0.06%
F - Contractor Requested Inspection Overtime	\$ (249,810.00)	-0.15%
<b>TOTAL (A + B + C + D + E + F)</b>	<b>\$ 17,949,662.63</b>	<b>10.98%</b>

Category	Total Amount	% of Original Contract
IRWD-Initiation/Driven	\$ 3,538,196.67	2.16%
FBB-Initiation/Driven	\$ 14,240,745.74	8.71%
N/A	\$ 170,720.22	0.10%
<b>TOTAL</b>	<b>\$ 17,949,662.63</b>	<b>10.98%</b>

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
E - Contractor Convenience/Initiation  
F - Contractor Requested Inspection Overtime

December 11, 2017  
 Prepared by: J. Zepeda  
 Submitted By: P. Shields  
 Approved by: Paul A. Cook 

**ACTION CALENDAR**

**SEWER COLLECTIONS SYSTEM INFRASTRUCTURE REHABILITATION  
 SERVICE CONTRACT AWARD**

**SUMMARY:**

The Fiscal Year 2017-18 Sewer General System Modification Project consists of repairing and rehabilitating sewer manholes and other related sewer system infrastructure at various locations within IRWD’s service area. Staff recommends that the Board authorize the General Manager to execute a contract with Zebron Corporation in the amount not to exceed \$990,000 for the period January 1, 2018 to December 31, 2020.

**BACKGROUND:**

The Sewer General System Modification Project is used to fund repairs required in the sewer system infrastructure. Manhole infrastructure considered for rehabilitation are identified during the normal collection system maintenance and inspection process. The scope of work for this project includes sewer manhole cleaning, wall preparation, lid and ring replacement, application of liner, and spark testing to ensure the installation is in compliance with the District’s Construction Manual. For the last three years, Zebron Corporation has been awarded the contract through a competitive bid process to perform this type of rehabilitation work for the District.

Staff distributed a Request for Proposal (RFP) on November 1, 2017 to multiple qualified contractors with a proposal due date of November 9, 2017 (as provided in Exhibit “A”). Staff received two bids from Zebron Corporation and Sancon Engineering; Zebron was determined to be the lowest responsive bidder. The successful bidder has more than 36 years of rehabilitation experience in the sewer/water industry and has provided the District with high-quality manhole rehabilitation services. Exhibit “B” provides the RFP bid results and the pricing breakdown comparison for manhole and other sewer structure rehabilitation.

**FISCAL IMPACTS:**

Project 06211 is included in the approved Fiscal Year 2017-18 Capital Budget. An Expenditure Authorization exists in the amount of \$330,000 and has been approved by the Board for Project 06211 on June 12, 2017. The Project is funded from the Replacement Fund. The remaining \$660,000 for Year Two and Year Three of the contract will be submitted for approval in Fiscal Year 2018-19, and Fiscal Year 2019-20 Capital Budgets.

Project No.	Current Budget	Addition <Reduction>	Total Budget
06211	\$330,000	-0-	\$330,000

Action Calendar: Sewer Collections System Infrastructure Rehabilitation Services Contract  
Award  
December 11, 2017  
Page 2

ENVIRONMENTAL COMPLIANCE:

This activity is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15060 (c)(1) Preliminary Review. An activity is not subject to CEQA if the activity will not result in a direct reasonably foreseeable indirect physical change to the environment.

RECOMMENDATION:

That the Board authorize the General Manager to execute a contract award with Zebron Contracting, Inc. in the amount not to exceed \$990,000 for the period of January 1, 2018 through December 31, 2020.

LIST OF EXHIBITS:

Exhibit "A" – Request for Proposal Sewer Collections System Infrastructure Rehabilitation  
Exhibit "B" – Sewer Collections System Infrastructure Rehabilitation Project Bid Results

# EXHIBIT "A"



Irvine Ranch Water District  
15600 Sand Canyon Ave., P.O. Box 57000, Irvine, CA 92619-7000 (949) 453-5300

## REQUEST FOR PROPOSAL

### **Sewer Collections System Infrastructure Rehabilitation Project No. 06211 Calendar Year: 2018-2020**

Date: November 1, 2017  
MWRP – Operations Center  
3512 Michelson Drive  
Irvine, CA 92612

**DUE BY: Thursday, November 9, 2017  
3:00 P.M.**

The Irvine Ranch Water District (IRWD or the District) invites your firm to submit a proposal to complete the project herein described. The bid is to include all labor, material, equipment, traffic control and insurance costs required for the project. The bid shall be a lump sum total and itemized totals from the Request for Pricing spreadsheet including all work described in the scope of work section. Bidder must be the manufacturer and applicator of the product. Third party applicators will not be allowed to participate.

The following information is provided for guidance in preparing your proposal:

#### **SCOPE OF WORK**

Perform the needed manhole repairs as stated in the attached paper work to include the following schedule:

##### **Tier 1 - Sewer manhole infrastructure coating**

- (1) Hydro blast / power wash inside of manhole to remove any material that would prevent a good seal or adhesion of the material to the inside walls of the manhole or vault.
- (1) Perform any minor repairs using epoxy grout to the inside walls and channel as needed to guarantee adhesion of new coating such as shelf, bench, rail or guides, removal of rungs, etc.
- (1) Apply product to interior of manhole (125 Mils) or vault and perform a spark test or other District approved test to ensure there are no defects with the coating, application or adhesion of product.
- (1) Apply coating so that it is between the ring and riser and then continue with the application of the coatings as mentioned above.

(1) Verify & document coating and adhesion is to be free from any defects. Proper paper work shall be given to the District utilizing manhole numbers or ID numbers as given for work to be performed.

**Tier 2 - Sewer manhole infrastructure coating (med degradation)**

(1) All of the above in Tier 1

(1) Rebuild or construct channel and base as needed such as med aggregate material showing and or channel issues.

**Tier 3 - Repair of sewer manhole infrastructure**

(1) All of the above in Tier 2

(1) Rebuild or construct channel and base in order to repair major damage to structure.

(1) Ensure that the walls are uniform in thickness and without any defects that would prevent a good seal or adhesion with the product being applied.

(1) Apply product to interior of manhole or vault and perform a spark test or other District approved test to ensure there are no defects with the coating, application or adhesion of product.

**Manhole Replacement**

(1) Cut around sewer manhole minimum of 18-inches and remove old sewer lid and ring.

(1) Placement of wood on the shelf to prevent any material from falling into the flow line.

Remove the wood from the structure once the work has been completed.

(1) Remove old material and raise the manhole to grade using appropriate cement risers. Ensure that the risers are sealed and cemented in place. Risers shall be mortared to ensure no infiltration or leaking behind coating.

(1) Replace with IRWD ring and lid provided by District.

(1) Cement the area around the ring and apply hot mix following City of Irvine Specifications. If hot mix cannot be used then color may be substituted in the cement to give the appearance of black asphalt.

(1) Any manholes that are replaced must be returned to the IRWD warehouse at the end of the business day unless otherwise approved by District staff member.

**Traffic Control**

(1) Traffic control **and** permit fees are the responsibility of the contractor and shall be obtained prior to the beginning of work.

It is the contractor's responsibility to ensure that any equipment being used to dry, ventilate, light, and or measure for gases are in proper working order as well tightly secured to prevent the loss of said equipment into a sewer manhole and therefore causing a blockage in the downstream lines. The contractor will be responsible for location and removal of any lost equipment and may be liable for any damages incurred. **The contractor will be responsible for the submittal of traffic control plans and permits as necessary in order to complete the work. Notifications shall be given to the proper agency prior to the start of the project including manhole locations, road or lane closures and duration of time for work to be completed each day.**

Any and all work shall be in accordance to the city where the work is being performed. A final inspection shall be done by the city as requested and shall be the responsibility of the contractor to make any and all notifications to the responsible agency for an appointment and final inspection of manhole replacement and any asphalt work taking place in any roadway.

The furnishing of any and all labor, material, tools, equipment, and transportation necessary for traffic control, surface preparation, application of lining, safety procedures and compliance with the California Code of Regulations Title 8, General Industry Safety Orders and Construction Safety Orders, to perform as specified. Spark test to be performed after work has been completed in sewer manhole to ensure no holidays are present in the new liner.

### **SAFETY AND REGULATORY REQUIREMENTS**

Safety shall be of the utmost importance at all times. The contractor shall safeguard all District, and contractor personnel, during the progress of the work by providing barricades, flagmen, traffic control and appropriate warning signs as required. Any equipment (such as tractors) shall be of the proper size necessary to safely accomplish the task.

Contractor and his personnel shall be required to follow all IRWD rules, regulations and procedures as listed in the Emergency Evacuation Plans. These include but are not limited to speed limits. In the event of an emergency the contractor and his personnel shall follow evacuation procedures in the Emergency Evacuation Plans. Contractor shall be held responsible for all such training of his personnel.

**The contractor shall provide proof to the District's representative, that they, the contractor have in place all safety programs that are required by the state and federal agencies.** The contractor must also prove that his personnel have been trained in these programs, by providing the District with training documentation. The contractor will be required to provide to the District's representative a copy of the **Material Safety Data Sheets** for all chemicals that are brought on site. No hazardous materials will be approved for use or permitted in the building or at the job site. Work areas must be cleaned up at the end of each shift, and no storage of material or equipment will be allowed in the building. All trash and spent materials are to be disposed of off site and in compliance with state and federal regulations. All washing and cleaning of contractor equipment must be done off site. The Contractor shall protect all surfaces during refueling or other maintenance activities.

The contractor **shall** perform all work during IRWD's regular business hours of 7:00 am to 4:00 pm, Monday through Friday unless other arrangements are made with IRWD's agent.

### **QUALITY CONTROL**

All work shall be done by experienced and qualified personnel in accordance with the written request for proposal. The contractor will be responsible for quality control of his employee's actions and the finished product. The District reserves the right to reject any and all work that it feels is defective and may require the contractor to repair or replace such work, at no extra cost to the District. The contractor shall leave the job site clean and neat at the end of each workday.

### **PROPOSAL CONTENTS**

The proposal shall include at a minimum:

- Work schedule and time line.
- Pricing required on all tier footage.



- Total bid price to include, labor, material, equipment and insurance and traffic control if needed. **Labor must be based on prevailing wage standard for each work task being performed. The attached “LABOR AND PREVAILING WAGE REQUIREMENTS” is incorporated in this Request For Proposal and will be incorporated in the contract.**

**PURCHASING & CONTRACT REQUIREMENTS**

Before the contractor will be allowed to move any staff, material, or equipment, on to the job site and commence any work the following conditions must be met:

- Payment and Performance Bonds required for projects over \$25,000, deemed “public works” or “works of improvement”.
- Bid Bond required for projects over \$100,000, deemed “public works” or “works of improvement”.

All required insurance certificates must be on file with the Irvine Ranch Water District (IRWD) Purchasing Department, i.e. Worker’s Compensation, General Liability, and Automobile Liability. The District to be named additional insured.

**INSURANCE REQUIREMENTS**

- An ACORD form of “Certificate of Insurance” is acceptable by the District. NAIC numbers must be provided for each insurer affording coverage.
- Purchase Orders with a value of \$100,000 or greater must be submitted on ACORD form 25 (2014/01) or a more current revision.
- Minimum coverage is as follows:

Workers Compensation	\$1 Million
Automobile Liability	\$1 Million
Comprehensive General Liability	\$1 Million
Professional Liability*	\$1 Million

- Irvine Ranch Water District must be named as an “Additional Insured” on all policies for General and Excess Liability Insurance coverage. ACORD 25 form “Certificate Holder” box should read Irvine Ranch Water District and be sent via e-mail to [purchasingdept@irwd.com](mailto:purchasingdept@irwd.com) or mailed to Irvine Ranch Water District, Attn: Purchasing Department, 3512 Michelson Drive, Irvine, CA 92612.
- Provide a certificate for each project, or a certificate covering “All Operations” of the insured on ACORD 25 “Description of Operations” section.
- **General and Automobile Liability:** On PROJECTS EXCEEDING \$100,000 requires a Best’s Key Rating of “A” or better with a **Financial Size Category (FSC) of VIII or higher.** PROJECTS of \$100,000 or less requires a rating of B+ or better with a **Financial Size Category (FSC) of “V” or higher.**

- **Workman's Compensation:** Can be State Fund or for other carries have a have a Best's Key Rating of **B+ or better with a Financial Size Category of "V" or higher.**
- \* Professional Liability is **only** required for Consulting and/or Professional Services.
- \* IRWD reserves the right for higher liability limits for Purchase Orders exceeding \$1M.
- The contractor must have a written, signed purchase order from the IRWD Purchasing Department before work can commence.
- Contractor license number and references if not previously submitted.
- Any and all change orders must be submitted and approved by the Districts representative, in writing, prior to starting any work associated with the change order.

### **COLLATERAL DAMAGE**

Contractor shall be responsible for all damage to IRWD property, facilities or personnel caused by his employees, subcontractors or their equipment during the performance of the contract.

### **PROJECT COMPLETION**

The project is complete when all work activity has been completed and all items on the punch list have been completed. All work must have passed inspection by the District's representative and the site must be left neat and clean. Payment may be withheld until the work is completed and approved by a District representative.

### **AWARD OF CONTRACT**

- If the contract is to be awarded, it will be awarded to the lowest bidder or contractor who, after evaluation by the District, indicates to the District that the award will be in the best interest of the District.
- If the contract is to be awarded, IRWD will give the successful bidder a Notice of Award within 15 days after the day of the bid opening.
- If at the time that this contract is to be awarded, the total of the acceptable bid exceeds the funds then estimated by IRWD as available, then the District may reject all bids or take such other action that best serves the interest of the District.
- IRWD reserves the right to reject any or all bids including, without limitation, the right to reject any other all non-conforming, non-responsive or conditional bids. IRWD reserves the right to reject the bid of any bidder if IRWD believes that it would not be in the best interest of the project to make an award to that bidder, whether because the bid is not responsive or the bidder is unqualified or of doubtful financial ability, or fails to meet any other pertinent standard or criteria established by IRWD.

- IRWD may conduct such investigations, as IRWD deems necessary to assist in bid evaluations, and to establish responsibility, qualifications and financial ability of the bidder.
- In the event of failure of the successful bidder to sign the Agreement, provide insurance certificates, and the required documents, IRWD may award the contract to the next responsive responsible bidder.
- The contractor selected for the award of contract must be able to begin work immediately upon award of the contract and must be able to maintain the level of staff necessary to meet the proposed schedule that was approved by the District's representative.

Company Name: ZERROFF CONTRACTING, INC.  
 Bid Submitted by:  Date: 11-9-17  
 Print Name GREGORY HEX Title: VICE PRESIDENT

You must prepare your bid on the District's Request for Pricing form.

**Submit the following:**

- (1) Request for Proposal
- (2) Request for Pricing
- (3) Bid Bond

Documents need to be hand delivered to Magdalena Ramirez prior to bid due date/time at MWRP – Operations Center 3512 Michelson Drive, Irvine, CA, 92612.

If you have any technical questions, please call Dorien McElroy at 949-453-5803 or Henry Solis at 949-453-5748.

# EXHIBIT "B"

## Sewer Collections System Infrastructure Rehabilitation Project Bid Results

Year 1 of 3

Item	Description	Traffic Control (TC)	4 FT MANHOLE DIA.			5 FT MANHOLE DIA.			6 FT MANHOLE DIA.		
			Zebtron w/TC	Sancon w/TC	Percent Difference	Zebtron w/TC	Sancon w/TC	Percent Difference	Zebtron w/TC	Sancon w/TC	Percent Difference

Tier 1											
1	0 - 10 feet	Residential	\$2,455	\$2,900	-18%	\$2,875	\$3,350	-17%	\$3,055	\$3,500	-15%
		Major	\$3,495	\$4,900	-40%	\$3,915	\$5,350	-37%	\$4,095	\$5,500	-34%
2	10.1 - 15 feet	Residential	\$3,055	\$3,400	-11%	\$3,230	\$3,650	-13%	\$3,705	\$4,100	-11%
		Major	\$4,095	\$5,400	-32%	\$4,270	\$5,650	-32%	\$4,745	\$6,100	-29%
3	15.1 - 20 feet	Residential	\$3,525	\$4,000	-13%	\$3,945	\$4,350	-10%	\$4,480	\$4,900	-9%
		Major	\$4,565	\$6,000	-31%	\$4,985	\$6,350	-27%	\$5,520	\$6,900	-25%
4	20.1 - 25 feet	Residential	\$4,480	\$4,900	-9%	\$5,210	\$5,650	-8%	\$6,470	\$7,000	-8%
		Major	\$5,520	\$6,900	-25%	\$6,250	\$7,650	-22%	\$7,510	\$9,000	-20%
5	25.1 - 35 feet	Residential	\$6,560	\$7,000	-7%	\$7,820	\$8,200	-5%	\$9,710	\$10,100	-4%
		Major	\$7,600	\$9,000	-18%	\$8,860	\$10,200	-15%	\$10,750	\$12,100	-13%

Tier 2											
6	0 - 10 feet	Residential	\$3,525	\$4,000	-13%	\$3,760	\$4,100	-9%	\$4,000	\$4,500	-13%
		Major	\$4,565	\$6,000	-31%	\$4,800	\$6,100	-27%	\$5,040	\$6,500	-29%
7	10.1 - 15 feet	Residential	\$4,000	\$4,500	-13%	\$4,480	\$4,900	-9%	\$4,710	\$5,100	-8%
		Major	\$5,040	\$6,500	-29%	\$5,520	\$6,900	-25%	\$5,750	\$7,100	-23%
8	15.1 - 20 feet	Residential	\$4,890	\$5,300	-8%	\$5,230	\$5,700	-9%	\$5,670	\$6,100	-8%
		Major	\$5,930	\$7,300	-23%	\$6,270	\$7,700	-23%	\$6,710	\$8,100	-21%
9	20.1 - 25 feet	Residential	\$5,820	\$6,250	-7%	\$6,830	\$7,200	-5%	\$8,140	\$8,500	-4%
		Major	\$6,860	\$8,250	-20%	\$7,870	\$9,200	-17%	\$9,180	\$10,500	-14%
10	25.1 - 35 feet	Residential	\$7,150	\$7,700	-8%	\$9,250	\$9,900	-7%	\$11,310	\$11,750	-4%
		Major	\$8,190	\$9,700	-18%	\$10,290	\$11,900	-16%	\$12,350	\$13,750	-11%

Tier 3											
11	0 - 10 feet	Residential	\$3,945	\$4,300	-9%	\$4,305	\$4,650	-8%	\$4,480	\$4,850	-8%
		Major	\$4,985	\$6,300	-26%	\$5,345	\$6,650	-24%	\$5,520	\$6,850	-24%
12	10.1 - 15 feet	Residential	\$4,890	\$5,500	-12%	\$5,670	\$6,000	-6%	\$6,550	\$7,000	-7%
		Major	\$5,930	\$7,500	-26%	\$6,710	\$8,000	-19%	\$7,590	\$9,000	-19%
13	15.1 - 20 feet	Residential	\$6,550	\$7,000	-7%	\$7,330	\$7,900	-8%	\$8,270	\$8,900	-8%
		Major	\$7,590	\$9,000	-19%	\$8,370	\$9,900	-18%	\$9,310	\$10,900	-17%
14	20.1 - 25 feet	Residential	\$9,480	\$10,100	-7%	\$11,200	\$12,000	-7%	\$13,490	\$14,500	-7%
		Major	\$10,520	\$12,100	-15%	\$12,240	\$14,000	-14%	\$14,530	\$16,500	-14%
15	25.1 - 35 feet	Residential	\$13,140	\$13,500	-3%	\$15,120	\$15,500	-3%	\$18,090	\$18,500	-2%
		Major	\$14,180	\$15,500	-9%	\$16,160	\$17,500	-8%	\$19,130	\$20,500	-7%

Item	Description	Zebtron	Sancon	Percent Difference
16	Traffic Control (Residential)	\$260	\$500	-92%
17	Traffic Control (Major)	\$1,300	\$2,500	-92%
18	Lid & Ring Replacement	\$1,300	\$1,500	-15%

Sewer Collections System  
Infrastructure Rehabilitation Project  
Bid Results

Year 2 of 3

Item	Description	Traffic Control (TC)	4 FT MANHOLE DIA.			5 FT MANHOLE DIA.			6 FT MANHOLE DIA.		
			Zebbron w/TC	Sancon w/TC	Percent Difference	Zebbron w/TC	Sancon w/TC	Percent Difference	Zebbron w/TC	Sancon w/TC	Percent Difference
<b>Tier 1</b>											
1	0 - 10 feet	Residential	\$2,455	\$3,000	-22%	\$2,875	\$3,450	-20%	\$3,055	\$3,600	-18%
		Major	\$3,495	\$5,000	-43%	\$3,915	\$5,450	-39%	\$4,095	\$5,600	-37%
2	10.1 - 15 feet	Residential	\$3,055	\$3,500	-15%	\$3,230	\$3,750	-16%	\$3,705	\$4,200	-13%
		Major	\$4,095	\$5,500	-34%	\$4,270	\$5,750	-35%	\$4,745	\$6,200	-31%
3	15.1 - 20 feet	Residential	\$3,525	\$4,100	-16%	\$3,945	\$4,450	-13%	\$4,480	\$5,000	-12%
		Major	\$4,565	\$6,100	-34%	\$4,985	\$6,450	-29%	\$5,520	\$7,000	-27%
4	20.1 - 25 feet	Residential	\$4,480	\$5,000	-12%	\$5,210	\$5,750	-10%	\$6,470	\$7,100	-10%
		Major	\$5,520	\$7,000	-27%	\$6,250	\$7,750	-24%	\$7,510	\$9,100	-21%
5	25.1 - 35 feet	Residential	\$6,560	\$7,100	-8%	\$7,820	\$8,300	-6%	\$9,710	\$10,200	-5%
		Major	\$7,600	\$9,100	-20%	\$8,860	\$10,300	-16%	\$10,750	\$12,200	-13%

<b>Tier 2</b>											
6	0 - 10 feet	Residential	\$3,525	\$4,100	-16%	\$3,760	\$4,200	-12%	\$4,000	\$4,600	-15%
		Major	\$4,565	\$6,100	-34%	\$4,800	\$6,200	-29%	\$5,040	\$6,600	-31%
7	10.1 - 15 feet	Residential	\$4,000	\$4,600	-15%	\$4,480	\$5,000	-12%	\$4,710	\$5,200	-10%
		Major	\$5,040	\$6,600	-31%	\$5,520	\$7,000	-27%	\$5,750	\$7,200	-25%
8	15.1 - 20 feet	Residential	\$4,890	\$5,400	-10%	\$5,230	\$5,800	-11%	\$5,670	\$6,200	-9%
		Major	\$5,930	\$7,400	-25%	\$6,270	\$7,800	-24%	\$6,710	\$8,200	-22%
9	20.1 - 25 feet	Residential	\$5,820	\$6,350	-9%	\$6,830	\$7,300	-7%	\$8,140	\$8,600	-6%
		Major	\$6,860	\$8,350	-22%	\$7,870	\$9,300	-18%	\$9,180	\$10,600	-15%
10	25.1 - 35 feet	Residential	\$7,150	\$7,800	-9%	\$9,250	\$10,000	-8%	\$11,310	\$11,850	-5%
		Major	\$8,190	\$9,800	-20%	\$10,290	\$12,000	-17%	\$12,350	\$13,850	-12%

<b>Tier 3</b>											
11	0 - 10 feet	Residential	\$3,945	\$4,400	-12%	\$4,305	\$4,750	-10%	\$4,480	\$4,950	-10%
		Major	\$4,985	\$6,400	-28%	\$5,345	\$6,750	-26%	\$5,520	\$6,950	-26%
12	10.1 - 15 feet	Residential	\$4,890	\$5,600	-15%	\$5,670	\$6,150	-8%	\$6,550	\$7,100	-8%
		Major	\$5,930	\$7,600	-28%	\$6,710	\$8,150	-21%	\$7,590	\$9,100	-20%
13	15.1 - 20 feet	Residential	\$6,550	\$7,100	-8%	\$7,330	\$8,000	-9%	\$8,270	\$9,000	-9%
		Major	\$7,590	\$9,100	-20%	\$8,370	\$10,000	-19%	\$9,310	\$11,000	-18%
14	20.1 - 25 feet	Residential	\$9,480	\$10,200	-8%	\$11,200	\$12,100	-8%	\$13,490	\$14,600	-8%
		Major	\$10,520	\$12,200	-16%	\$12,240	\$14,100	-15%	\$14,530	\$16,600	-14%
15	25.1 - 35 feet	Residential	\$13,140	\$13,600	-4%	\$15,120	\$15,600	-3%	\$18,090	\$18,600	-3%
		Major	\$14,180	\$15,600	-10%	\$16,160	\$17,600	-9%	\$19,130	\$20,600	-8%

Item	Description	Zebbron	Sancon	Percent Difference
16	Traffic Control (Residential)	\$260	\$550	-112%
17	Traffic Control (Major)	\$1,300	\$2,550	-96%
18	Lid & Ring Replacement	\$1,300	\$1,550	-19%

Sewer Collections System  
Infrastructure Rehabilitation Project  
Bid Results

Year 3 of 3

Item	Description	Traffic Control (TC)	4 FT MANHOLE DIA.			5 FT MANHOLE DIA.			6 FT MANHOLE DIA.		
			Zebtron w/TC	Sancon w/TC	Percent Difference	Zebtron w/TC	Sancon w/TC	Percent Difference	Zebtron w/TC	Sancon w/TC	Percent Difference

Tier 1											
1	0 - 10 feet	Residential	\$2,575	\$3,100	-20%	\$3,025	\$3,550	-17%	\$3,210	\$3,700	-15%
		Major	\$3,660	\$5,100	-39%	\$4,110	\$5,550	-35%	\$4,295	\$5,700	-33%
2	10.1 - 15 feet	Residential	\$3,225	\$3,600	-12%	\$3,395	\$3,850	-13%	\$3,895	\$4,300	-10%
		Major	\$4,310	\$5,600	-30%	\$4,480	\$5,850	-31%	\$4,980	\$6,300	-27%
3	15.1 - 20 feet	Residential	\$3,705	\$4,200	-13%	\$4,145	\$4,550	-10%	\$4,705	\$5,100	-8%
		Major	\$4,790	\$6,200	-29%	\$5,230	\$6,550	-25%	\$5,790	\$7,100	-23%
4	20.1 - 25 feet	Residential	\$4,715	\$5,100	-8%	\$5,475	\$5,850	-7%	\$6,795	\$7,200	-6%
		Major	\$5,800	\$7,100	-22%	\$6,560	\$7,850	-20%	\$7,880	\$9,200	-17%
5	25.1 - 35 feet	Residential	\$6,890	\$7,200	-4%	\$8,215	\$8,400	-2%	\$10,200	\$10,300	-1%
		Major	\$7,975	\$9,200	-15%	\$9,300	\$10,400	-12%	\$11,285	\$12,300	-9%

Tier 2											
6	0 - 10 feet	Residential	\$3,705	\$4,200	-13%	\$3,950	\$4,300	-9%	\$4,205	\$4,700	-12%
		Major	\$4,790	\$6,200	-29%	\$5,035	\$6,300	-25%	\$5,290	\$6,700	-27%
7	10.1 - 15 feet	Residential	\$4,205	\$4,700	-12%	\$4,705	\$5,100	-8%	\$4,945	\$5,300	-7%
		Major	\$5,290	\$6,700	-27%	\$5,790	\$7,100	-23%	\$6,030	\$7,300	-21%
8	15.1 - 20 feet	Residential	\$5,135	\$5,500	-7%	\$5,495	\$5,900	-7%	\$5,955	\$6,300	-6%
		Major	\$6,220	\$7,500	-21%	\$6,580	\$7,900	-20%	\$7,040	\$8,300	-18%
9	20.1 - 25 feet	Residential	\$6,115	\$6,450	-5%	\$7,145	\$7,400	-4%	\$8,550	\$8,700	-2%
		Major	\$7,200	\$8,450	-17%	\$8,230	\$9,400	-14%	\$9,635	\$10,700	-11%
10	25.1 - 35 feet	Residential	\$7,515	\$7,900	-5%	\$9,715	\$10,100	-4%	\$11,875	\$11,950	-1%
		Major	\$8,600	\$9,900	-15%	\$10,800	\$12,100	-12%	\$12,960	\$13,950	-8%

Tier 3											
11	0 - 10 feet	Residential	\$4,145	\$4,500	-9%	\$4,525	\$4,850	-7%	\$4,705	\$5,050	-7%
		Major	\$5,230	\$6,500	-24%	\$5,610	\$6,850	-22%	\$5,790	\$7,050	-22%
12	10.1 - 15 feet	Residential	\$5,135	\$5,700	-11%	\$5,955	\$6,200	-4%	\$6,880	\$7,200	-5%
		Major	\$6,220	\$7,700	-24%	\$7,040	\$8,200	-16%	\$7,965	\$9,200	-16%
13	15.1 - 20 feet	Residential	\$6,880	\$7,200	-5%	\$7,700	\$8,100	-5%	\$8,685	\$9,100	-5%
		Major	\$7,965	\$9,200	-16%	\$8,785	\$10,100	-15%	\$9,770	\$11,100	-14%
14	20.1 - 25 feet	Residential	\$9,955	\$10,300	-3%	\$11,765	\$12,200	-4%	\$14,165	\$14,700	-4%
		Major	\$11,040	\$12,300	-11%	\$12,850	\$14,200	-11%	\$15,250	\$16,700	-10%
15	25.1 - 35 feet	Residential	\$13,795	\$13,700	1%	\$15,875	\$15,700	1%	\$18,995	\$18,700	2%
		Major	\$14,880	\$15,700	-6%	\$16,960	\$17,700	-4%	\$20,080	\$20,700	-3%

Item	Description	Zebtron	Sancon	Percent Difference
16	Traffic Control (Residential)	\$275	\$600	-118%
17	Traffic Control (Major)	\$1,360	\$2,600	-91%
18	Lid & Ring Replacement	\$1,365	\$1,600	-17%

December 11, 2017

Prepared and

Submitted by: L. Bonkowski

Approved by: Paul Cook

## ACTION CALENDAR

### ANNUAL BOARD OF DIRECTORS' FEES

#### SUMMARY:

The Finance and Personnel Committee annually reviews the Board of Directors' compensation and recommends to the Board to either accept or deny a fee increase for the new calendar year. Pursuant to the District's Ordinance No. 1989-1 and enacted under Section 20202 et seq. of the California Water Code, the Board's meeting compensation increases on January 1 of each year; however, said increase may not exceed an amount equal to five percent, and no compensation for more than a total of 10 days in any calendar month.

#### BACKGROUND:

The last Board of Directors' compensation increase was effective in January 2017. The current compensation for the Board of Directors is \$273 per meeting, not to exceed 10 meetings per month. In accordance with Section 20202 et seq. of the California Water Code, the Board's meeting compensation increases on January 1 of each year by five percent. If the Board accepts the increase, the resulting per meeting fee will be \$287 (rounded to the nearest dollar). Provided as Exhibit "A" is a survey of the Director Fees for other local water districts.

#### FISCAL IMPACTS:

A 5% increase has a nominal impact on the operating budget if accepted by the Board.

#### ENVIRONMENTAL COMPLIANCE:

Not applicable.

#### COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on November 14 2017.

#### RECOMMENDATION:

THAT THE BOARD EITHER ACCEPT OR DECLINE THE FIVE PERCENT COMPENSATION INCREASE FOR CALENDAR YEAR 2018.

#### LIST OF EXHIBITS:

Exhibit "A" – Survey of Director Fees

**EXHIBIT "A"****BOARD OF DIRECTORS PER DIEM SURVEY  
(as of November 1, 2017)**

<b>AGENCY</b>	<b>PER DIEM MEETING</b>	<b>EFFECTIVE DATE</b>	<b>MAXIMUM MEETINGS PER MONTH</b>
El Toro Water District	\$198.00	December 2007	10
Irvine Ranch Water District	\$273.00	January 2017	10
Mesa Water District	\$264.00	April 2017	10
Moulton Niguel Water District	\$220.00	September 2016	10
Municipal Water of Orange County	\$282.85	January 2017	10
Orange County Water District	\$275.00	April 2017	10
Santa Margarita Water District	\$210.00	February 2009	10
South Coast Water District	\$190.00	January 2006	10
Yorba Linda Water District	\$150.00	January 2003	10

December 11, 2017  
Prepared and  
Submitted by: L. Bonkowski  
Approved by: Paul Cook



ACTION CALENDAR

ELECTION OF OFFICERS FOR 2018

SUMMARY:

The Bylaws of the District provide that the President and Vice President shall be elected by the Board from among its members. The term of office of the President and Vice President is one year, or until the election and qualification of their successors. On January 9, 2017, Director Douglas Reinhart was elected to the office of President and Director Peer Swan was elected to the office of Vice President for calendar year 2017.

While there are no formal election procedures set forth in the Bylaws, it is suggested that the General Manager be appointed temporary Chairman to conduct the election of President. The temporary Chairman would open nominations, accept nominations which need not be seconded, accept a motion to close the nominations, and conduct the balloting by voice vote. The President would then conduct the election of the Vice President in a similar manner.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT AN ELECTION BE CONDUCTED OF THE PRESIDENT AND VICE PRESIDENT OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT.

LIST OF EXHIBITS:

None.