

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

May 22, 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 three minutes per speaker on each subject. Consent Calendar items will be acted upon by one motion, without discussion, unless a request is made for specific items to be removed from the Calendar for separate action.

COMMUNICATIONS TO THE BOARD

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

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

CONSENT CALENDAR	Resolution No. 2017-11	Items 3-12
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| 3. | <u>RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS</u> | |
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Recommendation: That the Board ratify/approve the meetings and events for Steven LaMar, Mary Aileen Matheis, Peer Swan, Douglas Reinhart and John Withers, as described.

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| 4. | <u>MINUTES OF REGULAR BOARD MEETING</u> | |
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Recommendation: That the minutes of the April 24, 2017 Regular Board Meeting be approved as presented.

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| 5. | <u>FOURTH AMENDMENT TO THE SETTLEMENT AGREEMENT MCAS EL TORO GROUNDWATER REMEDIATION PROJECT</u> | |
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Recommendation: That the Board authorize the President and Secretary to execute the Fourth Amendment to The Settlement Agreement for the MCAS El Toro Groundwater Remediation Project.

CONSENT CALENDAR (continued) Resolution No. 2017-11

Items 3-12

6. IRVINE BUSINESS COMPLEX APPURTENANCE RELOCATIONS
FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Irvine Business Complex Appurtenance Relocations, projects 06849 and 06850; authorize the filing of a Notice of Completion; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

7. BAKER WATER TREATMENT PLANT RAW WATER CONVEYANCE
FACILITIES FINAL ACCEPTANCE

Recommendation: That the Board authorize the General Manager to accept construction of Baker Water Treatment Plant Raw Water Conveyance Facilities, project 05027; authorize the General Manager to file a Notice of Completion; and authorize the release of retention 35 days after filing of the Notice of Completion.

8. RESERVOIR LADDER FALL PROTECTION BUDGET ADDITION

Recommendation: That the Board authorize the addition of Project 10119 in the amount of \$100,000 and Project 10120 in the amount of \$40,000 to the FY 2016-17 Capital Budget for the reservoir ladder fall protection project

9. APRIL 2017 TREASURY REPORTS

Recommendation: That The Board Receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate Swap Summary for April 2017, and Disclosure Report of Reimbursements to Board Members and staff; approve the April 2017 Summary of Payroll ACH payments in the total amount of \$1,719,748 and approve the April 2017 Accounts Payable Disbursement Summary Of Warrants 376196 Through 376893, Workers' Compensation Distributions, Wire Transfers, Payroll Withholding Distributions And Voided Checks In The Total Amount Of \$21,383,097.

10. OPERATION CENTER AIR HANDLING DUCT REPLACEMENT
PROJECT

Recommendation: That the Board authorize the General Manager to execute a construction contract with Triton Air in the amount of \$107,718.25 for the Operations Center Air Handling Duct Replacement Project.

CONSENT CALENDAR (continued) Resolution No. 2017-11

Items 3-12

11. LETTER OF CREDIT EXTENSION FOR THE SERIES 2008-A
REFUNDING BONDS AND EARLY REDEMPTION OF THE SERIES
1995 BONDS

Reso. 2017-
Reso. 2017-

Recommendation: That the Board authorize staff to extend the Sumitomo Mitsui Letter of Credit supporting the 2008-A Refunding bonds for four years at 0.315% annually, approve an early redemption of the outstanding Series 1995 Bonds on July 1, 2017; and adopt two resolutions: 1) authorizing certain actions in connection with extension of Letter of Credit in connection to Consolidated Refunding Series 2008A; and 2) calling bonds for redemption and authorizing certain actions in connection to Consolidated Series 1995.

12. DEBT MANAGEMENT POLICY

Recommendation: That the Board adopt a resolution approving an Irvine Ranch Water District Debt Management Policy.

Reso. 2017-

ACTION CALENDAR

13. MICHELSON WATER RECYCLING PLANT BIOSOLIDS ODOR
MONITORING SYSTEM

Recommendation: That the Board authorize the General Manager to execute a contract with Odotech for the purchase of an Odowatch odor monitoring system in the amount of \$137,000 for the MWRP Biosolids and Energy Recovery Facilities, Project 04286.

14. IRVINE INDUSTRIAL COMPLEX EAST ZONE A TO B BOOSTER
PUMP STATION UPGRADES CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a professional services agreement in the amount of \$213,757 with Lee & Ro for engineering services for the IIC East Zone A To B Booster Pump Station Upgrades, Project 06198.

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.

15. A. General Manager's Report

B. Directors' Comments

C. 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)

D. Open Session


E. Adjourn

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

May 22, 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.

Events/Meetings

Steven LaMar

June 1-2 ACWA Board of Directors' Meeting, Sacramento
May 17 OCWD Internal Ad Hoc Committee Meeting

John Withers

April 12 AWWA Meeting, Anaheim
May 4 Irvine Chamber of Commerce Government Affairs Meeting
May 12 City of Lake Forest Civic Center Groundbreaking, Lake Forest
May 25 Water Education's Santa Ana River Watershed Conference, Ontario
June 16 Orange County Water Summit

Douglas Reinhart

April 13 IRWD Business Outreach Luncheon
April 18 MWRP Biosolids Tour
May 23 Monthly Discussion of District Activities with the General Manager

Mary Aileen Matheis

June 13-16 Water Education Foundation's Bay-Delta Tour, Sacramento

Peer Swan

May 13 Irvine Korean Cultural Festival
May 17 OCWA May Luncheon, Irvine
May 17 OCWD Internal Ad Hoc Committee Meeting
May 23 Monthly Discussion of District Activities with the General Manager

RECOMMENDATION:

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

LIST OF EXHIBITS:


None.

lb-Board Mtgs Events.doc

May 22, 2017

Prepared and

Submitted by: L. Bonkowski 

Approved by: P. Cook 

CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes of the April 24 2017 Regular Board Meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE APRIL 24, 2017 REGULAR MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" –April 24, 2017 Regular Board Meeting

EXHIBIT "A"

MINUTES OF REGULAR MEETING – APRIL 24, 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 April 24, 2017 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: LaMar.

Also Present: General Manager Cook, Executive Director of Finance Clary, Executive Director of Water Policy Weghorst, Executive Director of Operations Sheilds, Executive Director of Engineering and Water Quality Burton, Director of Water Resources Sanchez, Director of Public Affairs Beeman, Director of Treasury and Risk Management Jacobson, Director of Recycling Operations Zepeda, Director of Maintenance Drake, Assistant Director of Water Operations Roberts, Legal Counsel Arneson (via teleconference), Secretary Bonkowski, Principle Engineer Akiyoshi, Principle Engineer Cortez, Government Relations Officer Compton, Ms. Kellie Welch, Mr. Christopher Smithson, Ms. Kristine Swan, Ms. Connie Ho, Mr. Jim Reed, and Mr. Bruce Newell.

ORAL COMMUNICATIONS: None.

WRITTEN COMMUNICATIONS: None.

ITEMS TOO LATE TO BE AGENDIZED: None.

WORKSHOP

FISCAL YEAR 2017-18 OPERATING BUDGET AND PROPOSED RATES AND CHARGES

Executive Director of Finance and Administration Clary reported that this is the second workshop held on the proposed Operating Budget with the first workshop held on April 10, 2017. Ms. Clary said that rate increases are necessary to provide for cost of service equity. She said that the proposed budget is \$148.7 million, representing an increase of \$1.7 million, or 1.2%, when compared with the Operating Budget for FY 2016-17.

Using a PowerPoint presentation. Mr. Christopher Smithson provided an overview of the proposed operating budget and rate setting. Mr. Smithson reviewed the key driver comparison to the prior year's budget which includes salaries and benefits, purchased water, repairs and maintenance, electricity, and other expenses. He updated the Board on the effects of the proposed rate increases, and that based on the recommendation, a typical residential customer within the District's rate area will experience an increase of \$1.10 or 2/2% from \$55.10 to \$52.20 per month and the average residential customer in the Los Alisos rate area who will

be transitioning onto the District's rate structure this fiscal year, will experience a decrease of \$7.52 or 12.6% from \$59.72 to \$52.20.

Mr. Smithson said that the proposed Proposition 218 notices for the Irvine and Los Alisos Rate Areas indicate that the rate impacts to the Irvine Ranch Rate Area is an increase of 2.2% for the average residential customer. He said that for the Los Alisos Rate Area, who will be transitioning onto the IRWD rate structure this fiscal year, will experience a decrease of 12.6% as a result of the use of a portion of the proceeds from the property sale to establish rate parity. He said that staff is recommending that the Board approve the proposed Proposition 218 notices subject to non-substantive changes, whereupon staff will proceed with the mailing of these notices to the District's customer and landowners.

On MOTION by Swan, seconded and unanimously carried, THE BOARD ADOPTED THE FOLLOWING RESOLUTION BY TITLE APPROVING THE OPERATING BUDGET FOR FISCAL YEAR 2017-18 (WITH RATES AND CHARGES FOR FISCAL YEAR 2017-18 TO BE ADOPTED ON JUNE 26, 2017); AND APPROVE THE PROPOSITION 218 NOTICES SUBJECT TO NON-SUBSTANTIVE MODIFICATIONS.

RESOLUTION NO. 2017-10

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA
APPROVING DISTRICT'S OPERATING BUDGET FOR
FISCAL YEAR 2017-18 AND DETERMINING COMPLIANCE WITH
ARTICLE XIII B OF THE CALIFORNIA CONSTITUTION

CONSENT CALENDAR

On MOTION by Withers, seconded and unanimously carried, CONSENT CALENDAR ITEMS 4 THROUGH 9 WERE APPROVED AS FOLLOWS:

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

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

5. IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES

Receive and file.

6. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the April 10, 2017 Special Board Meeting and the April 10, 2017 Regular Board Meeting be approved as presented.

CONSENT CALENDAR (CONTINUED)

7. DYER ROAD WELLFIELD WELL NO. 18 REHABILITATION – FINAL ACCEPTANCE

Recommendation: That the Board accept construction of Dyer Road Wellfield No. 18 Rehabilitation, Project 04401, authorize the General Manager to file a Notice of Completion, and authorize the release of retention 35 days after filing the Notice of Completion.

8. MARCH 2017 TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate Swap Summary for March 2017, and Disclosure Report of Reimbursements to Board members and staff; approve the March 2017 Summary of Payroll ACH payments in the total amount of \$2,544,309 and approve the March 2017 Accounts Payable Disbursement Summary of Warrants 375075 through 376195, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$74,940,455.

9. 2017 LEGISLATIVE UPDATE

Recommendation: That the Board adopt a "Seek Amendments" position on SB 525 (Dodd) and authorize the District to move to an "Oppose Unless Amended" position on the bill should suitable amendments not be obtained, and adopt an "oppose" position on the budget Trailer Bill related "Water Conservation as a California Way of Life" and authorize the District to move to an "Oppose" position on other legislative proposals inconsistent with the approach outlined in AB 968 (Rubio, D-West Covina) and AB 1654 (Rubio).

ACTION CALENDAR

OUT-OF-AREA SERVICE AGREEMENT WITH ORANGE COUNTY SANITATION DISTRICT FOR PORTIONS OF LAKE FOREST

General Manager Cook reported that an Out-of-Area Service Agreement with Orange County Sanitation District (OCSD) is required to allow sewage from two areas of IRWD's service area within the City of Lake Forest to be conveyed to Revenue Area 14 (RA) within OCSD's jurisdictional boundary. Executive Director of Engineering and Water Quality Burton said that staff coordinated with OCSD to develop an agreement that addresses the out-of-area sewage flows and the associated operation, maintenance and capital costs in the same manner as other RA 14 flows per the RA 14 agreements. He said that the Agreement has a term of three years from the date of execution during which OCSD and IRWD will seek annexation of the two areas into OCSD. IRWD will serve as the applicant to the Local Agency Formation Commission for the annexation. The Agreement has been reviewed by both IRWD's and OCSD's legal counsel. SOCWA has no objection to the proposed Agreement.

Director Withers said that this item was reviewed and approved by the Engineering and Operations Committee on April 18, 2017. On MOTION by Withers, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE THE OUT-OF-AREA SERVICE AGREEMENT WITH ORANGE COUNTY SANITATION DISTRICT FOR THE CONVEYANCE OF SEWAGE IN TWO PORTIONS OF IRWD'S SERVICE AREA WITHIN THE CITY OF LAKE FOREST TO ORANGE COUNTY SANITATION DISTRICT'S JURISDICTIONAL BOUNDARY, SUBJECT TO NON-SUBSTANTIVE CHANGES.

IRVINE LAKE PIPELINE NORTH CONVERSION RESERVOIR CONTRACT CHANGE ORDER

The ILP North Conversion Reservoir project includes construction of a 2.4 million gallon buried concrete reservoir, modifications at the Rattlesnake complex, and modifications at the Orchard Hills Strainer Facility. Construction of the ILP North Conversion Reservoir project began October 2016.

Executive Director of Engineering and Water Quality Burton reported that staff and Pascal & Ludwig (P&L) completed negotiations for Contract Change Order No. 4 for modified work hours and additional soils handling and disposal activities at the Santiago Hills Reservoir site. The change order consists of two change requests. She said that the first request includes modified work hours. He said that per the Contract Documents, the contractor is allowed to start work at 7:00 a.m. He said that once the excavation activities began and the contractor began hauling soils from the reservoir site, traffic on Santiago Canyon Road was immediately impacted and became significantly congested. Staff coordinated with the City of Orange to modify the start time of the hauling activities from 7:00 a.m. to 8:30 a.m., which immediately improved the traffic conditions. With the later start time, the contractor's workday was reduced by 1.5 hours which decreased the contractor's daily production level and increased the overall duration of the hauling activities. The cost associated with this item is \$83,970, and P&L is requesting that 10 additional calendar days be added to the contract time to account for the reduced daily working hours and extended duration of the hauling activities.

Mr. Burton said that the second request includes additional soils handling and disposal. The design for the reservoir included an estimate that a total quantity of 56,000 cubic yards of excess soil material would need to be exported from the reservoir site and disposed. The contractor has nearly completed the exporting operation and has determined that a total of 76,000 cubic yards of excess soil requires exporting, which includes material associated with removing a portion of the berm along Santiago Canyon Road, removal of unsuitable structural backfill, and removal of non-structural backfill to provide adequate space to construct the reservoir.

As a result of the above items, the contractor removed an additional 20,000 cubic yards of material beyond what was originally identified in the Contract Documents. The cost associated with this work is \$267,044, and P&L is requesting that 10 additional calendar days be added to the contract time to account for the time needed to complete the additional work. Soils handling and disposal was identified as a unit price item in the bid form, and staff confirmed that the submitted cost is based on the unit price included in the original bid.

Director Withers reported that this item was reviewed and approved by the Engineering and Operations Committee on April 18, 2017.

On MOTION by Withers, seconded and unanimously carried, THE BOARD APPROVED CONTRACT CHANGE ORDER NO. 4 IN THE AMOUNT OF \$351,014 AND AN ADDITIONAL 20 CONTRACT DAYS WITH PASCAL & LUDWIG FOR THE ILP NORTH CONVERSION RESERVOIR, PROJECT 05407.

DYER ROAD WELLFIELD SURGE TANKS BUDGET INCREASE, CONSTRUCTION AWARD AND CONSULTANT SELECTION

Executive Director of Engineering and Water Quality Burton reported that the Dyer Road Wellfield (DRWF) Surge Tanks project will replace the existing surge tanks at Well 11 and Well 15 that are corroding and will install new surge tanks at Well 5 and Well 7 to provide protection against pressure surges in the Zone 1 system. Mr. Burton said that the surge tanks at Well 11 and Well 15 are mostly buried with one end located in a vault that includes a tank manway. Inspection of the surge tank walls in the vaults at Well 11 and Well 15 indicate that the walls of both surge tanks are thinning from corrosion and are near the end of their useful lives. The DRWF Surge Tanks project will replace the existing surge tanks at Well 11 and Well 15 and install new surge tanks at Well 5 and Well 7.

Tetra Tech was retained to provide design plans and project manual to replace the surge tanks at Wells 11 and 15 and to construct new surge tanks at Wells 5 and 7. To eliminate tank corrosion, the tanks are designed so they are not directly buried in the ground. At Well 11, the surge tank will be constructed in a recessed pit 12 feet below ground surface similar to the surge tank at Orange Park Acres Well 1. At Well 15, the surge tank will be constructed in an underground vault due to the lack space at the site. The surge tanks at Wells 5 and 7 will be constructed aboveground.

Mr. Burton said that the project was advertised for construction bidding on March 20, 2017 to a select bidders list of 17 mechanical contractors. The bid opening occurred on April 18, 2017, and four contractors submitted bids. The apparent low bidder is Pascal & Ludwig with a bid of \$3,693,000; the engineer's estimate was \$5,500,000. The low bid represents the true construction cost as the top three contractor bids were within a range of \$70,000 as shown in the bid summary in Exhibit "B". The engineer's estimate was high as the estimate included higher costs for the procurement and installation of the surge tank at all four sites and also included higher unit costs for the programmable logic control units at the four sites as compared to the low bid.

Mr. Burton said that staff solicited a proposal from Tetra Tech for construction phase engineering services and that its proposal is in the amount of \$126,000. He said that staff reviewed the proposal and found it in line with proposal amounts for other projects with similar scopes of work. Since Tetra Tech completed the design and is most familiar with the project, staff recommends awarding a Professional Services Agreement to Tetra Tech for construction phase services.

Director Withers reported that an item for construction phase services was reviewed and approved by the Engineering and Operations Committee on April 18, 2017. On MOTION by Matheis, seconded and unanimously carried, THE BOARD AUTHORIZED A BUDGET INCREASE IN THE AMOUNT OF \$2,412,900, FROM \$1,213,300 TO \$3,626,200, FOR

PROJECT 05473 AND A BUDGET INCREASE IN THE AMOUNT OF \$721,900, FROM \$528,600 TO \$1,250,500, FOR PROJECT 06165; AUTHORIZED THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT IN THE AMOUNT OF \$3,693,000 WITH PASCAL & LUDWIG; AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH TETRA TECH FOR CONSTRUCTION PHASE SERVICES IN THE AMOUNT OF \$126,000 FOR THE DYER ROAD WELLFIELD SURGE TANKS, PROJECTS 05473 AND 06165.

AMENDMENT NO. 1 TO STOCKDALE INTEGRATED BANKING PROJECT OPERATING AGREEMENT

General Manager Cook reported that Rosedale-Rio Bravo Water Storage District and IRWD are jointly developing the Stockdale Integrated Water Banking Project in accordance with the Agreement for a Water Banking, Recovery and Exchange Program for the Stockdale West and Stockdale East Properties (Operating Agreement). Mr. Cook said that IRWD is currently constructing recovery facilities on the Stockdale West property including connections to the Cross Valley Canal (CVC). He said that in August 2016, the Board approved terms for and execution of an amendment to the Operating Agreement that would facilitate IRWD's purchase of one-third of the capacity in the Rosedale CVC Return Pipeline (Return Pipeline). He further said that IRWD's legal counsel prepared Amendment No. 1 to the Operating Agreement that memorializes the reimbursement terms established in the Memorandum of Understanding and provides for IRWD's acquisition of capacity rights in the Return Pipeline. Specifically, the amendment modifies the Operating Agreement to allow for: 1) IRWD capital cost participation in the amount of \$201,000 to purchase one-third of the capacity in the Rosedale CVC Return Pipeline, and 2) IRWD reimbursement to Rosedale for IRWD's share of costs associated with the construction of the CVC turn-out to the Stockdale West Ranch recharge facilities. The proposed Amendment No. 1 has been reviewed by Rosedale and its comments have been incorporated into the document.

Director Swan reported that this item was reviewed and approved by the Supply Reliability Programs Committee on April 20, 2017. On MOTION by Swan, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 1 TO THE AGREEMENT FOR A WATER BANKING, RECOVERY AND EXCHANGE PROGRAM FOR THE STOCKDALE WEST AND STOCKDALE EAST PROPERTIES, SUBJECT TO NON-SUBSTANTIVE CHANGES OR TO SUBSTANTIVE CHANGES AS APPROVED BY THE SUPPLY RELIABILITY PROGRAMS COMMITTEE.

GENERAL MANAGER'S REPORT

General Manager Cook introduced Ms. Connie Ho, the District's newly-hired Senior Public Affair Specialist, who previously worked on the Westways Magazine for the Automobile Club of America.

Mr. Cook said that he, along with Ms. Fiona Sanchez and Ms. Christine Compton, will be testifying tomorrow on two Assembly Bills 968 and 1654, both of which are being co-sponsored by IRWD and the Regional Water Authority in Sacramento, and noted that well over 50 agencies plus the key statewide water associations are supporting these bills.

DIRECTORS' COMMENTS

Director Matheis reported that she attended the Water Education Summit and the District's Business Outreach luncheon.

Director Withers reported that he will be attending an OCSD Board meeting on Wednesday.

Director Swan also reported that he attended the Water Education Summit, a WACO Planning meeting, OCWD meetings, and an OCWA lunch meeting.

Director Reinhart reported that he attended the District's Business Outreach luncheon, and a MWDOC Public Affairs Committee meeting.

CLOSED SESSION

President Reinhart said that the following Closed Session would be held this evening.

PUBLIC EMPLOYEE APPOINTMENT – Pursuant to Government Code Section 54957(b).
Title: Legal Counsel

OPEN SESSION

Following the Closed Session, the meeting was reconvened with four Directors present (LaMar absent). President Reinhart said that by unanimous support for Alfred Smith as IRWD General Counsel, Mary Lynn Coffee as Assistant IRWD General Counsel, the Board authorized the General Manager to execute a Professional Services Agreement with Nossaman LLP to provide general counsel services for the term of May 15, 2017 to May 15, 2018, and authorized the General Manager to execute a Professional Services Agreement with Bowie, Arneson, Wiles and Gianonne to provide special legal services for the term of May 15, 2017 to May 15, 2018.

ADJOURNMENT

There being no further business, President Reinhart adjourned the meeting.

APPROVED and SIGNED this 22nd day of May, 2017.

President, IRVINE RANCH WATER DISTRICT

Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

Legal Counsel – Nossaman LLP

May 22, 2017

Prepared by: C. Spangenberg/M. Cortez

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

Approved by: Paul Cook *[Signature]*

CONSENT CALENDAR

FOURTH AMENDMENT TO THE SETTLEMENT AGREEMENT MCAS EL TORO GROUNDWATER REMEDIATION PROJECT

SUMMARY:

A Fourth Amendment to the Settlement Agreement for the Marine Corps Air Station (MCAS) El Toro Groundwater Remediation Project is required to formalize the decommissioning of Wells IDP-1 and IDP-3. Staff recommends that the Board authorize the Board President and Secretary to execute the Fourth Amendment to the Settlement Agreement for the MCAS El Toro Groundwater Remediation Project.

BACKGROUND:

Wells IDP-1, IDP-2, IDP-3 and IDP-4 were installed by Orange County Water District (OCWD) in 1992 and 1993. The original purpose of these wells was to extract groundwater contaminated by a volatile organic compound (VOC) originating from the former MCAS El Toro, as well as groundwater with high total dissolved solids (TDS) resulting from past agricultural activities. Under the 2001 Settlement Agreement, the Department of the Navy reimbursed OCWD for the costs of constructing the IDP production wells. The IDP wells were installed under a previous design concept whereby the water would be treated to remove VOCs and TDS, and then discharged to IRWD's potable distribution system. Subsequently, the IDP design was modified to two components, potable and non-potable, which have been successfully operating since 2006; the four original wells were not utilized in the new design.

IRWD initially requested that OCWD maintain the original wells for possible future use. In 2004, IRWD purchased the property on which IDP-4 was located, along with the ownership of IDP-4. IRWD later determined that IDP-4 was not suitable for use and destroyed the well in 2011 under the Third Amendment to the Settlement Agreement. In 2004, OCWD converted IDP-2 from a production well to a monitoring well (IDP-2R), which remains active to date. Through recent staff discussions, OCWD and IRWD both agree that the two remaining IDP wells have no future purpose. Existing OCWD and Navy monitoring wells in that area provide adequate monitoring of groundwater conditions. Consequently, staff concurs with OCWD's recommendation to destroy the remaining wells IDP-1 and IDP-3.

In 2001, OCWD approved the Settlement Agreement and Shallow Groundwater Unit (SGU) Contract with the U.S. Departments of Justice and Navy and IRWD. These agreements established the scope, responsibilities, and cost allocation for construction and operation of portions of the IDP to clean up contaminants from the former MCAS El Toro. Since IDP-1 and IDP-3 are part of the 2001 Settlement Agreement, the U.S. Departments of Justice and Navy have requested the decommissioning of these wells be addressed in an amendment (the Fourth Amendment) to the Settlement Agreement.

The Fourth Amendment to the Settlement Agreement, attached as Exhibit "A", was approved by the OCWD Board on April 19, 2017. The U.S. Departments of Justice and Navy have reviewed the amendment language and will execute the amendment after IRWD and OCWD approve it.

FISCAL IMPACTS:

IRWD owns the IDP-1 well vault, appurtenances, and pipeline from the SGU to the well and will reimburse OCWD for the cost of removal. The estimated reimbursement is \$20,000 with the work scheduled to be completed in fall 2017.

ENVIRONMENTAL COMPLIANCE:

The decommissioning of wells IDP-1 and IDP-3 is exempt from the requirements of the California Environmental Quality Act pursuant to the California Code of Regulations, Title 14, Chapter 3, Section 15301, and the OCWD is filing the Notice of Exemption with the County Clerk.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 16, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE BOARD PRESIDENT AND SECRETARY TO EXECUTE THE FOURTH AMENDMENT TO THE SETTLEMENT AGREEMENT FOR THE MCAS EL TORO GROUNDWATER REMEDIATION PROJECT.

LIST OF EXHIBITS:

Exhibit "A" – Fourth Amendment to the Settlement Agreement

**Fourth Amendment to the Settlement Agreement Among the Settling Federal Agencies (SFA),
Orange County Water District (OCWD), and Irvine Ranch Water District (IRWD)
in Regard to the Former Marine Corps Air Station (MCAS) El Toro Groundwater Remediation**

WHEREAS Section III.A. of the Second Amendment to the Settlement Agreement Among the Settling Federal Agencies (SFA), Orange County Water District (OCWD), and Irvine Ranch Water District (IRWD) in Regard to the Former Marine Corps Air Station (MCAS) El Toro Groundwater Remediation (the "Agreement"), entitled "OCWD's and IRWD's Obligations To Design, Construct, and Operate and Maintain OCWD/IRWD Assets of the CCMI," paragraph 1, provides that "OCWD and IRWD are jointly and severally responsible for and will design, construct, operate and maintain the OCWD/IRWD Assets of the CCMI in accordance with this Agreement, the ROD and the requirements set forth in the former MCAS El Toro FFA and FFA deliverables set forth in Section 8.2 of the FFA that receive concurrence from USEPA and CALEPA or otherwise become finalized pursuant to the FFA including, but not limited to, the schedules set forth therein";

WHEREAS Recitals P.a.6 and P.a.7 of the Agreement, as amended, define the "basic assets of the Modified IDP Non-Potable System (hereinafter referred to as the 'CERCLA Component of the Modified IDP' or 'CCMI')" to include "Injection Well IDP-1" and "Monitoring Wells IDP-2 and IDP-3" and Appendix 4, Sections 1.a.6 and 1.a.7 state that the CCMI consists of "Injection Well IDP-1" and "Monitoring Wells IDP-2 and IDP-3";

WHEREAS the Settling Federal Agencies, OCWD, and the IRWD agree that the wells identified as IDP-1 and IDP-3 are not required by the ROD as changed in the Explanation of Significant Differences (ESD) to the ROD dated December 2005 or by the requirements set forth in the former MCAS El Toro FFA and FFA deliverables set forth in Section 8.2 of the FFA that receive concurrence from USEPA and CALEPA or otherwise become finalized pursuant to the FFA;

WHEREAS the OCWD and IRWD intend to cease operation and maintenance of wells IDP-1 and IDP-3 and decommission the wells;

WHEREAS the Settling Federal Agencies do not object to OCWD and IRWD decommissioning wells IDP-1 and IDP-3;

WHEREAS the Settling Federal Agencies will bear no costs related to decommissioning of wells IDP-1 and IDP-3;

WHEREAS Section VII.N. provides that the "Agreement may be modified only upon the mutual agreement of the Parties reflected in a written document signed by duly authorized representatives of the Parties, which document expressly makes reference to this Agreement and the intent to modify the terms of this Agreement";

WHEREAS, capitalized terms used herein and not otherwise defined shall have the meanings given such terms in the Agreement;

THEREFORE, the Agreement is hereby modified as follows:

Strike "to Injection Well IDP-1 and" from Recital P.a.6 and Appendix 4, Section 1.a.6.

Replace "Wells" with "Well" and strike "IDP-3" from Recital P.a.7 and Appendix 4, Section 1.a.7.

May 22, 2017
Prepared by: T. Bonkowski/M. Cortez
Submitted by: K. Burton *KLB*
Approved by: Paul Cook *PC*

CONSENT CALENDAR

IRVINE BUSINESS COMPLEX APPURTENANCE RELOCATIONS
FINAL ACCEPTANCE

SUMMARY:

Construction of the Irvine Business Complex Appurtenance Relocations project is complete. The contractor, T.E. Roberts, has completed the required work and all punch list items. The project has received final inspection and acceptance of construction is recommended.

BACKGROUND:

The City of Irvine is continuing its sidewalk improvement program in the Irvine Business Complex and has proposed sidewalk construction on: Millikan Avenue, from DuBridge Avenue to Barranca Parkway; DuBridge, Noyes, Gates and Hales Avenues; Armstrong Avenue, between Alton Parkway and Barranca Parkway; and Teller Avenue, north of Campus Drive. This project relocated District facilities, e.g., meters, hydrants and backflow devices, to avoid conflicting with the City of Irvine's proposed sidewalk improvements. MBF Consulting completed the design and T. E. Roberts, Inc. was awarded the construction contract on October 26, 2016 and completed construction of the improvements on April 7, 2016.

Project Title:	Irvine Business Complex Appurtenance Relocations
Project No:	06849 and 06850
Design Engineer:	MBF Consulting, Inc.
Construction Management by:	IRWD Staff
Contractor:	T.E. Roberts, Inc.
Original Contract Cost:	\$662,601.00
Final Contract Cost:	\$675,617.63
Original Contract Days:	150
Final Contract Days:	166
Final Change Order Approved On:	April 25, 2017

FISCAL IMPACTS:

Projects 06849 and 06850 are included in the FY 2016-17 Capital Budget. The existing budgets and Expenditure Authorizations are sufficient to fund the final payment for the project.

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 structure, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead determination. A Notice of Exemption for this project was filed with the Orange County Clerk/Recorder on January 8, 2016.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ACCEPT CONSTRUCTION OF THE IRVINE BUSINESS COMPLEX APPURTENANCE RELOCATIONS, PROJECTS 06849 AND 06850; AUTHORIZE THE FILING OF A NOTICE OF COMPLETION; AND AUTHORIZE THE PAYMENT OF THE RETENTION 35 DAYS AFTER THE DATE OF RECORDING THE NOTICE OF COMPLETION.

LIST OF EXHIBITS:

None.

May 22, 2017

Prepared by: S. Toland/R. Mori

Submitted by: K. Burton *(KLB)*

Approved by: Paul Cook *(P. Cook)*

CONSENT CALENDAR

BAKER WATER TREATMENT PLANT
RAW WATER CONVEYANCE FACILITIES FINAL ACCEPTANCE

SUMMARY:

Construction of the Baker Water Treatment Plant Raw Water Conveyance Facilities project is complete. The contractor, Pacific Hydrotech, has completed the required work and all punch list items. The project has received final inspection and acceptance of construction is recommended.

BACKGROUND:

The construction contract for the Baker Water Treatment Plant Raw Water Conveyance Facilities Project was awarded to Pacific Hydrotech in December 2013. The construction schedule was extended multiple times to align the completion of the project with the startup of the Baker Water Treatment Plant. The pump station was placed into service February 22, 2017, and operated continuously until March 30, 2017, delivering Irvine Lake water to the Baker Water Treatment Plant.

Project Title:	Baker Water Treatment Plant Raw Water Conveyance Facilities
Project No.:	05027
Design Engineer:	RBF Consulting / Carollo Engineers
Construction Management by:	IRWD Staff
Contractor:	Pacific Hydrotech
Original Contract Cost:	\$4,995,744.00
Final Contract Cost:	\$5,216,933.29
Original Contract Days:	455
Final Contract Days:	1,121
Final Change Order Approved On:	November 28, 2016

FISCAL IMPACTS:

Project 05027 is included in the FY 2016-17 Capital Budget. The existing budget is sufficient to fund the final payment for the project.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and an Environmental Impact Report (EIR) was prepared in conformance with California Code of Regulations Title 14, Chapter 3, Article 7. The Final EIR was certified and adopted by the Board in April 2011. Addenda No. 1 and No. 2 to the EIR were prepared in accordance with Section 15164 of the CEQA Guidelines and were approved by the Board in February 2012, and March 2013, respectively.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO ACCEPT CONSTRUCTION OF BAKER WATER TREATMENT PLANT RAW WATER CONVEYANCE FACILITIES, PROJECT 05027; AUTHORIZE THE GENERAL MANAGER TO FILE A NOTICE OF COMPLETION; AND AUTHORIZE THE RELEASE OF RETENTION 35 DAYS AFTER FILING OF THE NOTICE OF COMPLETION.

LIST OF EXHIBITS:

None.

May 22, 2017

Prepared by: H. Cho/M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul Cook *[Signature]*

CONSENT CALENDAR

RESERVOIR LADDER FALL PROTECTION BUDGET ADDITION

SUMMARY:

The Reservoir Ladder Fall Protection project will replace the existing fall protection equipment on the ladders at 13 domestic and two recycled water reservoirs. Staff recommends that the Board authorize the addition of Project 10119 in the amount of \$100,000 and Project 10120 in the amount of \$40,000 to the FY 2016-17 Capital Budget for the Reservoir Ladder Fall Protection project.

BACKGROUND:

Currently, there are 18 aboveground domestic water and two aboveground recycled water reservoirs with ladders in the District. The Saf-T Climb fall prevention system is used at 17 reservoirs. The remaining three reservoirs have ladder cages, and staff use other fall protection equipment that attaches to the ladder when climbing.

When using the Saf-T Climb, the operator's harness is attached to a ratcheting sleeve that travels up and down a pole installed in the center of the ladder's rungs. The pole is notched, and in the event of a fall, the ratcheting sleeve will catch in a notch and prevent the operator from falling any further. A drawback to the Saf-T Climb system is that the operator must move the sleeve by hand a few notches at a time when ascending or descending the ladder, and thus have only one hand gripping the ladder.

In 2016, staff installed an alternative ladder fall protection system, LAD-SAF, at two reservoirs (Fleming and Chapman). The LAD-SAF system uses a cable instead of a notched pole, and its harness sleeve is designed to grip the cable and stop traveling when weight is pulled down on the sleeve. This unit will freely travel along the cable as the operator ascends or descends the ladder allowing the operator to have a more continual grip on the ladder. The LAD-SAF catalog cut sheet is shown in Exhibit "A".

The Reservoir Ladder Fall Protection project will install the LAD-SAF system and replace the Saf-T Climb fall protection equipment at the remaining 13 domestic water reservoirs and two recycled water reservoirs. The 13 domestic water reservoirs include Lomas Valley Zone 3, Quail Hill Zone 4, Orchard Hills Zone 5, Portola Springs Zone 6, Foothill Zone 6, Foothill Zone 6A, Portola Zone 8, Portola Zone 9, El Toro Zone 4 No. 1, El Toro Zone 4 No. 2, Canada Zone 4, Shaw, and Benner reservoirs. The two recycled water reservoirs are Portola Springs Zone D and Lake Forest Zone C No. 2. The 2016 installation of the LAD-SAF units at Fleming and Chapman reservoirs cost \$3,510 each. Staff's estimate for installation at the 15 reservoirs is \$52,000.

FISCAL IMPACTS:

Projects 10119 and 10120 are not included in the FY 2016-17 Capital Budget. Staff requests the addition of Project 10119 and Project 10120 to the FY 2016-17 Capital Budget as shown in the table below. Funding for Projects 10119 and 10120 will be provided from Improvement Districts 1100 and 2100, respectively.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10119	\$-0-	\$100,000	\$100,000
10120	\$-0-	\$40,000	\$40,000
Total	\$-0-	\$140,000	\$140,000

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. It is expected that preliminary analysis will lead to the preparation of a Notice of Exemption for the project.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 16, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF PROJECT 10119 IN THE AMOUNT OF \$100,000 AND PROJECT 10120 IN THE AMOUNT OF \$40,000 TO THE FY 2016-17 CAPITAL BUDGET FOR THE RESERVOIR LADDER FALL PROTECTION PROJECT.

LIST OF EXHIBITS:

Exhibit "A" – LAD-SAF Fall Protection System Catalog Information Sheet



Globally Approved Vertical Fall Arrest System



- Globally Certified to ANSI, CE and CSA standards, so can be used anywhere in the world.
- Choice of Cable Options for flexibility of installations, allows the best cable option be used per application.
- Certified with 8mm (5/16") and 9.25mm (3/8") Lad-Saf® cable.
- Passes fall back test using anthropomorphic dummy in numerous fall positions, giving peace of mind and confidence when using.
- Choice of stainless steel or galvanised steel options for both cable and bracket options allowing for use both on and off-shore.

Vertical Fall Arrest Systems

Vertical Fall Arrest Systems ensure that users remain safe whilst climbing.

It is important that the user can ascend and descend comfortably and safely, which is why the Lad-Saf[®] system has been so popular over the years.

It has been available for over 30 years and is the biggest selling vertical fall arrest system. It has been installed in all continents across the globe and is this experience which has led the development of one fully certified system, including the shuttle that is now the new standard Lad-Saf[®] system.

From telecommunications and oil and gas to wind turbines and utility towers, the Lad-Saf[®] system has the flexibility to allow connection to all of the wide range of structures there may be.

Global Safety

The new Lad-Saf[®] sleeve has been designed to meet all applicable safety standards around the world, in conjunction with other Lad-Saf[®] components, creating a universally approved vertical fall arrest system. This means that the Lad-Saf[®] system can be used the world over and there is no requirement for different components in each region around the globe.

The whole system is certified to EN 353-1:2002, ANSI-ASC A14.3-2008 and CSA-Z259.2.1-98 (R2004).

Users only need one product or system specification across the globe unlike with previous versions where different specifications are required. This is essential for multi-national organisations who have assets globally, but are not able to purchase from one hub, instead having to purchase in different regions which can cause confusion. With a globally approved system it can be specified globally and purchased through a single purchasing location.

System Usage

The Lad-Saf[®] system retains its ability to allow up to 4 users use the system at once and enables them to connect and disconnect at any point of the lifeline.

The design also allows the shuttle to remain attached to the user to eliminate the potential for dropping and creating Lost Time Incidents or causing potential injury. Alongside the new shuttle the new Lad-Saf[®] system has extra options. Previous versions have only allowed 9.25mm (3/8") cable be used which can be difficult to handle especially in confined environments. The new global system introduces the availability of 8mm (5/16") cable options.

There are new top bracket assemblies for the range of 8mm cables too. New internal components are used within the head assembly to ensure optimal performance and safety. It is important to ensure that the correct bracket is used with the correct diameter of cable. Housed inside are the elastometric attenuator (shock absorbing element) and the strand vice, specific for the cable diameter used.



KC3PL330/6100400 - Intermediate Cable Guide

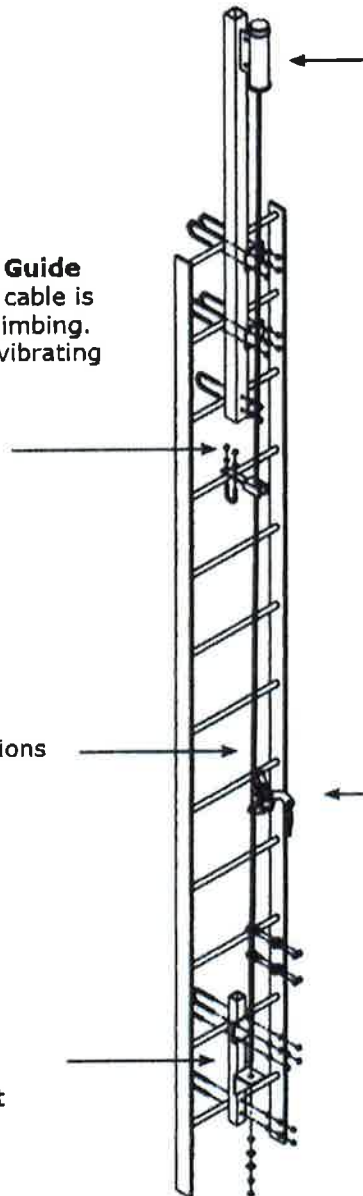
Galvanised intermediate cable guide to ensure cable is distanced away from the ladder to aid easier climbing. Polyurethane guide piece prevents cable from vibrating causing potential damage to the cable. Rung fix to ladder other fixing options and stainless steel product also available.

Lad-Saf[®] Cable

See "Cable options" specification below for options available. Only Capital Safety cable permitted.

KC3PL90/6100090 - Bottom Bracket

Galvanised bracket to be attached to ladder by using 2 off rung fixings. Cable gripped to tensioner bar and bar tensioned to pre-determined value to provide the correct tension on the lifeline. Other fixing options and stainless steel product also available.


**KC3PL280/6116280
(9.25mm/3/8") or
6116278 (8mm/5/16")
Top Bracket**

Galvanised bracket to be attached to ladder by using 3 off rung fixings. Contains elastometric attenuator (shock absorber) and strand vice for termination of the cable. Other fixing options and stainless steel product also available.

**6116507 - Global Sleeve**

Cable Sleeve for connection on to Lad-Saf[®] 8mm (5/16") and 9.25mm (3/8") cable. Incorporates shock absorber but remains less than 9" from cable for ANSI/OSHA requirements. Removable at any point on the lifeline.

Cable options available:

7240212 : 1x19 strand, 8mm (5/16") Stainless Steel

6126xxx (xxx length in feet) : 7x19 strand, 8mm (5/16") Galvanised Steel

KC36152xxx (xxx length in feet) : 1x7 strand, 9.25mm (3/8") Stainless Steel

KC36151xxx (xxx length in feet) : 1x7 strand, 9.25mm (3/8") Galvanised Steel

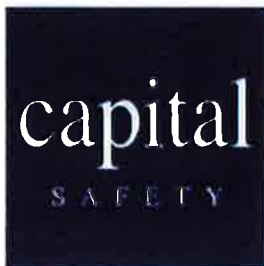
Specifications:

Top Bracket: Contains elastometric attenuator (for shock absorption), Fixing options : rung, weld-on. Up to 4 users capability. Material : Stainless steel or galvanised options **Cable:** see above **Bottom Bracket:** Cable attachment using cable grip.

Fixing options: rung fix, bolt-on, weld-on. Material : stainless steel or galvanised options **Fall Arrest Device (Ref 6116507) :**

1 user per device, Max weight per user : 141kg. Material : 17-4-PH grade stainless steel **Standards:** EN353-1:2002,

ANSI-ASC A14.3-2008, CSA-Z259.2.1-98 (R2004).



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Capital Safety, home of the DBI-SALA and PROTECTA brands is the world's leading manufacturer dedicated solely to fall protection. We are also the pioneer in the development of intelligent safety technology, leading the way toward a new era of safety management solutions. We are committed to providing new and improved systems to give you the complete confidence you need in your safety program.

- **QUALITY** for the performance you can trust.
- **BREADTH** for the best and most cost effective solutions.
- **EXPERTISE** to meet your unique fall protection requirements.
- **TRAINING** to ensure and motivate safety compliance.
- **INNOVATION** to improve your safety and productivity.



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May 22, 2017

Prepared by: Jennifer Davis/Tanja Fournier

Submitted by: Robert Jacobson/Cheryl Clary

Approved by: Paul Cook

CONSENT CALENDAR

APRIL 2017 TREASURY REPORTS

SUMMARY:

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

- A. The Investment Summary Report for April 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 Monthly Interest Rate Swap Summary as of April 30, 2017, as outlined in Exhibit "B".
- C. The Summary of Payroll ACH payments in the total amount of \$1,719,748, as outlined in Exhibit "C".
- D. The April 30, 2017 Disbursement Summary of warrants 376196 through 376893, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$21,383,097 as outlined in Exhibit "D".
- E. The Disclosure Report of Reimbursements to Board Members and Staff for April 2017, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "E".

FISCAL IMPACTS:

As of April 30, 2017, the book value of the investment portfolio was \$379,909,182, with a 1.00% rate of return and a market value of \$378,580,288. Based on the District's March 31, 2017 quarterly real estate investment rate of return of 14.25%, the weighted average return for the fixed income and real estate investments was 3.15%.

As of April 30, 2017, the total notional amount of the interest rate swap portfolio was \$130 million of fixed payer swaps. Cash accrual in April from all swaps was negative \$519,551.

Payroll ACH payments totaled \$1,719,748, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for April totaled \$21,383,097.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

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

RECOMMENDATION:

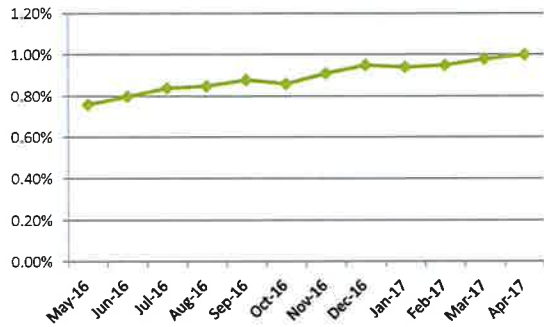
THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE MONTHLY INTEREST RATE SWAP SUMMARY FOR APRIL 2017, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE APRIL 2017 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$1,719,748 AND APPROVE THE APRIL 2017 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 376196 THROUGH 376893, WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$21,383,097.

LIST OF EXHIBITS:

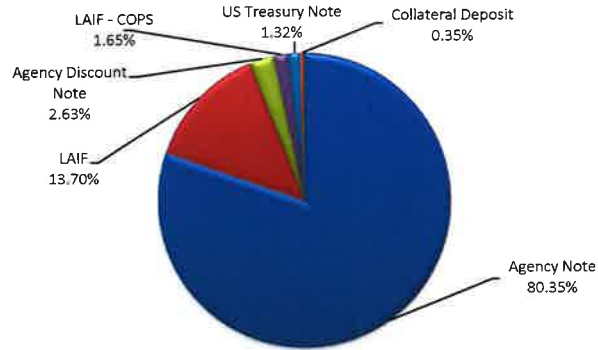
- Exhibit "A" – Investment Summary Report
- Exhibit "B" – Monthly Interest Rate Swap Summary
- Exhibit "C" – Monthly Payroll ACH Summary
- Exhibit "D" – Monthly Summary of District Disbursements
- Exhibit "E" – Disclosure of Reimbursements to Board Members and Staff

Exhibit "A"
**Irvine Ranch Water District
Investment Portfolio Summary
April 2017**

Monthly Fixed Income Yield



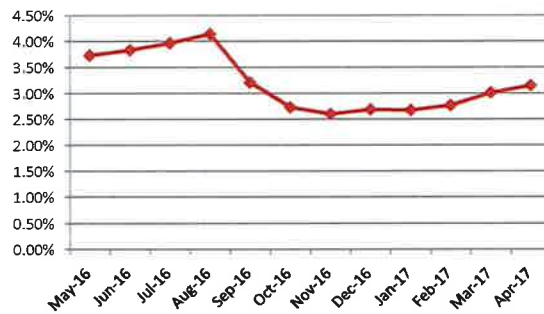
Portfolio Distribution



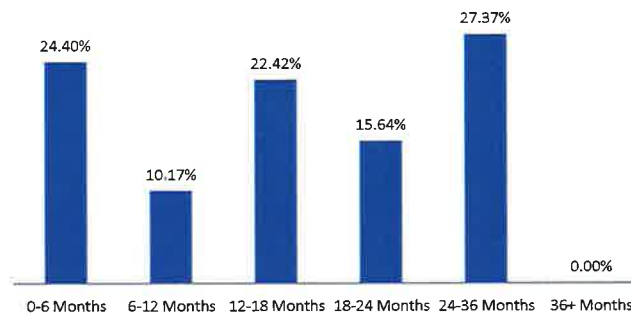
Investment Summary

Type	PAR	Book Value	Market Value
Agency Note	305,000,000	305,264,997	303,994,030
LAIF	52,000,000	52,000,000	51,957,149
Agency Discount Note	10,000,000	9,993,081	9,991,050
LAIF - COPS	6,300,000	6,300,000	6,294,808
US Treasury Note	5,000,000	5,028,154	5,020,300
Collateral Deposit	1,322,950	1,322,950	1,322,950
Grand Total	379,622,950	379,909,182	378,580,288

Weighted Average Return Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
Fed Home Loan Bank	126,000,000	33.19%
Fed Home Loan Mortgage Corp	74,000,000	19.49%
Fed Farm Credit Bank	60,000,000	15.81%
State of California Treasury - LAIF	58,300,000	15.35%
Fed Natl Mortgage Assoc	55,000,000	14.49%
US Treasury Note	5,000,000	1.32%
Citi-Group Collateral	1,322,950	0.35%
Merrill Lynch Collateral	0	0.00%
Grand Total	379,622,950	100.00%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

04/30/17

SETTLMT *	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 4/30/2017	UNREALIZED ⁽²⁾ GAIN/(LOSS)
03/06/17			05/01/17		LAIF	State of California Tsy.	\$52,000,000		0.850%	\$52,000,000.00	\$52,000,000.00	51,957,149.45	(42,850.55)
03/06/17			05/01/17		LAIF - COPS	State of California Tsy.	6,300,000		0.850%	\$6,300,000.00	\$6,300,000.00	6,294,808.49	(5,191.51)
06/16/16	N/A	N/A	05/12/17	NR	FNMA - Discount Note	Fed Natl Mortgage Assoc	5,000,000	0.570%	0.580%	4,973,875.00	4,999,129.17	4,998,850.00	(279.17)
08/27/15	N/A	N/A	05/30/17	NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.625%	0.642%	4,998,500.00	4,999,932.24	4,999,400.00	(532.24)
06/16/16	N/A	N/A	06/30/17	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.800%	0.614%	5,009,614.00	5,001,522.01	4,999,950.00	(1,572.01)
12/09/16	N/A	N/A	07/07/17	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.647%	0.658%	4,981,041.65	4,993,951.38	4,992,200.00	(1,751.38)
11/05/15	N/A	N/A	08/28/17	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	0.750%	0.800%	4,995,500.00	4,999,191.09	4,997,300.00	(1,891.09)
09/16/15	N/A	N/A	09/15/17	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.900%	0.915%	4,998,500.00	4,999,718.49	5,001,400.00	1,681.51
01/30/17	N/A	N/A	10/31/17	NR	US Treasury - Note	US Treasury	5,000,000	1.875%	0.743%	5,042,154.40	5,028,154.22	5,020,300.00	(7,854.22)
12/08/16	N/A	N/A	11/21/17	AAA/NR/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	0.750%	0.866%	9,989,000.00	9,993,551.72	9,985,900.00	(7,651.72)
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	4,990,534.48	4,994,000.00	3,465.52
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	3,999,831.22	3,992,080.00	(7,751.22)
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	4,996,600.00	(3,400.00)
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	5,008,484.93	4,990,700.00	(17,784.93)
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	4,998,125.68	4,981,250.00	(16,875.68)
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	4,997,397.26	4,982,850.00	(14,547.26)
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	5,005,581.98	4,984,350.00	(21,231.98)
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	11,030,584.72	11,006,050.00	(24,534.72)
06/29/16	One Time	12/29/16	06/29/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.000%	0.679%	10,016,000.00	10,009,293.15	9,980,300.00	(28,993.15)
09/01/16	One Time	07/27/17	07/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.750%	0.928%	4,983,250.00	4,989,090.78	4,966,500.00	(22,590.78)
12/21/16	One Time	08/15/17	08/15/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.000%	1.245%	4,980,000.00	4,984,352.16	4,984,750.00	397.84
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	4,979,650.00	(20,350.00)
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	5,014,160.16	4,991,600.00	(22,560.16)
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	4,993,186.40	4,991,600.00	(1,586.40)
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	9,992,531.47	9,962,800.00	(29,731.47)
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	4,995,516.76	4,979,150.00	(16,366.76)
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	5,007,326.97	4,988,200.00	(19,126.97)
10/12/16	One Time	04/12/17	10/12/18	Aaa/NR/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.000%	1.041%	9,992,000.00	9,993,983.56	9,950,600.00	(43,383.56)
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	10,107,621.39	10,054,700.00	(52,921.39)
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	5,064,807.67	4,987,500.00	(77,307.67)
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	5,034,294.88	5,037,650.00	3,355.12
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	4,982,771.29	5,037,650.00	54,878.71
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	4,994,922.81	4,965,950.00	(28,972.81)
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	4,992,581.72	4,965,950.00	(26,631.72)
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	4,992,191.28	4,965,950.00	(26,241.28)
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	9,992,121.92	9,955,000.00	(37,121.92)
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	5,048,969.50	5,015,100.00	(33,869.50)
10/12/16	One Time	03/29/17	03/29/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%	4,999,950.00	4,999,960.00	4,968,050.00	(31,910.00)
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	10,026,311.69	9,961,000.00	(65,311.69)
10/31/16	One Time	04/26/17	04/26/19	Aaa/AA+/AAA	FHLMC - Note	Fed Farm Credit Bank	5,000,000	1.050%	1.060%	4,998,750.00	4,998,999.45	4,969,500.00	(29,499.45)
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	4,998,143.49	4,950,650.00	(47,493.49)

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

04/30/17

SETTLMT *	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 4/30/2017	UNREALIZED ⁽²⁾ GAIN/(LOSS)
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	5,066,582.28	5,021,050.00	(45,532.28)
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	5,055,796.52	5,021,050.00	(34,746.52)
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	4,975,091.34	4,942,650.00	(32,441.34)
09/01/16	One Time	01/26/17	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,996,683.55	4,961,850.00	(34,833.55)
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	4,998,832.72	4,931,500.00	(67,332.72)
09/01/16	One Time	02/28/17	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,221.81	4,960,750.00	(38,471.81)
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	4,997,998.15	4,928,650.00	(69,348.15)
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	5,001,205.21	4,956,850.00	(44,355.21)
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	9,991,483.33	9,918,200.00	(73,283.33)
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	9,979,136.20	9,901,300.00	(77,836.20)
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	5,000,630.82	4,963,900.00	(36,730.82)
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	4,991,895.01	4,987,100.00	(4,795.01)
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	4,987,115.38	4,981,450.00	(5,665.38)
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	5,001,264.44	4,999,150.00	(2,114.44)
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	4,984,465.42	4,996,950.00	12,484.58
SUB-TOTAL							<u>\$378,300,000</u>			<u>\$378,666,820.03</u>	<u>\$378,586,231.40</u>	<u>\$377,257,337.94</u>	<u>(\$1,328,893.46)</u>
RESTRICTED CASH (Swap Collateral Deposits)⁽⁴⁾													
03/01/17					Collateral Deposit	Citi-Group	\$1,322,950		0.910%	\$1,322,950.10	\$1,322,950.10	1,322,950.10	
					Collateral Deposit	Merrill Lynch							
SUB-TOTAL							<u>\$1,322,950</u>			<u>\$1,322,950.10</u>	<u>\$1,322,950.10</u>	<u>\$1,322,950.10</u>	
TOTAL INVESTMENTS							<u>\$379,622,950</u>			<u>\$379,989,770.13</u>	<u>\$379,909,181.50</u>	<u>\$378,580,288.04</u>	
				April	Petty Cash Ck Balance	Bank of America				3,400.00 (108,663.78)			
										<u>\$379,884,506.35</u>			

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

Outstanding Variable Rate Debt	\$303,300,000
Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps)	\$173,300,000
Investment Balance:	\$379,884,506
Investment to Variable Rate Debt Ratio:	219%
Portfolio - Average Number of Days To Maturity ⁽⁴⁾	473

	Investment Portfolio	Real Estate ⁽³⁾ Portfolio	Weighted Avg. Return
April	1.00%	14.25%	3.15%
March	0.98%	14.25%	3.01%
Change	0.02%		0.14%

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

04/30/17

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
04/17	\$58,300,000	15.36%	\$58,300,000				
05/17	10,000,000	2.63%		5,000,000	5,000,000		
06/17	5,000,000	1.32%		5,000,000			
07/17	5,000,000	1.32%			5,000,000		
08/17	5,000,000	1.32%		5,000,000			
09/17	6,322,950	1.67%		5,000,000		\$1,322,950	
10/17	5,000,000	1.32%					\$5,000,000
11/17	10,000,000	2.63%		10,000,000			
12/17	5,000,000	1.32%		5,000,000			
01/18	4,000,000	1.05%		4,000,000			
02/18	5,000,000	1.32%		5,000,000			
03/18	5,000,000	1.32%		5,000,000			
SUB-TOTAL	\$123,622,950	32.56%	\$58,300,000	\$49,000,000	\$10,000,000	\$1,322,950	\$5,000,000
13 Months - 3 YEARS							
4/01/18 - 6/30/18	36,000,000	9.48%		36,000,000			
7/01/18 - 9/30/2018	40,000,000	10.54%		40,000,000			
10/01/18 - 12/31/2018	40,000,000	10.54%		40,000,000			
1/01/19 - 3/31/2019	35,000,000	9.22%		35,000,000			
4/01/2019 - 6/30/19	30,000,000	7.90%		30,000,000			
7/01/19 - 9/30/2019	30,000,000	7.90%		30,000,000			
10/01/2019 - 12/31/2019	45,000,000	11.85%		45,000,000			
1/01/2020 - 3/31/2020	-						
	-						
	-						
	-						
TOTALS	\$379,622,950	100.00%	\$58,300,000	\$305,000,000	\$10,000,000	\$1,322,950	\$5,000,000

% OF PORTFOLIO

15.35%

80.35%

2.63%

0.35%

1.32%

Irvine Ranch Water District
 Summary of Real Estate
 3/31/2017

	<u>ACQUISITION DATE</u>	<u>PROPERTY TYPE</u>	<u>OWNERSHIP INTEREST</u>	<u>ORIGINAL COST</u>	<u>ESTIMATED MARKET VALUE 6/30/2016</u>	<u>RATE OF RETURN QUARTER ENDED 3/31/2017</u>
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 143,910,000	19.02%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 27,296,298	8.57%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 9,384,000	6.68%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 7,650,000	4.85%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 10,608,000	8.58%
				<u>\$ 72,569,826</u>	<u>\$ 198,848,298</u>	14.25%

IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT
INVESTMENT ACTIVITY
Apr-17

MATURITIES/SALES/CALLS

PURCHASES

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
4/21/2017	FNMA - Discount Note	\$5,000,000	0.54%					
4/27/2017	FNMA - Note	\$5,000,000	0.61%					

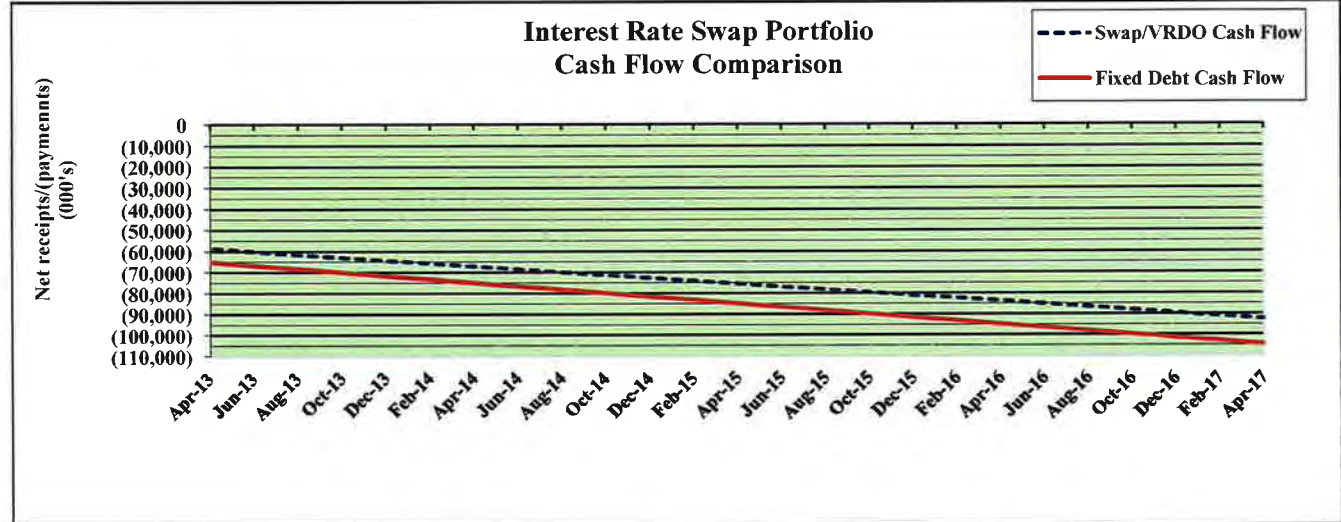
**IRVINE RANCH WATER DISTRICT
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL
April 30, 2017**

LIBOR Avg %	Prior Mo.	Current Mo.	12-Mo Avg
	0.92%	0.99%	0.64%

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	
Fixed Payer Swaps - By Effective Date														
6/4/2006	6/4/2019	2.1	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(99,491)	(83,849)	\$ (924,272)	\$ (10,751,448)	\$ 18,065,908	\$ (1,934,092)	
6/4/2006	6/4/2019	2.1	CG	20,000,000	FXP	LIBOR	6.200%	(99,491)	(83,849)	(924,272)	(10,751,448)	18,059,291	(1,940,709)	
6/17/2006	6/17/2019	2.1	CG	30,000,000	FXP	LIBOR	6.140%	(146,890)	(124,260)	(1,370,242)	(15,948,693)	27,081,313	(2,918,687)	
3/10/2007	3/10/2029	11.9	ML	30,000,000	FXP	LIBOR	5.687%	(134,951)	(113,797)	(1,258,973)	(14,374,002)	19,179,594	(10,820,406)	
3/10/2007	3/10/2029	11.9	CG	30,000,000	FXP	LIBOR	5.687%	(134,951)	(113,797)	(1,258,973)	(14,374,002)	19,164,597	(10,835,403)	
Totals/Weighted Avgs		6.6		\$ 130,000,000			5.949%	\$ (615,774)	\$ (519,551)	\$ (5,736,731)	\$ (66,199,593)	\$ 101,550,703	\$ (28,449,297)	
Total Current Year Active Swaps				\$ 130,000,000				\$ (615,774)	\$ (519,551)	\$ (5,736,731)	\$ (66,199,593)	\$ 101,550,703	\$ (28,449,297)	

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

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market	
Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference								
\$ (615,774)	\$ (519,551)	\$ (5,736,731)	\$ (66,199,593)	\$ 101,550,703	\$ (28,449,297)								



Cash Flow Comparison Synthetic Fixed vs. Fixed Rate Debt	
Cash Flow to Date	
Synthetic Fixed =	\$92,265,869
Fixed Rate =	\$106,151,468
Assumptions:	
- Fixed rate debt issued at 5.10% in Jun-06, and 4.93% in Mar-07 (estimated TE rates - Bloomberg)	
- 'Synthetic' includes swap cash flow + interest + fees to date	

Exhibit "C"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

April
2017

	AMOUNT	VENDOR	PURPOSE
4/14/2017	857,005.70	BANK OF AMERICA	ACH Payments for Payroll
4/28/2017	862,742.62	BANK OF AMERICA	ACH Payments for Payroll
	<u>\$1,719,748.32</u>		

Voids

Exhibit "D"

PERIOD	CHECK No.	DATE	SUPPLIER NAME	AMOUNT	CCSB	CCSB Acct #	Okay to be Voided and Confirmed	CODING	PROJECT	TASK	EXP. TYPE	EXP. ORG.
Aug-16	369951	8/18/16	HAMC IRVINE CENTER, LLC 215	108.00	Yes	8310100000	VOID PER CHERYL CARTER 3/16/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Oct-16	371619	10/6/16	CHOI, YIJIN	172.50	Yes	6067553074	VOID PER CHERYL CARTER 3/16/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Oct-16	372162	10/20/16	JPI DEVELOPMENT GROUP INC,	702.53	Yes	8341710425	VOID PER CHERYL CARTER 3/16/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Jan-17	374613	1/26/17	WEST DESERT PROPERTIES LLC	1,078.08	Yes	7091725192	VOID PER JENNY PAN EMAIL FROM FW. FROM FERNANDA GONZALEZ	1010.000.1610.221150.0000.00000.0000C				
Nov-16	372535	11/3/16	LEONG, SCOTT	28.36	Yes	8444080136	VOID PER CHERYL CARTER 3/30/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Nov-16	372619	11/3/16	ZHANG, HANXIAO	23.19	Yes	2148568540	VOID PER CHERYL CARTER 3/30/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Nov-16	372622	11/3/16	ZHU, YONGYIN	50.00	Yes	9714920462	VOID PER CHERYL CARTER 3/30/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Nov-16	372689	11/10/16	GAMARRA, KEVIN	47.43	Yes	0647007013	VOID PER CHERYL CARTER 3/30/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Nov-16	372982	11/17/16	SUN RANCH CAPITOL PARTNERS	580.93	Yes	7220899503	VOID PER CHERYL CARTER 3/30/17 EMAIL	1010.000.1610.221150.0000.00000.0000C				
Jan-17	374200	1/12/17	REGAN, AMELIA	16.61	Yes	5307110000	VOID/CANCEL PER CHERYL CARTER CHECK W/ NOTES IN BINDER	1010.000.1610.221150.0000.00000.0000C				
Jan-17	374431	1/23/17	STATE WATER RESOURCES CONTRC	2,771.00	NO	PRD APP ID 482117	VOID/CANCEL CHECK RETURNED FROM ROB JACOBSON AS NOT NEEDED	PROJECT	Jun-03	1065	9/11/13	ENGINEERI
Feb-17	374856	2/3/17	IRWD-PETTY CASH CUSTODIAN	3,000.00	NO	2017 ORACLE EBS UPGRADE	VOID/CANCEL CHECK NOT NEEDED DURING ORACLE UPGRADE	1010.000.1610.111500.0000.00000.0000C				
				<u>6,578.63</u>								

Total Voids

JOURNAL	
(2,807.63)	1010.000.0000.221150.0000.16100.0000C
(2,771.00)	1100.000.0000.151100.0000.14040.0000C
(3,000.00)	1010.000.0000.111500.0000.16100.0000C
2,807.63	1010.000.0000.111100.0000.16100.0000C
2,771.00	1100.000.0000.111100.0000.14040.0000C
3,000.00	1010.000.0000.111100.0000.16100.0000C

01264 4.0 Professional Services Engineerin

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 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								
376196		06-APR-17	ACCESS TECHNOLOGIES, INC.		7,072.03	11-APR-17	7,072.03	Reconciled
376197		06-APR-17	ACCUSTANDARD INC		319.34	12-APR-17	319.34	Reconciled
376198		06-APR-17	ACWA		4,100.00	18-APR-17	4,100.00	Reconciled
376199		06-APR-17	ALEXANDER'S CONTRACT SERVICES, INC.		116,700.39	13-APR-17	116,700.39	Reconciled
376200		06-APR-17	ALSTON & BIRD LLP		36,227.72	13-APR-17	36,227.72	Reconciled
376201		06-APR-17	AM CONSERVATION GROUP, INC.		104.27	11-APR-17	104.27	Reconciled
376202		06-APR-17	AMERICAN TECHNOLOGIES, INC		285.00	10-APR-17	285.00	Reconciled
376203		06-APR-17	AT&T		3,955.30	12-APR-17	3,955.30	Reconciled
376204		06-APR-17	AUTOZONE PARTS, INC.		26.33	10-APR-17	26.33	Reconciled
376205		06-APR-17	BARETTI, PAOLO		15.64	28-APR-17	15.64	Reconciled
376206		06-APR-17	BARICH, JAMES		44.99	11-APR-17	44.99	Reconciled
376207		06-APR-17	BARTOLIC, PATRICK		17.25			Negotiable
376208		06-APR-17	BATTERIES PLUS AND BATTERIES PLUS BULBS		122.48	10-APR-17	122.48	Reconciled
376209		06-APR-17	BATTERY SPECIALTIES		3,453.18	13-APR-17	3,453.18	Reconciled
376210		06-APR-17	BIOMERIEUX INC		222.59	10-APR-17	222.59	Reconciled
376211		06-APR-17	BOYD & ASSOCIATES		125.00	11-APR-17	125.00	Reconciled
376212		06-APR-17	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		718.26	12-APR-17	718.26	Reconciled
376213		06-APR-17	BUTLER BOX & STAKE INC		1,359.16	13-APR-17	1,359.16	Reconciled
376214		06-APR-17	CALIFORNIA PACIFIC HOMES		121.78	19-APR-17	121.78	Reconciled
376215		06-APR-17	CAPTIVE AUDIENCE MARKETING INC.		85.12	18-APR-17	85.12	Reconciled
376216		06-APR-17	CDW GOVERNMENT LLC		15,291.34	13-APR-17	15,291.34	Reconciled
376217		06-APR-17	CHEN, PETER SUNG YIN		14.19	18-APR-17	14.19	Reconciled
376218		06-APR-17	CITY OF IRVINE		177.94	10-APR-17	177.94	Reconciled
376219		06-APR-17	CITY OF ORANGE		85.50	11-APR-17	85.50	Reconciled
376220		06-APR-17	CITY OF TUSTIN		208.25	10-APR-17	208.25	Reconciled
376221		06-APR-17	COASTLINE EQUIPMENT COMPANY		369.80	10-APR-17	369.80	Reconciled
376222		06-APR-17	COLLINS, CAROLE		252.39	14-APR-17	252.39	Reconciled
376223		06-APR-17	D & G SIGNS		1,904.64	10-APR-17	1,904.64	Reconciled
376224		06-APR-17	DEE JASPAR & ASSOCIATES, INC.		1,718.81	18-APR-17	1,718.81	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 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								
376225		06-APR-17	DELL MARKETING LP		2,146.46	11-APR-17	2,146.46	Reconciled
376226		06-APR-17	DONG, NING		14.23	05-MAY-17	14.23	Reconciled
376227		06-APR-17	EAGLE PRINT DYNAMICS		5,210.12	10-APR-17	5,210.12	Reconciled
376228		06-APR-17	EAST ORANGE COUNTY WATER DISTRICT		2,693.73	11-APR-17	2,693.73	Reconciled
376229		06-APR-17	EDUCATION & TRAINING SERVICES, LLC		1,497.00	17-APR-17	1,497.00	Reconciled
376230		06-APR-17	EMEDCO		1,224.98	11-APR-17	1,224.98	Reconciled
376231		06-APR-17	ENVIRONMENTAL SCIENCE ASSOCIATES		938.75	10-APR-17	938.75	Reconciled
376232		06-APR-17	ERDT'SLECK, ERYNNE		346.07	11-APR-17	346.07	Reconciled
376233		06-APR-17	FARRAR, KIMARY		21.64	17-APR-17	21.64	Reconciled
376234		06-APR-17	FERGUSON ENTERPRISES, INC.		4,034.17	10-APR-17	4,034.17	Reconciled
376235		06-APR-17	FISHER SCIENTIFIC COMPANY LLC		5,208.01	10-APR-17	5,208.01	Reconciled
376236		06-APR-17	FOSTER, DENNIS		30.88	14-APR-17	30.88	Reconciled
376237		06-APR-17	FUSCOE ENGINEERING, INC.		9,987.50	11-APR-17	9,987.50	Reconciled
376238		06-APR-17	GANAHL LUMBER CO.		43.90	13-APR-17	43.90	Reconciled
376239		06-APR-17	GENTERRA CONSULTANTS INC		3,790.00	07-APR-17	3,790.00	Reconciled
376240		06-APR-17	GM SAGER CONSTRUCTION CO, INC.		25,074.00	12-APR-17	25,074.00	Reconciled

376241	06-APR-17	GRAINGER	5,796.73	10-APR-17	5,796.73	Reconciled
376242	06-APR-17	HACH COMPANY	2,466.25	10-APR-17	2,466.25	Reconciled
376243	06-APR-17	HARRINGTON INDUSTRIAL PLASTICS LLC	395.79	10-APR-17	395.79	Reconciled
376244	06-APR-17	HDR ENGINEERING INC	1,373.13	10-APR-17	1,373.13	Reconciled
376245	06-APR-17	HELP/SYSTEMS, LLC	4,250.00	10-APR-17	4,250.00	Reconciled
376246	06-APR-17	HELPMATES STAFFING SERVICES	4,354.24	10-APR-17	4,354.24	Reconciled
376247	06-APR-17	HILL BROTHERS CHEMICAL COMPANY	1,886.87	12-APR-17	1,886.87	Reconciled
376248	06-APR-17	HOPKINS TECHNICAL PRODUCTS INC	4,043.57	11-APR-17	4,043.57	Reconciled
376249	06-APR-17	INDUSTRIAL METAL SUPPLY CO	245.04	10-APR-17	245.04	Reconciled
376250	06-APR-17	INSIGHT	468.00	24-APR-17	468.00	Reconciled
376251	06-APR-17	IRVINE PIPE & SUPPLY INC	827.82	07-APR-17	827.82	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 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								
376252		06-APR-17	IRVINE POLICE ASSOCIATION		750.00	19-APR-17	750.00	Reconciled
376253		06-APR-17	IRVINE UNIFIED SCHOOL DISTRICT		968.41	13-APR-17	968.41	Reconciled
376254		06-APR-17	IRVINE UNIFIED SCHOOL DISTRICT		93.93	13-APR-17	93.93	Reconciled
376255		06-APR-17	IRWD-PETTY CASH CUSTODIAN		1,168.74	10-APR-17	1,168.74	Reconciled
376256		06-APR-17	KELLEY BLUE BOOK, INC.		98.00	10-APR-17	98.00	Reconciled
376257		06-APR-17	KEYSTONE PACIFIC PROPERTY MANAGEMENT		48.06			Negotiable
376258		06-APR-17	KIMBALL MIDWEST		389.47	10-APR-17	389.47	Reconciled
376259		06-APR-17	LARRY WALKER ASSOCIATES, INC.		10,325.00	14-APR-17	10,325.00	Reconciled
376260		06-APR-17	LEE, HAESOOK		35.07	17-APR-17	35.07	Reconciled
376261		06-APR-17	MC MASTER CARR SUPPLY CO		158.52	10-APR-17	158.52	Reconciled
376262		06-APR-17	MEGGER		600.54	11-APR-17	600.54	Reconciled
376263		06-APR-17	MSC INDUSTRIAL SUPPLY CO		396.68	14-APR-17	396.68	Reconciled
376264		06-APR-17	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		9,733.00			Negotiable
376265		06-APR-17	MUTUAL PROPANE		99.49	11-APR-17	99.49	Reconciled
376266		06-APR-17	NATURALWELL, LLC		1,650.00	10-APR-17	1,650.00	Reconciled
376267		06-APR-17	NCH CORPORATION		208.05	10-APR-17	208.05	Reconciled
376268		06-APR-17	NINYO & MOORE		2,281.75	10-APR-17	2,281.75	Reconciled
376269		06-APR-17	NORTHWOOD PLACE APTS		144.86	18-APR-17	144.86	Reconciled
376270		06-APR-17	NOSSAMAN LLP		2,411.55	10-APR-17	2,411.55	Reconciled
376271		06-APR-17	OCEAN BLUE ENVIRONMENTAL SERVICES INC		4,037.00	10-APR-17	4,037.00	Reconciled
376272		06-APR-17	OLIN CORPORATION		28,219.40	14-APR-17	28,219.40	Reconciled
376273		06-APR-17	ONESOURCE DISTRIBUTORS LLC		5,001.14	10-APR-17	5,001.14	Reconciled
376274		06-APR-17	ORANGE COUNTY AUTO PARTS CO		397.29	10-APR-17	397.29	Reconciled
376275		06-APR-17	ORANGE COUNTY SANITATION DISTRICT		3,140.00	10-APR-17	3,140.00	Reconciled
376276		06-APR-17	ORR, DAVID		2,490.84	21-APR-17	2,490.84	Reconciled
376277		06-APR-17	OUTSOURCE TECHNICAL LLC		20,860.00	12-APR-17	20,860.00	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 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								
376278		06-APR-17	PARKWAY LANNMOWER SHOP		193.90	10-APR-17	193.90	Reconciled
376279		06-APR-17	PAYNE & FEARS LLP		267.50	11-APR-17	267.50	Reconciled
376280		06-APR-17	PELLETIER & ASSOCIATES, INC.		1,240.00	10-APR-17	1,240.00	Reconciled
376281		06-APR-17	POLLARDWATER.COM		736.90	10-APR-17	736.90	Reconciled
376282		06-APR-17	PONTON INDUSTRIES INC		6,966.11	13-APR-17	6,966.11	Reconciled

376283	06-APR-17	PORTOLA SPRINGS APARTMENTS LLC	1,542.87	18-APR-17	1,542.87	Reconciled
376284	06-APR-17	PRAXAIR	1,023.52	10-APR-17	1,023.52	Reconciled
376285	06-APR-17	DISTRIBUTION INC PRUDENTIAL OVERALL SUPPLY	369.82	10-APR-17	369.82	Reconciled
376286	06-APR-17	PURE EFFECT INC	8,968.80	11-APR-17	8,968.80	Reconciled
376287	06-APR-17	RED WING SHOES	177.22	10-APR-17	177.22	Reconciled
376288	06-APR-17	RINCON TRUCK CENTER INC.	1,145.09	07-APR-17	1,145.09	Reconciled
376289	06-APR-17	RINGCLEAR LLC	96.60	10-APR-17	96.60	Reconciled
376290	06-APR-17	ROCK STRUCTURES CONSTRUCTION COMPANY	25,209.00	26-APR-17	25,209.00	Reconciled
376291	06-APR-17	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT	479,705.45	19-APR-17	479,705.45	Reconciled
376292	06-APR-17	RYAN HERCO PRODUCTS CORP	4,561.51	10-APR-17	4,561.51	Reconciled
376293	06-APR-17	SANTA MARGARITA FORD	1,253.28	10-APR-17	1,253.28	Reconciled
376294	06-APR-17	SCHINDLER ELEVATOR CORPORATION	188.97	10-APR-17	188.97	Reconciled
376295	06-APR-17	SECURTEC DISTRICT PATROL, INC.	1,600.00			Negotiable
376296	06-APR-17	SHAMROCK SUPPLY CO INC	4,289.04	10-APR-17	4,289.04	Reconciled
376297	06-APR-17	SMITH, SHIRLEY G	2.24			Negotiable
376298	06-APR-17	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	479.21	13-APR-17	479.21	Reconciled
376299	06-APR-17	SOUTHERN CALIFORNIA EDISON COMPANY	638,142.53	12-APR-17	638,142.53	Reconciled
376300	06-APR-17	SOUTHERN CALIFORNIA EDISON COMPANY	844.69	13-APR-17	844.69	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 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								
376301	06-APR-17	SPARLING INSTRUMENTS LLC	2,795.27		10-APR-17	2,795.27	Reconciled	
376302	06-APR-17	STRADLING YOCCA CARLSON & RAUTH	84.00		07-APR-17	84.00	Reconciled	
376303	06-APR-17	SUNSHINE SUPPLY COMPANY, INC.	2,734.70		10-APR-17	2,734.70	Reconciled	
376304	06-APR-17	TARMAS, WARREN	90.32		12-APR-17	90.32	Reconciled	
376305	06-APR-17	TAYLOR MORRISON	146,125.98		25-APR-17	146,125.98	Reconciled	
376306	06-APR-17	THE FURMAN GROUP, INC.	12,550.00		13-APR-17	12,550.00	Reconciled	
376307	06-APR-17	THYSSENKRUPP ELEVATOR CORPORATION	371.67		11-APR-17	371.67	Reconciled	
376308	06-APR-17	TROPICAL PLAZA NURSERY INC	1,728.00		10-APR-17	1,728.00	Reconciled	
376309	06-APR-17	TRUCPARCO	624.69		14-APR-17	624.69	Reconciled	
376310	06-APR-17	ULTRA SCIENTIFIC	314.30		11-APR-17	314.30	Reconciled	
376311	06-APR-17	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA	43.97		10-APR-17	43.97	Reconciled	
376312	06-APR-17	UNITED PARCEL SERVICE INC	25,000.00		17-APR-17	25,000.00	Reconciled	
376313	06-APR-17	UNITED STATES POST OFFICE	690.59		10-APR-17	690.59	Reconciled	
376314	06-APR-17	USHERWOOD, LAURA	302.17		12-APR-17	302.17	Reconciled	
376315	06-APR-17	VALLEY CREST LANDSCAPE COMPANIES	440.26		10-APR-17	440.26	Reconciled	
376316	06-APR-17	VCS ENVIRONMENTAL	2,231.43		12-APR-17	2,231.43	Reconciled	
376317	06-APR-17	VERIZON WIRELESS SERVICES LLC	16,169.77		12-APR-17	16,169.77	Reconciled	
376318	06-APR-17	WARE MALCOMB	2,840.00		10-APR-17	2,840.00	Reconciled	
376319	06-APR-17	WATERLINE TECHNOLOGIES INC	5,450.00		10-APR-17	5,450.00	Reconciled	
376320	06-APR-17	WATERWISE CONSULTING, INC.	520.03		10-APR-17	520.03	Reconciled	
376321	06-APR-17	WAXIE'S ENTERPRISES, INC	2,882.31		19-APR-17	2,882.31	Reconciled	
376322	06-APR-17	WEST COAST SAFETY SUPPLY INC	1,172.46		10-APR-17	1,172.46	Reconciled	
376323	06-APR-17	WEST COAST SAND & GRAVEL INC.	600.00		10-APR-17	600.00	Reconciled	
376324	06-APR-17	WISCONSIN STATE LABORATORY OF HYGENE						

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26

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

Account: Checking AP and PR Page: 6
 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								
376325		06-APR-17	YALE/CHASE EQUIPMENT AND SERVICES, INC.		82,004.47	12-APR-17	82,004.47	Reconciled
376326		12-APR-17	SOUTHERN CALIFORNIA EDISON COMPANY	AR DIV RM G-44	4,800.00	20-APR-17	4,800.00	Reconciled
376327		13-APR-17	CANON SOLUTIONS AMERICA, INC.	CHICAGO	3,768.88	17-APR-17	3,768.88	Reconciled
376328		13-APR-17	4IMPRINT, INC.		1,883.22	17-APR-17	1,883.22	Reconciled
376329		13-APR-17	A.J. KLEIN, INC. T. DENATALE, B. GOLDNER		280.00	17-APR-17	280.00	Reconciled
376330		13-APR-17	AIRGAS, INC.		904.20	17-APR-17	904.20	Reconciled
376331		13-APR-17	AM CONSERVATION GROUP, INC.		2,045.10	18-APR-17	2,045.10	Reconciled
376332		13-APR-17	ANTHONY N. LARSEN		400.00	20-APR-17	400.00	Reconciled
376333		13-APR-17	APEX LIFE SCIENCES, LLC		3,570.00	17-APR-17	3,570.00	Reconciled
376334		13-APR-17	ARCADIS U.S., INC.		2,290.00	18-APR-17	2,290.00	Reconciled
376335		13-APR-17	ASSOCIATION OF CALIFORNIA CITIES		5,000.00	26-APR-17	5,000.00	Reconciled
376336		13-APR-17	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA		32,834.52	20-APR-17	32,834.52	Reconciled
376337		13-APR-17	AT&T		1,861.41	18-APR-17	1,861.41	Reconciled
376338		13-APR-17	AT&T INTERNET SERVICES		2,075.61	18-APR-17	2,075.61	Reconciled
376339		13-APR-17	ATHENS SERVICES		7,036.17	21-APR-17	7,036.17	Reconciled
376340		13-APR-17	AUSTIN HARDWOODS, INC		318.05	17-APR-17	318.05	Reconciled
376341		13-APR-17	AUTOZONE PARTS, INC.		453.23	19-APR-17	453.23	Reconciled
376342		13-APR-17	BATTERIES PLUS AND BATTERIES PLUS BULBS		1,841.02	26-APR-17	1,841.02	Reconciled
376343		13-APR-17	BEARCOM		4,786.79	18-APR-17	4,786.79	Reconciled
376344		13-APR-17	BEHRENS AND ASSOCIATES, INC.		2,262.75	18-APR-17	2,262.75	Reconciled
376345		13-APR-17	BEST DRILLING AND PUMP, INC.		62,118.12	19-APR-17	62,118.12	Reconciled
376346		13-APR-17	BILCO COMPANY		348.25	18-APR-17	348.25	Reconciled
376347		13-APR-17	BLAIRS TOWING INC		326.00			Negotiable
376348		13-APR-17	BOWIE, ARNESON, WILES & GIANNONE		12,757.83	26-APR-17	12,757.83	Reconciled
376349		13-APR-17	BOYD & ASSOCIATES		516.00	18-APR-17	516.00	Reconciled

IRWD Ledger Upgrade

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

Account: Checking AP and PR Page: 7
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Report Date: 11-MAY-2017 10:26

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376350		13-APR-17	BRENNTAG PACIFIC INC		17,927.45	19-APR-17	17,927.45	Reconciled
376351		13-APR-17	BRITHINEE ELECTRIC		3,942.49	17-APR-17	3,942.49	Reconciled
376352		13-APR-17	BROOKFIELD EASTWOOD TRIPLEX LLC		1,664.93			Negotiable
376353		13-APR-17	C WELLS PIPELINE MATERIALS INC		28,324.30	21-APR-17	28,324.30	Reconciled
376354		13-APR-17	CALIFORNIA BARRICADE RENTAL, INC.		9,115.00	18-APR-17	9,115.00	Reconciled
376355		13-APR-17	CANON SOLUTIONS AMERICA, INC.		12,142.42	20-APR-17	12,142.42	Reconciled
376356		13-APR-17	CHAIREL CUSTOM HAY, INC.		6,647.00	17-APR-17	6,647.00	Reconciled
376357		13-APR-17	CHEMTREC		975.00	18-APR-17	975.00	Reconciled
376358		13-APR-17	CHO DESIGN ASSOCIATES, INC		4,085.00	18-APR-17	4,085.00	Reconciled
376359		13-APR-17	CITIGROUP GLOBAL MARKETS INC.		1,830.82	18-APR-17	1,830.82	Reconciled
376360		13-APR-17	CITY OF IRVINE		448.50	19-APR-17	448.50	Reconciled
376361		13-APR-17	CITY OF IRVINE		1,576.15	19-APR-17	1,576.15	Reconciled
376362		13-APR-17	CLEAN ENERGY		3,890.99	19-APR-17	3,890.99	Reconciled
376363		13-APR-17	CLEARINGHOUSE		477.67	24-APR-17	477.67	Reconciled
376364		13-APR-17	CNC ENGINEERING		1,865.00	18-APR-17	1,865.00	Reconciled
376365		13-APR-17	COMMERCIAL DOOR OF ORANGE COUNTY, INC.		903.81	18-APR-17	903.81	Reconciled
376366		13-APR-17	CR & R		282.82	17-APR-17	282.82	Reconciled

376367	13-APR-17	INCORPORATED		13,421.34	21-APR-17	13,421.34	Reconciled
376368	13-APR-17	CS-AMSCO		216.30			Negotiable
		CUESTA CONSTRUCTION COMPANY					
376369	13-APR-17	CULLIGAN OF SANTA ANA		8,022.80	18-APR-17	8,022.80	Reconciled
376370	13-APR-17	D & G SIGNS		2,282.60	19-APR-17	2,282.60	Reconciled
376371	13-APR-17	D & H WATER SYSTEMS INC.		8,480.16	18-APR-17	8,480.16	Reconciled
376372	13-APR-17	DDB ENGINEERING, INC.		5,707.49	17-APR-17	5,707.49	Reconciled
376373	13-APR-17	DEE JASPAR & ASSOCIATES, INC.		28,900.82	28-APR-17	28,900.82	Reconciled
376374	13-APR-17	DEX MEDIA INC.		77.25	19-APR-17	77.25	Reconciled
376375	13-APR-17	DISCOUNT COURIER SERVICE		157.20	18-APR-17	157.20	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-APR-17 To 30-APR-17
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376376		13-APR-17	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY		8,644.18	17-APR-17	8,644.18	Reconciled
376377		13-APR-17	DREYFUS, ANN		192.65	26-APR-17	192.65	Reconciled
376378		13-APR-17	DUFFY, ANTHONY		101.66			Negotiable
376379		13-APR-17	ECO SERVICES LLC		5,204.51	18-APR-17	5,204.51	Reconciled
376380		13-APR-17	EI&C ENGINEERING INC		64,435.00	21-APR-17	64,435.00	Reconciled
376381		13-APR-17	EMEDCO		1,247.65	19-APR-17	1,247.65	Reconciled
376382		13-APR-17	EMPLOYEE BENEFIT SPECIALIST, INC		1,200.00	20-APR-17	1,200.00	Reconciled
376383		13-APR-17	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		15,463.75	19-APR-17	15,463.75	Reconciled
376384		13-APR-17	ERP OPERATING LP		7,892.27	21-APR-17	7,892.27	Reconciled
376385		13-APR-17	EUROFINS EATON ANALYTICAL, INC.		300.00	17-APR-17	300.00	Reconciled
376386		13-APR-17	EXECUTIVE LIGHTING & ELECTRIC		5,098.44	17-APR-17	5,098.44	Reconciled
376387		13-APR-17	FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC. INC.		44,235.00	20-APR-17	44,235.00	Reconciled
376388		13-APR-17	FAIRMONT NEWPORT BEACH		138.49	21-APR-17	138.49	Reconciled
376389		13-APR-17	FARRELL & ASSOCIATES		298.33	18-APR-17	298.33	Reconciled
376390		13-APR-17	FEDEX		632.24	17-APR-17	632.24	Reconciled
376391		13-APR-17	FIDELITY SECURITY LIFE INSURANCE COMPANY		6,583.78	20-APR-17	6,583.78	Reconciled
376392		13-APR-17	FIRE EXTINGUISHING SAFETY & SERVICE		791.07	17-APR-17	791.07	Reconciled
376393		13-APR-17	FIRST CHOICE SERVICES		1,502.41	21-APR-17	1,502.41	Reconciled
376394		13-APR-17	FITCH RATINGS, INC.		7,000.00	19-APR-17	7,000.00	Reconciled
376395		13-APR-17	FLEET SOLUTIONS LLC		4,664.50	17-APR-17	4,664.50	Reconciled
376396		13-APR-17	FREEDMAN TRUST PROPERTIES		38.81	09-MAY-17	38.81	Reconciled
376397		13-APR-17	FRONTIER CALIFORNIA INC.		50.99	19-APR-17	50.99	Reconciled
376398		13-APR-17	GC LANDSCAPING & GENERAL CONSTRUCTION		1,090.24	18-APR-17	1,090.24	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-APR-17 To 30-APR-17
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376399		13-APR-17	GCI CONSTRUCTION, INC.		5,518.22	03-MAY-17	5,518.22	Reconciled
376400		13-APR-17	GEIGER BROS		845.35	17-APR-17	845.35	Reconciled
376401		13-APR-17	GENERAL PUMP COMPANY INC		18,591.50	19-APR-17	18,591.50	Reconciled
376402		13-APR-17	GRACE CITY FREE WILL BAPTISH CHURCH		1,318.16	24-APR-17	1,318.16	Reconciled
376403		13-APR-17	GRAINGER		2,039.58	17-APR-17	2,039.58	Reconciled
376404		13-APR-17	GRAYBAR ELECTRIC COMPANY		374.58	17-APR-17	374.58	Reconciled

376405	13-APR-17	HACH COMPANY	4,133.06	17-APR-17	4,133.06	Reconciled
376406	13-APR-17	HAIGH BUILDERS INC	1,068.10	17-APR-17	1,068.10	Reconciled
376407	13-APR-17	HARRINGTON INDUSTRIAL PLASTICS LLC	1,893.91	17-APR-17	1,893.91	Reconciled
376408	13-APR-17	HELP/SYSTEMS, LLC	25,773.00	20-APR-17	25,773.00	Reconciled
376409	13-APR-17	HELPMATES STAFFING SERVICES	1,107.23	18-APR-17	1,107.23	Reconciled
376410	13-APR-17	HILL BROTHERS CHEMICAL COMPANY	10,668.38	21-APR-17	10,668.38	Reconciled
376411	13-APR-17	HOME DEPOT USA INC	175.00	19-APR-17	175.00	Reconciled
376412	13-APR-17	HSG INC	1,613.00	17-APR-17	1,613.00	Reconciled
376413	13-APR-17	IBM CORPORATION	925.00	17-APR-17	925.00	Reconciled
376414	13-APR-17	IDEXX DISTRIBUTION, INC	6,035.99	17-APR-17	6,035.99	Reconciled
376415	13-APR-17	INDEPENDENT SPECIAL DISTRICT OF ORANGE COUNTY	200.00			Negotiable
376416	13-APR-17	INDUSTRIAL ELECTRIC MACHINERY LLC	1,180.60	18-APR-17	1,180.60	Reconciled
376417	13-APR-17	IRVINE PIPE & SUPPLY INC	1,504.31	14-APR-17	1,504.31	Reconciled
376418	13-APR-17	IRVINE UNIFIED SCHOOL DISTRICT	100.00	24-APR-17	100.00	Reconciled
376419	13-APR-17	IRVINE UNIFIED SCHOOL DISTRICT	200.00	03-MAY-17	200.00	Reconciled
376420	13-APR-17	IRVINE UNIFIED SCHOOL DISTRICT	100.00			Negotiable
376421	13-APR-17	IRVINE UNIFIED SCHOOL DISTRICT	4,822.94	20-APR-17	4,822.94	Reconciled
376422	13-APR-17	IRVINE UNIFIED SCHOOL DISTRICT	100.00	01-MAY-17	100.00	Reconciled
376423	13-APR-17	IRWD EMPLOYEE ASSOCIATION	1,355.00	21-APR-17	1,355.00	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 10
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 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								
376424		13-APR-17	JOHN MICHAEL COVAS		191.70	19-APR-17	191.70	Reconciled
376425		13-APR-17	JOHNSON-PELTIER		70,026.68	19-APR-17	70,026.68	Reconciled
376426		13-APR-17	KELLY BANGERT		1,078.08	17-APR-17	1,078.08	Reconciled
376427		13-APR-17	KIMBALL MIDWEST		1,780.70	17-APR-17	1,780.70	Reconciled
376428		13-APR-17	L. G. SUPPLY COMPANY		652.75	17-APR-17	652.75	Reconciled
376429		13-APR-17	LANDCARE HOLDINGS, INC.		29,788.18	20-APR-17	29,788.18	Reconciled
376430		13-APR-17	LCS TECHNOLOGIES, INC.		14,175.00	21-APR-17	14,175.00	Reconciled
376431		13-APR-17	LINKTURE CORP.		2,568.00	18-APR-17	2,568.00	Reconciled
376432		13-APR-17	MARVIN GARDENS LLC		849.35	13-APR-17	849.35	Reconciled
376433		13-APR-17	MC MASTER CARR SUPPLY CO		2,237.96	17-APR-17	2,237.96	Reconciled
376434		13-APR-17	MDT INC		13,515.00	27-APR-17	13,515.00	Reconciled
376435		13-APR-17	MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED		16,964.38	20-APR-17	16,964.38	Reconciled
376436		13-APR-17	METROSTUDY, INC.		6,375.00	21-APR-17	6,375.00	Reconciled
376437		13-APR-17	MICHAEL BAKER INTERNATIONAL, INC.		8,902.52	17-APR-17	8,902.52	Reconciled
376438		13-APR-17	MOULTON NIGUEL WATER DISTRICT		25,000.00	19-APR-17	25,000.00	Reconciled
376439		13-APR-17	MR CRANE INC		2,143.85	24-APR-17	2,143.85	Reconciled
376440		13-APR-17	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		47,207.00	19-APR-17	47,207.00	Reconciled
376441		13-APR-17	NALCO CAL WATER, LLC		240.00	17-APR-17	240.00	Reconciled
376442		13-APR-17	NATURES IMAGE INC		198.00	17-APR-17	198.00	Reconciled
376443		13-APR-17	NORMAN A. OLSSON CONSTRUCTION, INC.		590,037.59	20-APR-17	590,037.59	Reconciled
376444		13-APR-17	OCTA		2,413.00	18-APR-17	2,413.00	Reconciled
376445		13-APR-17	OLIN CORPORATION		8,762.87	17-APR-17	8,762.87	Reconciled
376446		13-APR-17	ONESOURCE DISTRIBUTORS LLC		811.44	17-APR-17	811.44	Reconciled
376447		13-APR-17	ORANGE COUNTY AUTO PARTS CO		462.96	14-APR-17	462.96	Reconciled
376448		13-APR-17	ORANGE COUNTY SANITATION DISTRICT		1,570.00	17-APR-17	1,570.00	Reconciled
376449		13-APR-17	OUTSOURCE TECHNICAL LLC		29,580.00	18-APR-17	29,580.00	Reconciled
376450		13-APR-17	PACIFIC COAST BOLT CORP		6,842.14	17-APR-17	6,842.14	Reconciled

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 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								
376451		13-APR-17	PACIFIC EH&S SERVICES, INC.		15,389.53	26-APR-17	15,389.53	Reconciled
376452		13-APR-17	PACIFIC HYDROTECH CORPORATION		78,764.50	19-APR-17	78,764.50	Reconciled
376453		13-APR-17	PACIFIC RESOURCE RECOVERY		1,762.80	17-APR-17	1,762.80	Reconciled
376454		13-APR-17	PACIFIC SURVEYS, LLC		5,243.38	18-APR-17	5,243.38	Reconciled
376455		13-APR-17	PAPER DEPOT DOCUMENT DESTRUCTION LLC		744.00	21-APR-17	744.00	Reconciled
376456		13-APR-17	PARKWAY LAWNMOWER SHOP		1,401.95	18-APR-17	1,401.95	Reconciled
376457		13-APR-17	PASCAL & LUDWIG CONSTRUCTORS		492,110.27	19-APR-17	492,110.27	Reconciled
376458		13-APR-17	PASCAL & LUDWIG CONSTRUCTORS		19,437.05	19-APR-17	19,437.05	Reconciled
376459		13-APR-17	PASCAL & LUDWIG CONSTRUCTORS		6,463.50	18-APR-17	6,463.50	Reconciled
376460		13-APR-17	PCL CONSTRUCTION, INC.		1,383.94	18-APR-17	1,383.94	Reconciled
376461		13-APR-17	PdMA CORPORATION		255.59	17-APR-17	255.59	Reconciled
376462		13-APR-17	PERS LONG TERM CARE		900.58	01-MAY-17	900.58	Reconciled
376463		13-APR-17	POLLARDWATER.COM		150.88	17-APR-17	150.88	Reconciled
376464		13-APR-17	POOLE, MATTHEW		1,103.62	17-APR-17	1,103.62	Reconciled
376465		13-APR-17	FORTOLA SPRINGS APARTMENTS LLC		4,904.66	21-APR-17	4,904.66	Reconciled
376466		13-APR-17	PRES-TECH MANUFACTURER'S REPRESENTATIVES, INC.		609.71	17-APR-17	609.71	Reconciled
376467		13-APR-17	PRO MOBILE AUTO DETAILING		650.00	18-APR-17	650.00	Reconciled
376468		13-APR-17	PRUDENTIAL OVERALL SUPPLY		6,017.52	17-APR-17	6,017.52	Reconciled
376469		13-APR-17	RAINBOW DISPOSAL CO INC		357.36	19-APR-17	357.36	Reconciled
376470		13-APR-17	RAM AIR ENGINEERING INC		11,752.69	20-APR-17	11,752.69	Reconciled
376471		13-APR-17	REED, JAMES D		2,007.00	24-APR-17	2,007.00	Reconciled
376472		13-APR-17	RICHARD C. SLADE & ASSOCIATES LLC		5,687.36	20-APR-17	5,687.36	Reconciled
376473		13-APR-17	RICHMOND AMERICAN HOMES OF MARYLAND, INC		46.70			Negotiable

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 12
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 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								
376474		13-APR-17	RINCON TRUCK CENTER INC.		47.93	17-APR-17	47.93	Reconciled
376475		13-APR-17	RS HUGHES COMPANY, INC.		1,183.10	18-APR-17	1,183.10	Reconciled
376476		13-APR-17	RYAN HERCO PRODUCTS CORP		783.06	17-APR-17	783.06	Reconciled
376477		13-APR-17	SAFETY-KLEEN SYSTEMS, INC		381.83	18-APR-17	381.83	Reconciled
376478		13-APR-17	SANTA ANA BLUE PRINT		2,590.33	18-APR-17	2,590.33	Reconciled
376479		13-APR-17	SANTA MARGARITA FORD		1,265.75	17-APR-17	1,265.75	Reconciled
376480		13-APR-17	SANTA MARGARITA WATER DISTRICT		21,617.10	19-APR-17	21,617.10	Reconciled
376481		13-APR-17	SCANLAN, SUSAN		770.39	20-APR-17	770.39	Reconciled
376482		13-APR-17	SCAP		10,114.00	21-APR-17	10,114.00	Reconciled
376483		13-APR-17	SEALS WEST PACKING CO.		522.98	17-APR-17	522.98	Reconciled
376484		13-APR-17	SHAMROCK SUPPLY CO INC		754.58	17-APR-17	754.58	Reconciled
376485		13-APR-17	SHEA HOMES, LIMITED PARTNERSHIP		1,222.35	08-MAY-17	1,222.35	Reconciled
376486		13-APR-17	SIGMA-ALDRICH INC		431.25	18-APR-17	431.25	Reconciled
376487		13-APR-17	SITMATIC		1,328.68	17-APR-17	1,328.68	Reconciled
376488		13-APR-17	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		2,396.05	21-APR-17	2,396.05	Reconciled
376489		13-APR-17	SOUTH COAST WATER CO.		40.00	19-APR-17	40.00	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
376490		13-APR-17	SOUTH COAST WATER CO.		151.66	19-APR-17	151.66	Reconciled
376491		13-APR-17	SOUTH ORANGE COUNTY WASTEWATER AUTHORITY		49,168.00	20-APR-17	49,168.00	Reconciled
376492		13-APR-17	SOUTHERN CALIFORNIA EDISON COMPANY		24,807.94	14-APR-17	24,807.94	Reconciled
376493		13-APR-17	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.		170.77	24-APR-17	170.77	Reconciled
376494		13-APR-17	SOUTHERN COUNTIES LUBRICANTS LLC		888.30	17-APR-17	888.30	Reconciled
376495		13-APR-17	SOUTHLAND WATER TECHNOLOGIES LLC		338.25	19-APR-17	338.25	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-APR-17 To 30-APR-17
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376496		13-APR-17	SPARKLETTS		285.48	24-APR-17	285.48	Reconciled
376497		13-APR-17	STANDARD & POOR'S FINANCIAL SERVICES LLC		5,000.00	17-APR-17	5,000.00	Reconciled
376498		13-APR-17	STANTEC CONSULTING SERVICES INC.		19,417.65	20-APR-17	19,417.65	Reconciled
376499		13-APR-17	STETSON ENGINEERS INC.		968.25	21-APR-17	968.25	Reconciled
376500		13-APR-17	SUSAN A. SIROTA		4,295.00	18-APR-17	4,295.00	Reconciled
376501		13-APR-17	SWAINS ELECTRIC MOTOR SERVICE		4,381.83			Negotiable
376502		13-APR-17	TESTAMERICA LABORATORIES, INC		210.00	17-APR-17	210.00	Reconciled
376503		13-APR-17	THE GAS COMPANY		3,946.31	21-APR-17	3,946.31	Reconciled
376504		13-APR-17	THE NEW HOME COMPANY SOUTHERN CALIFORNIA, LLC		1,428.61			Negotiable
376505		13-APR-17	THOMPSON INDUSTRIAL SUPPLY		1,602.00	18-APR-17	1,602.00	Reconciled
376506		13-APR-17	THORPE CONSTRUCTION, INC.		1,112.11	19-APR-17	1,112.11	Reconciled
376507		13-APR-17	TIC-RETAIL PROPERTIES		1,372.76	20-APR-17	1,372.76	Reconciled
376508		13-APR-17	TIGERCOMM LLC		3,605.00	18-APR-17	3,605.00	Reconciled
376509		13-APR-17	TRENCH SHORING COMPANY		103.44	18-APR-17	103.44	Reconciled
376510		13-APR-17	TROPICAL PLAZA NURSERY INC		4,067.95	17-APR-17	4,067.95	Reconciled
376511		13-APR-17	TRUCPARCO		1,866.85	18-APR-17	1,866.85	Reconciled
376512		13-APR-17	UNITED SITE SERVICES OF CALIFORNIA INC		630.34	18-APR-17	630.34	Reconciled
376513		13-APR-17	UNITED WATER WORKS, INC.		452.12	17-APR-17	452.12	Reconciled
376514		13-APR-17	US BANK NAT'L ASSOC N.DAKOTA		10,787.67	21-APR-17	10,787.67	Reconciled
376515		13-APR-17	VANTON PUMP & EQUIPMENT CORP.		12,747.90	20-APR-17	12,747.90	Reconciled
376516		13-APR-17	VARANASI, PADMAVATHI		107.01	02-MAY-17	107.01	Reconciled
376517		13-APR-17	VERIZON WIRELESS SERVICES LLC		689.60	18-APR-17	689.60	Reconciled
376518		13-APR-17	VERTECH INDUSTRIAL SYSTEMS, LLC		16,485.11	20-APR-17	16,485.11	Reconciled
376519		13-APR-17	VISION TECHNOLOGY SOLUTIONS, LLC		5,985.00	18-APR-17	5,985.00	Reconciled

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

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376520		13-APR-17	W.M. LYLES CO		36,945.43	19-APR-17	36,945.43	Reconciled
376521		13-APR-17	W.M. LYLES CO		701,963.13	19-APR-17	701,963.13	Reconciled
376522		13-APR-17	WASTE MANAGEMENT OF ORANGE COUNTY		2,401.79	17-APR-17	2,401.79	Reconciled
376523		13-APR-17	WATERLINE TECHNOLOGIES INC		3,236.18	14-APR-17	3,236.18	Reconciled
376524		13-APR-17	WAXIE'S ENTERPRISES, INC		2,062.05	17-APR-17	2,062.05	Reconciled
376525		13-APR-17	WECK LABORATORIES INC		1,739.00	18-APR-17	1,739.00	Reconciled
376526		13-APR-17	WEST COAST SAND &		917.49	17-APR-17	917.49	Reconciled

376527	13-APR-17	GRAVEL INC. WESTAMERICA COMMUNICATIONS, INC.	3,339.50	17-APR-17	3,339.50	Reconciled
376528	13-APR-17	WESTERN NATIONAL CONTRACTORS	914.17	18-APR-17	914.17	Reconciled
376529	13-APR-17	WHEELANS, RICHARD	7.57	17-APR-17	7.57	Reconciled
376530	13-APR-17	WIRELESS WATCHDOGS, LLC	636.00	25-APR-17	636.00	Reconciled
376531	13-APR-17	ZENON ENVIRONMENTAL CORPORATION	171,100.20	20-APR-17	171,100.20	Reconciled
376532	13-APR-17	Akiyoshi, Eric S (Eric)	123.76	17-APR-17	123.76	Reconciled
376533	13-APR-17	Bertsch, Frederick J (Jeff)	123.46	17-APR-17	123.46	Reconciled
376534	13-APR-17	Bleckert, Christopher A	172.00	20-APR-17	172.00	Reconciled
376535	13-APR-17	Bonkowski, Thomas J (Thomas)	26.86	21-APR-17	26.86	Reconciled
376536	13-APR-17	Compton, Christine A	410.92	03-MAY-17	410.92	Reconciled
376537	13-APR-17	Cortez, Malcolm A (Malcolm)	97.91			Negotiable
376538	13-APR-17	Davis, Jennifer R (Jennifer)	596.89	24-APR-17	596.89	Reconciled
376539	13-APR-17	Garcia, Juan	63.34	17-APR-17	63.34	Reconciled
376540	13-APR-17	Guzman, Juan (Juan)	129.30	24-APR-17	129.30	Reconciled
376541	13-APR-17	Johnson, Dane	24.65	25-APR-17	24.65	Reconciled
376542	13-APR-17	La, Jason (Jason)	25.85	17-APR-17	25.85	Reconciled
376543	13-APR-17	Lynch, Toni Marie	35.00	13-APR-17	35.00	Reconciled
376544	13-APR-17	Moeder, Jacob J (Jacob)	35.00			Negotiable

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

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376545		13-APR-17	Mori, Richard K (Rich)		35.00	28-APR-17	35.00	Reconciled
376546		13-APR-17	Parsons, Sheryl		192.00	24-APR-17	192.00	Reconciled
376547		13-APR-17	Perez, Rodolfo (Rudy)		68.29	18-APR-17	68.29	Reconciled
376548		13-APR-17	Rutherford, Allan		172.00	19-APR-17	172.00	Reconciled
376549		13-APR-17	Sanchez, Fiona M (Fiona)		47.82	24-APR-17	47.82	Reconciled
376550		13-APR-17	Toland, Scott Andrew		35.00	26-APR-17	35.00	Reconciled
376551		13-APR-17	Wehr, Dana C (Dana)		340.00	18-APR-17	340.00	Reconciled
376552		14-APR-17	Fournier, Tanja L HOME (Tanja)		57.98	14-APR-17	57.98	Reconciled
376553		18-APR-17	EMPLOYMENT DEVELOPMENT	WEST SACRAMENTO	7,565.73	25-APR-17	7,565.73	Reconciled
376554		18-APR-17	EMPLOYMENT DEVELOPMENT	WEST SACRAMENTO	14,184.15	25-APR-17	14,184.15	Reconciled
376555		19-APR-17	Bleckert, Christopher A		166.00	20-APR-17	166.00	Reconciled
376556		19-APR-17	Borowski, Michael (Mike)		250.00	08-MAY-17	250.00	Reconciled
376557		19-APR-17	Bystrom, Brian V (Brian)		635.69	21-APR-17	635.69	Reconciled
376558		19-APR-17	Cariker, Cody J (Cody)		37.69	03-MAY-17	37.69	Reconciled
376559		19-APR-17	Hatch, Lauren		199.99	04-MAY-17	199.99	Reconciled
376560		19-APR-17	Hjorth, Charles O (Charles)		167.00	24-APR-17	167.00	Reconciled
376561		19-APR-17	Kalinsky, Arseny (Arseny)		262.00	19-APR-17	262.00	Reconciled
376562		19-APR-17	LaMar, Steven E		241.97	02-MAY-17	241.97	Reconciled
376563		19-APR-17	Lao, Richard S		98.00	01-MAY-17	98.00	Reconciled
376564		19-APR-17	Pan, Jenny W (Jenny)		129.68	24-APR-17	129.68	Reconciled
376565		19-APR-17	Reynoso, Pio (Pio)		340.00	20-APR-17	340.00	Reconciled
376566		19-APR-17	Shinbashi, Allen		116.98	21-APR-17	116.98	Reconciled
376567		19-APR-17	Tetterer, John M (Mark)		86.88	20-APR-17	86.88	Reconciled
376568		19-APR-17	Velardes, Mattias J (Matt)		416.10	01-MAY-17	416.10	Reconciled
376569		19-APR-17	3 DAY BLINDS LLC		3,294.47	28-APR-17	3,294.47	Reconciled
376570		19-APR-17	3M COMPANY		624.24	24-APR-17	624.24	Reconciled
376571		19-APR-17	ACCUSOURCE, INC.		575.50	27-APR-17	575.50	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 16
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376572		19-APR-17	ADS LLC		1,936.50	24-APR-17	1,936.50	Reconciled
376573		19-APR-17	ADVANCED CALIBRATION DESIGNS INC		1,712.00	26-APR-17	1,712.00	Reconciled
376574		19-APR-17	AIRGAS, INC.		483.04	24-APR-17	483.04	Reconciled
376575		19-APR-17	ALPHA TRAFFIC SERVICES, INC.		925.00	25-APR-17	925.00	Reconciled
376576		19-APR-17	APPLIED MEMBRANES INC		4,030.35	24-APR-17	4,030.35	Reconciled
376577		19-APR-17	AQUA-METRIC SALES COMPANY		25,758.72	02-MAY-17	25,758.72	Reconciled
376578		19-APR-17	ARCADIS U.S., INC.		5,390.00	24-APR-17	5,390.00	Reconciled
376579		19-APR-17	ARMATIS, DANIEL		37.16	25-APR-17	37.16	Reconciled
376580		19-APR-17	AT&T		48.72	26-APR-17	48.72	Reconciled
376581		19-APR-17	AT&T		1,342.19	26-APR-17	1,342.19	Reconciled
376582		19-APR-17	AT&T		3,783.65	26-APR-17	3,783.65	Reconciled
376583		19-APR-17	AT&T INTERNET SERVICES		2,048.86	26-APR-17	2,048.86	Reconciled
376584		19-APR-17	AVISTA TECHNOLOGIES, INC		8,576.47	24-APR-17	8,576.47	Reconciled
376585		19-APR-17	BEARCOM		858.77	24-APR-17	858.77	Reconciled
376586		19-APR-17	BIOMAGIC INC		15,767.69	25-APR-17	15,767.69	Reconciled
376587		19-APR-17	BLACK & VEATCH CORPORATION		242,923.48	27-APR-17	242,923.48	Reconciled
376588		19-APR-17	BORCHARD SURVEYING & MAPPING, INC.		6,340.00	26-APR-17	6,340.00	Reconciled
376589		19-APR-17	BOYD & ASSOCIATES		135.00	24-APR-17	135.00	Reconciled
376590		19-APR-17	BRITHINEE ELECTRIC		33,486.55	26-APR-17	33,486.55	Reconciled
376591		19-APR-17	BTF PRECISE MICROBIOLOGY INC.		545.65	25-APR-17	545.65	Reconciled
376592		19-APR-17	BUCKNALL POWER TOOL SERVICE, INC.		603.64	24-APR-17	603.64	Reconciled
376593		19-APR-17	CAEPIPING INC		500.00	27-APR-17	500.00	Reconciled
376594		19-APR-17	CALIFORNIA BARRICADE RENTAL, INC.		7,730.00	25-APR-17	7,730.00	Reconciled
376595		19-APR-17	CALIFORNIA COUNCIL FOR ENVIRONMENTAL AND ECONOMIC BALANCE		22,000.00	25-APR-17	22,000.00	Reconciled
376596		19-APR-17	CANON FINANCIAL SERVICES, INC		10,308.99	26-APR-17	10,308.99	Reconciled
376597		19-APR-17	CAROLLO ENGINEERS, INC		10,180.00	01-MAY-17	10,180.00	Reconciled
376598		19-APR-17	CDW GOVERNMENT LLC		972.30	24-APR-17	972.30	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-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26 Account: Checking AP and PR Page: 17 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								
376599		19-APR-17	CHAIREL CUSTOM HAY, INC.		6,401.35	24-APR-17	6,401.35	Reconciled
376600		19-APR-17	CITY OF IRVINE		385.50	25-APR-17	385.50	Reconciled
376601		19-APR-17	CITY OF SANTA ANA		160.87	24-APR-17	160.87	Reconciled
376602		19-APR-17	CITY OF TUSTIN		520.23	21-APR-17	520.23	Reconciled
376603		19-APR-17	COMMERCIAL DOOR OF ORANGE COUNTY, INC.		302.00	24-APR-17	302.00	Reconciled
376604		19-APR-17	D & H WATER SYSTEMS INC.		5,679.87	28-APR-17	5,679.87	Reconciled
376605		19-APR-17	DDB ENGINEERING, INC.		1,080.00	21-APR-17	1,080.00	Reconciled
376606		19-APR-17	DELL MARKETING LP		47,469.53	27-APR-17	47,469.53	Reconciled
376607		19-APR-17	DIRECTV INC		123.98	25-APR-17	123.98	Reconciled
376608		19-APR-17	ENVIRONMENTAL RESOURCE ASSOCIATES		754.67	26-APR-17	754.67	Reconciled
376609		19-APR-17	EUROFINS EATON ANALYTICAL, INC.		300.00	25-APR-17	300.00	Reconciled
376610		19-APR-17	EXECUTIVE LIGHTING & ELECTRIC		9,488.89	24-APR-17	9,488.89	Reconciled
376611		19-APR-17	EXPONENT, INC.		620.00	24-APR-17	620.00	Reconciled
376612		19-APR-17	FARWEST CORROSION CONTROL COMPANY		583.31	24-APR-17	583.31	Reconciled
376613		19-APR-17	FEDEX		195.77	24-APR-17	195.77	Reconciled
376614		19-APR-17	FISERV		18,008.46	25-APR-17	18,008.46	Reconciled
376615		19-APR-17	FISHER SCIENTIFIC COMPANY LLC		5,286.52	24-APR-17	5,286.52	Reconciled
376616		19-APR-17	FLW, INC.		273.27	21-APR-17	273.27	Reconciled
376617		19-APR-17	FRONTIER CALIFORNIA INC.		264.50	27-APR-17	264.50	Reconciled
376618		19-APR-17	FRONTLINE SENSORS		733.39	02-MAY-17	733.39	Reconciled

376619	19-APR-17	AND SYSTEMS, INC. FULLER TRUCK ACCESSORIES	954.67	02-MAY-17	954.67	Reconciled
376620	19-APR-17	GARZA INDUSTRIES, INC	1,292.58	24-APR-17	1,292.58	Reconciled
376621	19-APR-17	GEIGER BROS	421.94	25-APR-17	421.94	Reconciled
376622	19-APR-17	GEORGE HILLS COMPANY, INC.	51.00	26-APR-17	51.00	Reconciled
376623	19-APR-17	GRAINGER	2,072.57	24-APR-17	2,072.57	Reconciled
376624	19-APR-17	GRAYBAR ELECTRIC COMPANY	7,733.99	24-APR-17	7,733.99	Reconciled
376625	19-APR-17	HACH COMPANY	739.30	24-APR-17	739.30	Reconciled
376626	19-APR-17	HARMSWORTH ASSOCIATES	1,050.00	21-APR-17	1,050.00	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 18
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376627		19-APR-17	HELPMATES STAFFING SERVICES		9,353.99	21-APR-17	9,353.99	Reconciled
376628		19-APR-17	HERC RENTALS INC.		2,298.31	26-APR-17	2,298.31	Reconciled
376629		19-APR-17	HILL BROTHERS CHEMICAL COMPANY		8,842.71	26-APR-17	8,842.71	Reconciled
376630		19-APR-17	HOME DEPOT USA INC		1,064.21			Negotiable
376631		19-APR-17	I. KRUGER INC.		4,872.39	25-APR-17	4,872.39	Reconciled
376632		19-APR-17	IRON MOUNTAIN INFORMATION MANAGEMENT INC		1,441.32	24-APR-17	1,441.32	Reconciled
376633		19-APR-17	IRVINE COMMUNITY DEVELOPMENT COMPANY LLC		407,144.31	27-APR-17	407,144.31	Reconciled
376634		19-APR-17	IRVINE PIPE & SUPPLY INC		2,019.60	21-APR-17	2,019.60	Reconciled
376635		19-APR-17	IRWD-PETTY CASH CUSTODIAN		1,533.68	20-APR-17	1,533.68	Reconciled
376636		19-APR-17	JOHN ROBINSON CONSULTING, INC.		14,931.00	01-MAY-17	14,931.00	Reconciled
376637		19-APR-17	KAZARIANS & ASSOCIATES, INC.		6,145.25	25-APR-17	6,145.25	Reconciled
376638		19-APR-17	KIM, SOON TAE		900.00	24-APR-17	900.00	Reconciled
376639		19-APR-17	KLEINFELDER, INC.		41,481.26	24-APR-17	41,481.26	Reconciled
376640		19-APR-17	KOELLER NEBEKER CARLSON & HALUCK, LLP		1,671.30	21-APR-17	1,671.30	Reconciled
376641		19-APR-17	LANDCARE HOLDINGS, INC.		2,500.00			Negotiable
376642		19-APR-17	LEWIS BRISBOIS BISGAARD AND SMITH, LLP		690.50	26-APR-17	690.50	Reconciled
376643		19-APR-17	LGC GEOTECHNICAL, INC.		4,007.50	21-APR-17	4,007.50	Reconciled
376644		19-APR-17	MARK ENTERPRISES, INC.		33,316.32	26-APR-17	33,316.32	Reconciled
376645		19-APR-17	MATTSON RESOURCES L.L.C		16,800.00	28-APR-17	16,800.00	Reconciled
376646		19-APR-17	MC MASTER CARR SUPPLY CO		293.66	25-APR-17	293.66	Reconciled
376647		19-APR-17	MCCALL'S METERS, INC.		2,831.67	05-MAY-17	2,831.67	Reconciled
376648		19-APR-17	MCR TECHNOLOGIES INC		38,129.51	26-APR-17	38,129.51	Reconciled
376649		19-APR-17	METTLER-TOLEDO RAININ, LLC		635.38	26-APR-17	635.38	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 19
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376650		19-APR-17	MOBILE MODULAR MANAGEMENT CORPORATION		1,018.24	24-APR-17	1,018.24	Reconciled
376651		19-APR-17	NATIONAL READY MIXED CONCRETE CO.		954.68	24-APR-17	954.68	Reconciled
376652		19-APR-17	NEWPORT BEACH CHAMBER OF COMMERCE		2,500.00	01-MAY-17	2,500.00	Reconciled
376653		19-APR-17	NGUY, LAURA		23.02	27-APR-17	23.02	Reconciled
376654		19-APR-17	NMG GEOTECHNICAL INC		11,604.90	28-APR-17	11,604.90	Reconciled
376655		19-APR-17	OLIN CORPORATION		20,383.12	28-APR-17	20,383.12	Reconciled
376656		19-APR-17	ONESOURCE DISTRIBUTORS LLC		8,761.22	24-APR-17	8,761.22	Reconciled

376657	19-APR-17	PARKHOUSE TIRE INC	3,906.26	25-APR-17	3,906.26	Reconciled
376658	19-APR-17	PAULUS ENGINEERING, INC.	34,627.01	27-APR-17	34,627.01	Reconciled
376659	19-APR-17	PINNACLE TOWERS LLC	692.68	24-APR-17	692.68	Reconciled
376660	19-APR-17	PRAXAIR DISTRIBUTION INC	223.71	24-APR-17	223.71	Reconciled
376661	19-APR-17	PSOMAS	1,923.75	24-APR-17	1,923.75	Reconciled
376662	19-APR-17	RAM AIR ENGINEERING INC	1,305.23	25-APR-17	1,305.23	Reconciled
376663	19-APR-17	REACH EMPLOYEE ASSISTANCE INC	968.80	25-APR-17	968.80	Reconciled
376664	19-APR-17	RELIANCE SAFETY CONSULTANTS, INC.	2,112.92	28-APR-17	2,112.92	Reconciled
376665	19-APR-17	ROCKFORCE CONSTRUCTION, LLC	989.90	26-APR-17	989.90	Reconciled
376666	19-APR-17	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT	70,632.69			Negotiable
376667	19-APR-17	SANDERS PAVING INC	68,539.15	26-APR-17	68,539.15	Reconciled
376668	19-APR-17	SECURITAS SECURITY SERVICES USA, INC.	592.04	24-APR-17	592.04	Reconciled
376669	19-APR-17	SECURTEC DISTRICT PATROL, INC.	9,100.00	04-MAY-17	9,100.00	Reconciled
376670	19-APR-17	SEPARATION PROCESSES INC	150.75	24-APR-17	150.75	Reconciled
376671	19-APR-17	SHAMROCK SUPPLY CO INC	1,209.12	24-APR-17	1,209.12	Reconciled
376672	19-APR-17	SIGMA-ALDRICH INC	128.27	24-APR-17	128.27	Reconciled
376673	19-APR-17	SIRIUS COMPUTER SOLUTIONS INC	9,620.68	25-APR-17	9,620.68	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 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								
376674		19-APR-17	SOUTH COAST WATER DISTRICT		2,456.00	24-APR-17	2,456.00	Reconciled
376675		19-APR-17	SOUTHERN CALIFORNIA EDISON COMPANY		399,413.44	25-APR-17	399,413.44	Reconciled
376676		19-APR-17	SOUTHERN COUNTIES LUBRICANTS LLC		1,484.52	24-APR-17	1,484.52	Reconciled
376677		19-APR-17	STANDARD REGISTER, INC.		2,440.07	24-APR-17	2,440.07	Reconciled
376678		19-APR-17	STANTEC CONSULTING SERVICES INC.		11,974.50	26-APR-17	11,974.50	Reconciled
376679		19-APR-17	STATE BOARD OF EQUALIZATION		5,229.00	01-MAY-17	5,229.00	Reconciled
376680		19-APR-17	SUN-STAR ELECTRIC, INC.		55,786.25	28-APR-17	55,786.25	Reconciled
376681		19-APR-17	T.E. ROBERTS, INC.		232,975.70	26-APR-17	232,975.70	Reconciled
376682		19-APR-17	TAIT ENVIRONMENTAL SERVICES INC		4,696.91	26-APR-17	4,696.91	Reconciled
376683		19-APR-17	TEKDRAULICS		2,176.77	02-MAY-17	2,176.77	Reconciled
376684		19-APR-17	TESTAMERICA LABORATORIES, INC		105.00	25-APR-17	105.00	Reconciled
376685		19-APR-17	TETRA TECH, INC		87,983.10	27-APR-17	87,983.10	Reconciled
376686		19-APR-17	THE GAS COMPANY		1,232.19	28-APR-17	1,232.19	Reconciled
376687		19-APR-17	THOMPSON INDUSTRIAL SUPPLY		3,847.62	24-APR-17	3,847.62	Reconciled
376688		19-APR-17	TOTAL RESOURCE MANAGEMENT, INC.		113,820.00	27-APR-17	113,820.00	Reconciled
376689		19-APR-17	ULTRA SCIENTIFIC		767.50	25-APR-17	767.50	Reconciled
376690		19-APR-17	UNITED PARCEL SERVICE INC		141.32	24-APR-17	141.32	Reconciled
376691		19-APR-17	UPPAL, BALVINDER		418.99	27-APR-17	418.99	Reconciled
376692		19-APR-17	UTILITY SYSTEMS SCIENCE & SOFTWARE INC.		2,930.00	24-APR-17	2,930.00	Reconciled
376693		19-APR-17	VEGA AMERICAS, INC		8,225.32	24-APR-17	8,225.32	Reconciled
376694		19-APR-17	VULCAN MATERIALS COMPANY		1,393.35	24-APR-17	1,393.35	Reconciled
376695		19-APR-17	WALTERS WHOLESALE ELECTRIC		1,484.67	24-APR-17	1,484.67	Reconciled
376696		19-APR-17	WASTE MANAGEMENT OF ORANGE COUNTY		697.05	25-APR-17	697.05	Reconciled
376697		19-APR-17	WATER ENVIRONMENT RESEARCH FOUNDATION (WERF)		15,530.00	24-APR-17	15,530.00	Reconciled
376698		19-APR-17	WATERWISE CONSULTING, INC.		5,146.00	24-APR-17	5,146.00	Reconciled

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 Payment Type: All Display Supplier Address: No

Cleared

376748	26-APR-17	CLA-VAL COMPANY	2,127.42	27-APR-17	2,127.42	Reconciled
376749	26-APR-17	COASTLINE EQUIPMENT COMPANY	393.22	28-APR-17	393.22	Reconciled
376750	26-APR-17	CONTROLLED KEY SYSTEMS INC	252.65	02-MAY-17	252.65	Reconciled
376751	26-APR-17	CORRPRO COMPANIES	459.45			Negotiable
376752	26-APR-17	COTTONS POINT DESIGN, INC	4,527.37	09-MAY-17	4,527.37	Reconciled
376753	26-APR-17	COX COMMUNICATIONS, INC.	3,372.43	01-MAY-17	3,372.43	Reconciled
376754	26-APR-17	CS-AMSCO	1,621.43	01-MAY-17	1,621.43	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-APR-17 To 30-APR-17
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 Display Supplier Address: No

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376755		26-APR-17	CULLIGAN OF SANTA ANA		11,031.35	04-MAY-17	11,031.35	Reconciled
376756		26-APR-17	CUMMINS PACIFIC, LLC		900.00	01-MAY-17	900.00	Reconciled
376757		26-APR-17	D & G SIGNS		639.38	03-MAY-17	639.38	Reconciled
376758		26-APR-17	D & H WATER SYSTEMS INC.		2,031.28	28-APR-17	2,031.28	Reconciled
376759		26-APR-17	DEACON, JANET		770.97			Negotiable
376760		26-APR-17	DISCOUNT COURIER SERVICE		179.46	27-APR-17	179.46	Reconciled
376761		26-APR-17	DOMINGUEZ, ERNESTO		39.76	01-MAY-17	39.76	Reconciled
376762		26-APR-17	ENVIRONMENTAL RESOURCE ASSOCIATES		529.47	01-MAY-17	529.47	Reconciled
376763		26-APR-17	EUROFINS EATON ANALYTICAL, INC.		150.00	01-MAY-17	150.00	Reconciled
376764		26-APR-17	EVANTEC CORPORATION		2,048.32	28-APR-17	2,048.32	Reconciled
376765		26-APR-17	EXECUTIVE LIGHTING & ELECTRIC		1,481.68	28-APR-17	1,481.68	Reconciled
376766		26-APR-17	FEDEX		233.52	01-MAY-17	233.52	Reconciled
376767		26-APR-17	FISERV		306.20	27-APR-17	306.20	Reconciled
376768		26-APR-17	FISHER SCIENTIFIC COMPANY LLC		2,238.34	28-APR-17	2,238.34	Reconciled
376769		26-APR-17	FLW SERVICE CORPORATION		1,350.00	28-APR-17	1,350.00	Reconciled
376770		26-APR-17	FORREST CARTER		700.00	28-APR-17	700.00	Reconciled
376771		26-APR-17	GIBBS OSBORNE FRONTIER CALIFORNIA INC.		309.95	02-MAY-17	309.95	Reconciled
376772		26-APR-17	GALLEGOS, CHRISTINA		37.22			Negotiable
376773		26-APR-17	GANAHL LUMBER CO.		56.05	02-MAY-17	56.05	Reconciled
376774		26-APR-17	GENTERRA CONSULTANTS INC		8,618.50	28-APR-17	8,618.50	Reconciled
376775		26-APR-17	GRAINGER		904.17	01-MAY-17	904.17	Reconciled
376776		26-APR-17	HACH COMPANY		5,044.17	01-MAY-17	5,044.17	Reconciled
376777		26-APR-17	HD SUPPLY WATERWORKS LTD		9,813.87	28-APR-17	9,813.87	Reconciled
376778		26-APR-17	HDR ENGINEERING INC		109,944.50	03-MAY-17	109,944.50	Reconciled
376779		26-APR-17	HEINS, BRIAN		37.85	27-APR-17	37.85	Reconciled
376780		26-APR-17	HELEN CICINO FABIAN		2,275.00	04-MAY-17	2,275.00	Reconciled
376781		26-APR-17	HELPMATES STAFFING SERVICES		3,000.50	28-APR-17	3,000.50	Reconciled

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

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376782		26-APR-17	HILL BROTHERS CHEMICAL COMPANY		9,699.40	01-MAY-17	9,699.40	Reconciled
376783		26-APR-17	HILLEBRECHT, WARREN K		589.56	03-MAY-17	589.56	Reconciled
376784		26-APR-17	HOME DEPOT USA INC		354.85	08-MAY-17	354.85	Reconciled
376785		26-APR-17	IBM CORPORATION		34,733.48	04-MAY-17	34,733.48	Reconciled
376786		26-APR-17	INDUSTRIAL ELECTRIC MACHINERY LLC		5,616.78	01-MAY-17	5,616.78	Reconciled
376787		26-APR-17	IRVINE PIPE & SUPPLY INC		2,148.34	28-APR-17	2,148.34	Reconciled
376788		26-APR-17	IRWD-PETTY CASH CUSTODIAN		704.85	28-APR-17	704.85	Reconciled
376789		26-APR-17	KAESER COMPRESSORS, INC.		1,667.11	02-MAY-17	1,667.11	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
376790		26-APR-17	KENT & AMY DAHLBERG		12,315.35			Negotiable
376791		26-APR-17	KUSTERS ZIMA CORPORATION		4,578.18	01-MAY-17	4,578.18	Reconciled
376792		26-APR-17	LANDCARE HOLDINGS, INC.		74,313.14			Negotiable
376793		26-APR-17	LGC GEOTECHNICAL, INC.		435.00	02-MAY-17	435.00	Reconciled
376794		26-APR-17	LU'S LIGHTHOUSE, INC.		1,451.62	01-MAY-17	1,451.62	Reconciled
376795		26-APR-17	MANDLER, ELVIA		553.14			Negotiable
376796		26-APR-17	MARVIN GARDENS LLC		2,593.70	27-APR-17	2,593.70	Reconciled
376797		26-APR-17	MBC APPLIED ENVIRONMENTAL SCIENCES		1,300.00	28-APR-17	1,300.00	Reconciled
376798		26-APR-17	MC FADDEN-DALE INDUSTRIAL		20.29	01-MAY-17	20.29	Reconciled
376799		26-APR-17	MC MASTER CARR SUPPLY CO		738.94	28-APR-17	738.94	Reconciled
376800		26-APR-17	MCR TECHNOLOGIES INC		5,300.24	27-APR-17	5,300.24	Reconciled
376801		26-APR-17	MICHAEL BAKER INTERNATIONAL, INC.		1,097.79	01-MAY-17	1,097.79	Reconciled
376802		26-APR-17	NATURES IMAGE INC		2,580.00	27-APR-17	2,580.00	Reconciled
376803		26-APR-17	NCH CORPORATION		663.54	01-MAY-17	663.54	Reconciled
376804		26-APR-17	NEWAGE INDUSTRIES INC		558.43	01-MAY-17	558.43	Reconciled
376805		26-APR-17	NINYO & MOORE		12,129.75	03-MAY-17	12,129.75	Reconciled
376806		26-APR-17	NOSSAMAN LLP		2,213.00	28-APR-17	2,213.00	Reconciled

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376807		26-APR-17	O'HAREN GOVERNMENT RELATIONS		6,500.00	02-MAY-17	6,500.00	Reconciled
376808		26-APR-17	O'NEIL LLP		689.07	01-MAY-17	689.07	Reconciled
376809		26-APR-17	OLIN CORPORATION		26,090.22	05-MAY-17	26,090.22	Reconciled
376810		26-APR-17	ONESOURCE DISTRIBUTORS LLC		616.42	28-APR-17	616.42	Reconciled
376811		26-APR-17	ORANGE COUNTY AUTO PARTS CO		355.03	27-APR-17	355.03	Reconciled
376812		26-APR-17	PARKHOUSE TIRE INC		1,152.35	02-MAY-17	1,152.35	Reconciled
376813		26-APR-17	PAULUS ENGINEERING, INC.		50,905.51	03-MAY-17	50,905.51	Reconciled
376814		26-APR-17	PELLETIER & ASSOCIATES, INC.		325.00	28-APR-17	325.00	Reconciled
376815		26-APR-17	PEREZ, HAZEL		10.86	28-APR-17	10.86	Reconciled
376816		26-APR-17	PLUMBERS DEPOT INC.		427.55	28-APR-17	427.55	Reconciled
376817		26-APR-17	POLLARDWATER.COM		1,048.80	01-MAY-17	1,048.80	Reconciled
376818		26-APR-17	PRAXAIR DISTRIBUTION INC		929.83	01-MAY-17	929.83	Reconciled
376819		26-APR-17	PREMIER DEVELOPING SERVICES		762.58			Negotiable
376820		26-APR-17	RAM AIR ENGINEERING INC		9,702.50	28-APR-17	9,702.50	Reconciled
376821		26-APR-17	RANCHO MONTEREY APTS		404.29	09-MAY-17	404.29	Reconciled
376822		26-APR-17	RELIANCE STANDARD LIFE INSURANCE COMPANY		25,680.89	08-MAY-17	25,680.89	Reconciled
376823		26-APR-17	RESPONSE ENVELOPE, INC		2,618.33	05-MAY-17	2,618.33	Reconciled
376824		26-APR-17	RICHARD C. SLADE & ASSOCIATES LLC		16,887.00			Negotiable
376825		26-APR-17	RICHMOND AMERICAN HOME ATTN: AP		832.41			Negotiable
376826		26-APR-17	RICOH ELECTRONICS INC		78.69			Negotiable
376827		26-APR-17	RINCON TRUCK CENTER INC.		1,730.37	27-APR-17	1,730.37	Reconciled
376828		26-APR-17	RMS ENGINEERING & DESIGN, INC.		2,480.00	28-APR-17	2,480.00	Reconciled
376829		26-APR-17	RYAN COMPANIES US INC		780.64			Negotiable
376830		26-APR-17	SANTA MARGARITA FORD		1,639.40	27-APR-17	1,639.40	Reconciled
376831		26-APR-17	SEALS WEST PACKING CO.		480.16	08-MAY-17	480.16	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
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Payment Document : IRWD CHECK							
376832	26-APR-17	SHAMROCK SUPPLY CO INC	1,295.09	01-MAY-17	1,295.09	Reconciled	
376833	26-APR-17	SITMATIC	614.56	28-APR-17	614.56	Reconciled	
376834	26-APR-17	SOLANA APTS	145.31	09-MAY-17	145.31	Reconciled	
376835	26-APR-17	SOUTH BAY FOUNDRY, INC	4,487.79	01-MAY-17	4,487.79	Reconciled	
376836	26-APR-17	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	2,241.68	04-MAY-17	2,241.68	Reconciled	
376837	26-APR-17	SOUTH COAST ANSWERING SERVICE	691.10	02-MAY-17	691.10	Reconciled	
376838	26-APR-17	SOUTHERN CALIFORNIA EDISON COMPANY	133,306.19	27-APR-17	133,306.19	Reconciled	
376839	26-APR-17	SOUTHERN COUNTIES LUBRICANTS LLC	930.97	01-MAY-17	930.97	Reconciled	
376840	26-APR-17	STANTEC CONSULTING SERVICES INC.	3,434.83	01-MAY-17	3,434.83	Reconciled	
376841	26-APR-17	STERIS CORPORATION	1,899.19	01-MAY-17	1,899.19	Reconciled	
376842	26-APR-17	STICE COMPANY INC	860.47	28-APR-17	860.47	Reconciled	
376843	26-APR-17	STRADLING YOCCA CARLSON & RAUTH	56.00	27-APR-17	56.00	Reconciled	
376844	26-APR-17	SUKLE ADVERTISING INC.	27,121.50			Negotiable	
376845	26-APR-17	TAYLOR MORRISON	793.59			Negotiable	
376846	26-APR-17	TESTAMERICA LABORATORIES, INC	384.30	01-MAY-17	384.30	Reconciled	
376847	26-APR-17	TETRA TECH, INC	660.00	01-MAY-17	660.00	Reconciled	
376848	26-APR-17	THE IRVINE COMPANY LLC	1,997.84	01-MAY-17	1,997.84	Reconciled	
376849	26-APR-17	TIC-OFFICE PROPERTIES	188.79	01-MAY-17	188.79	Reconciled	
376850	26-APR-17	TIC-RETAIL PROPERTIES	50.47	01-MAY-17	50.47	Reconciled	
376851	26-APR-17	TRAILS4ALL	750.00			Negotiable	
376852	26-APR-17	TROPICAL PLAZA NURSERY INC	42,977.16	03-MAY-17	42,977.16	Reconciled	
376853	26-APR-17	TRUCPARCO	534.31	04-MAY-17	534.31	Reconciled	
376854	26-APR-17	ULTRA SCIENTIFIC	534.50	02-MAY-17	534.50	Reconciled	
376855	26-APR-17	UNITED PARCEL SERVICE INC	37.20	01-MAY-17	37.20	Reconciled	
376856	26-APR-17	US BANK NAT'L ASSOCIATION NORTH DAKOTA	117,889.11	08-MAY-17	117,889.11	Reconciled	
376857	26-APR-17	WACO FILTERS CORPORATION	3,446.32	01-MAY-17	3,446.32	Reconciled	

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 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								
376858		26-APR-17	WATER EDUCATION FOUNDATION		3,500.00	04-MAY-17	3,500.00	Reconciled
376859		26-APR-17	WATERLINE TECHNOLOGIES INC		3,148.14	27-APR-17	3,148.14	Reconciled
376860		26-APR-17	WATERSMART SOFTWARE, INC		27,195.00	03-MAY-17	27,195.00	Reconciled
376861		26-APR-17	WAXIE'S ENTERPRISES, INC		1,058.93	28-APR-17	1,058.93	Reconciled
376862		26-APR-17	WECK LABORATORIES INC		3,620.00	01-MAY-17	3,620.00	Reconciled
376863		26-APR-17	WESTAMERICA COMMUNICATIONS, INC.		2,177.00	27-APR-17	2,177.00	Reconciled
376864		26-APR-17	WESTERN AV		5,410.01	28-APR-17	5,410.01	Reconciled
376865		26-APR-17	WESTERN EXTERMINATOR COMPANY		16,412.50	03-MAY-17	16,412.50	Reconciled
376866		26-APR-17	WESTERN SAFETY PRODUCTS INC		4,162.08	02-MAY-17	4,162.08	Reconciled
376867		26-APR-17	WESTERN WEATHER GROUP INC		2,884.00	01-MAY-17	2,884.00	Reconciled
376868		26-APR-17	YORK INSURANCE SERVICES GROUP INC - CA		7,936.25	27-APR-17	7,936.25	Reconciled
376869		26-APR-17	IRVINE UNIFIED SCHOOL DISTRICT	IRVINE 1	250.00	05-MAY-17	250.00	Reconciled
376870		26-APR-17	METROPOLIS GARDENSPAY LLC		485,188.00	09-MAY-17	485,188.00	Reconciled
376871		26-APR-17	EQUITY RESIDENTIAL	CHICAGO	217,231.90			Negotiable
376872		26-APR-17	UDR, INC.	HIGHLANDS RANCH TAMPA	286,702.00	05-MAY-17	286,702.00	Reconciled
376873		26-APR-17	JCI JONES CHEMICALS INC		6,750.73	01-MAY-17	6,750.73	Reconciled
376874		27-APR-17	SOCAL REMOVAL	PURCHASE	49,352.50	03-MAY-17	49,352.50	Reconciled
376875		27-APR-17	CLEARINGHOUSE	PHOENIX	477.67	03-MAY-17	477.67	Reconciled

376876	27-APR-17	IRWD EMPLOYEE ASSOCIATION	15600 SC	1,340.00			Negotiable
376877	27-APR-17	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	62.50	04-MAY-17	62.50	Reconciled
376878	27-APR-17	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	409.79			Voided
376879	27-APR-17	PRE-PAID LEGAL SERVICES INC	PO BOX 2629	1,481.42	04-MAY-17	1,481.42	Reconciled
376880	27-APR-17	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	ATLANTA	112.48	01-MAY-17	112.48	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 28
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
376881		27-APR-17	COLONIAL LIFE & ACCIDENT INSURANCE CO.	COLUMBIA	1,363.58	01-MAY-17	1,363.58	Reconciled
376882		27-APR-17	AFLAC	PO BOX 84069	203.12	02-MAY-17	203.12	Reconciled
376883		27-APR-17	AFLAC	1932 WYNNTON RD	6,885.92	02-MAY-17	6,885.92	Reconciled
376884		27-APR-17	PERS LONG TERM CARE	PASADENA	900.58	02-MAY-17	900.58	Reconciled
376885		27-APR-17	MR CRANE INC	ORANGE	2,300.20	01-MAY-17	2,300.20	Reconciled
376886		27-APR-17	ANTHEM BLUE CROSS	LOS ANGELES	281.97	01-MAY-17	281.97	Reconciled
376887		27-APR-17	ANTHEM BLUE CROSS	LOS ANGELES	208.43	01-MAY-17	208.43	Reconciled
376888		27-APR-17	ANTHEM BLUE CROSS	LOS ANGELES	546.33	01-MAY-17	546.33	Reconciled
376889		27-APR-17	ANTHEM BLUE CROSS	LOS ANGELES	546.33	01-MAY-17	546.33	Reconciled
376890		27-APR-17	MORRISROE, EDWARD	PURCHASE	214.76	04-MAY-17	214.76	Reconciled
376891		28-APR-17	Garcia, Juan		88.84			Negotiable
376892		28-APR-17	Oldewage, Lars D (Lars)		103.22	04-MAY-17	103.22	Reconciled
376893		28-APR-17	Swan, Peer		2,811.83	03-MAY-17	2,811.83	Reconciled
Payment Document Subtotal:					10,039,947.95		9,563,849.08	

Payment Document : IRWD Wire

12008		12-APR-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	13,249.73			Negotiable
12009		12-APR-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	7,251.52			Negotiable
12010		12-APR-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	4,176.82			Negotiable
12011		12-APR-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	26,308.16			Negotiable
12012		12-APR-17	BANK OF AMERICA	SAN FRANCISCO	63,198.63			Negotiable
12013		13-APR-17	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	14,127.53			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-17 To 30-APR-17 Report Date: 11-MAY-2017 10:26
 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 Wire								
12014		13-APR-17	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	29,230.68			Negotiable
12015		13-APR-17	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	60,647.75			Negotiable
12016		13-APR-17	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	5,766.41			Negotiable
12017		13-APR-17	CALPERS	SACRAMENTO 1	450,936.84			Negotiable
12018		13-APR-17	CALPERS	SACRAMENTO 1	2,866.58			Negotiable
12019		17-APR-17	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	28,133.56			Negotiable
12020		17-APR-17	BANK OF AMERICA	SAN FRANCISCO	27,003.39			Negotiable

12021	17-APR-17	U.S. BANK NATIONALST. LOUIS ASSOCIATION		1,600,717.59		Negotiable
12022	17-APR-17	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	60,258.06		Negotiable
12023	17-APR-17	U.S. BANK NATIONALST. LOUIS ASSOCIATION		93,954.19		Negotiable
12024	18-APR-17	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	36,969.40		Negotiable
12025	18-APR-17	PCL CONSTRUCTION, INC.	ACCT 6971821722	1,222,455.71		Negotiable
12026	18-APR-17	PCL CONSTRUCTION, INC.	ESR 141511.1	144,211.40		Negotiable
12027	18-APR-17	FILANC-BALFOUR BEATTY JV	ACT 4427724347	737,245.16		Negotiable
12028	18-APR-17	FILANC-BALFOUR BEATTY JV	ESR 211084000	4,128.78		Negotiable
12029	18-APR-17	MUNICIPAL WATER DISTRICT OF ORANGEVALLEY COUNTY	FOUNTAIN	113,695.79		Negotiable
12030	18-APR-17	INTERNAL REVENUE SERVICE	FRESNO	196,015.84		Negotiable
12031	18-APR-17	FRANCHISE TAX BOARD	SACRAMENTO	53,123.51		Negotiable
12032	18-APR-17	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	12,072.28		Negotiable
12033	18-APR-17	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR	500.77		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-APR-17 To 30-APR-17
 Account: Checking AP and PR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Report Date: 11-MAY-2017 10:26
 Page: 30

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12034		18-APR-17	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	2,312.75			Negotiable
12035		18-APR-17	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	12,827.08			Negotiable
12036		18-APR-17	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	119,212.09			Negotiable
12037		18-APR-17	EKMEKJYAN, NAREK	PAY	10.60			Negotiable
12038		18-APR-17	BOWEN, DAVID	PAY	21.93			Negotiable
12039		18-APR-17	JACKSON, KATHY	PAY	18.49			Negotiable
12040		18-APR-17	U.S. BANK NATIONALST. LOUIS ASSOCIATION		10,529.31			Negotiable
12041		25-APR-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	3,472.61			Negotiable
12042		25-APR-17	YORK INSURANCE SERVICES GROUP INC - CA	PAY	7,211.45			Negotiable
12043		28-APR-17	U.S. BANK NATIONALST. LOUIS ASSOCIATION		5,794,250.00			Negotiable
12044		28-APR-17	INTERNAL REVENUE SERVICE	FRESNO	194,783.38			Negotiable
12045		28-APR-17	FRANCHISE TAX BOARD	SACRAMENTO	54,116.48			Negotiable
12046		28-APR-17	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	11,971.61			Negotiable
12047		28-APR-17	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR	500.77			Negotiable
12048		28-APR-17	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	2,312.75			Negotiable
12049		28-APR-17	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	11,643.14			Negotiable
12050		28-APR-17	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	118,287.61			Negotiable

Payment Document Subtotal: 11,351,728.13
 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-APR-17 To 30-APR-17
 Account: Checking AP and PR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Report Date: 11-MAY-2017 10:26
 Page: 31

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Bank Account Subtotal :					21,391,676.08		9,563,849.08	

Report Count : 741

Report Total: 21,391,676.08 9,563,849.08

=====
Total Disbursement

*** End of Report ***

\$ 21,391,676.08 Disbursements
<8,578.63> Voids
\$ 21,383,097.45 Total Voids and Disbursements


Exhibit "E"

IRWD Gov Code 53065.5 Disclosure Report

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

01-APR-17 to 30-APR-17

NAME	CHECK No.	CHECK	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Bleckert, Christopher	376534	13-Apr-17	172.00	Membership Renewal	CWEA membership
Bleckert, Christopher	376555	19-Apr-17	166.00	Certification Renewal	CWEA Plant Maintenance Technician Grade I
Borowski, Mike	376556	19-Apr-17	150.00	Membership Renewal	DIR General Electrician Class Fee
Borowski, Mike	376556	19-Apr-17	100.00	Certification Renewal	DIR Electrician Certification
Chandler, Mike	376712	26-Apr-17	105.00	Certification Renewal	SWRCB Water Distribution Grade IV
Davis, Jennifer	376538	13-Apr-17	129.26	Lodging	GIOA 13th Annual Conf., Las Vegas, NV - March 22, 2017
Davis, Jennifer	376538	13-Apr-17	129.26	Lodging	GIOA 13th Annual Conf., Las Vegas, NV - March 23, 2017
Davis, Jennifer	376538	13-Apr-17	195.00	Membership Renewal	Certified Fixed Income Practitioner renewal
Guzman, Juan	376540	13-Apr-17	129.30	Other(Misc)	Safety shoes allowance
Hatch, Lauren	376559	19-Apr-17	199.99	Certification Renewal	American Water College Distribution Exam Preparation Grade 3
Hiorth, Charles	376560	19-Apr-17	167.00	Other(Misc)	Safety shoes allowance
Kalinsky, Arseny	376561	19-Apr-17	262.00	Membership Renewal	AWWA membership renewal
Nelson, Mark	376716	26-Apr-17	105.00	Certification Renewal	SWRCB Water Treatment Operator Grade IV
Parsons, Sheryl	376546	13-Apr-17	150.00	Registration Fees	Raptor ID workshop with Sea & Sage Audubon
Reinhart, Doug	376717	26-Apr-17	436.25	Lodging	Federal Advocacy Trip, Washington, DC - April 5, 2017
Reynoso, Pio	376565	19-Apr-17	340.00	Certification Renewal	SWRCB Wastewater Treatment Plant Operator Grade V
Rutherford, Allan	376548	13-Apr-17	172.00	Membership Renewal	CWEA membership renewal
Swan, Peer	376893	28-Apr-17	360.68	Lodging	CASA and ACWA Conf., Washington, DC - Feb. 26, 2017
Swan, Peer	376893	28-Apr-17	1,196.78	Airfare	CASA and ACWA Conf., Washington, DC - Feb. 26-Mar. 2, 2017
Swan, Peer	376893	28-Apr-17	360.68	Lodging	CASA and ACWA Conf., Washington, DC - Feb. 27, 2017
Swan, Peer	376893	28-Apr-17	100.00	Parking Fee	CASA and ACWA Conf., Washington, DC - Feb. 26-Mar. 2, 2017, airport parking
Van Deusen, Scott	376718	26-Apr-17	172.00	Membership Renewal	CWEA membership renewal
Velardes, Matt	376568	19-Apr-17	393.37	Airfare	American Backflow Prevention Conf., San Antonio, TX - Apr. 3-5, 2017
Wehr, Dana	376551	13-Apr-17	340.00	Certification Renewal	SWRCB Wastewater Treatment Plant Operator Grade IV
Withers, John	376719	26-Apr-17	253.56	Lodging	WaterReuse California Annual Conf., San Diego, CA - Mar. 19, 2017
Withers, John	376719	26-Apr-17	253.56	Lodging	WaterReuse California Annual Conf., San Diego, CA - Mar. 20, 2017
Total Amount:			\$6,538.69		

May 22, 2017
Prepared by: J. Dayer
Submitted by: P. Sheilds
Approved by: Paul A. Cook 

CONSENT CALENDAR

OPERATIONS CENTER AIR HANDLING DUCT REPLACEMENT PROJECT

SUMMARY:

The air handler units at the Michelson Operations Center distribute conditioned air to this building through a network of insulated roof-mounted ductwork. The existing duct work, which is original to the building, shows normal wear expected of galvanized metal ducting exposed to the elements over thirty years and now requires replacement. Staff recommends that the Board authorize the General Manager to execute a contract with Triton Air in the amount of \$107,718.25 for replacement of the Operations Center air handling ducts.

BACKGROUND:

IRWD's Michelson Operations Center was built in 1994 and provides office and shop workspace for multiple departments. The indoor air quality of these spaces is maintained by four air handler units that filter, regulate, and circulate air as part of the heating, ventilating, and air-conditioning system. While the air handler units remain in good operating condition, the air handling ductwork is showing wear due to environmental exposure; this ducting now requires replacement. This project will be implemented in two phases: Phase I is the replacement of ducting for the four air handlers and Phase II will be the replacement of the existing roof coating with a single component elastomeric top coat; both phases are funded through a capital project titled Operations Center Roof Replacement.

Staff issued a request for proposal to a select list of four qualified contractors in April 2017 for Phase I – the replacement of the ducting on the roof. Three contractors attended a job walk held on April 20, 2017. The bid opening was held on May 4, 2017. Only two contractors submitted bids: Ram Air, Inc. in the amount of \$219,962.50 and Triton Air in the amount of \$107,718.25. The third contractor, Orange County Air Conditioning, declined to bid citing its current workload and project timing. The bid summary is as follows:

Supplier	Bid Amount
Triton Air	\$107,718.25
Ram Air Engineering	\$219,962.50
Orange County Air Conditioning	No Bid

FISCAL IMPACTS:

Projects 07117, 07118, and 07119 are included in the 2016-17 Capital Budget; sufficient funds are budgeted to complete the Operations Center Air Handling Duct Replacement Project, which is Phase I of the Operations Center Roof Replacement Project.

Consent Calendar: Operations Center Air Handling Duct Replacement

May 22, 2017

Page 2

ENVIRONMENTAL COMPLIANCE:

This activity does not constitute a project as defined by the California Environmental Quality Act pursuant to section 15378 of the California Code of Regulations, Title 14, Division 6, Chapter 3.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 16, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH TRITON AIR IN THE AMOUNT OF \$107,718.25 FOR THE OPERATIONS CENTER AIR HANDLING DUCT REPLACEMENT PROJECT.

LIST OF EXHIBITS:

None.

May 22, 2017

Prepared by: J. Davis / T. Fournier

Submitted by: R. Jacobson / C. Clary

Approved by: Paul A. Cook

CONSENT CALENDAR

LETTER OF CREDIT EXTENSION FOR THE SERIES 2008-A REFUNDING BONDS AND EARLY REDEMPTION OF THE SERIES 1995 BONDS

SUMMARY:

IRWD currently has \$51.0 million of Series 2008-A Refunding Bonds (2008-A Bonds) and \$9.9 million of Series 1995 Bonds (1995 Bonds) supported by Sumitomo Mitsui letters of credit (LOC), which are scheduled to expire on July 14, 2017. Staff requested that Sumitomo provide pricing to extend the LOCs. Additionally, former IRWD LOC provider Landesbank Hessen-Thuringen (Helaba) provided pricing for the 2008-A Bonds and the IRWD's Municipal Advisor, Public Financial Management (PFM), reviewed the indicative pricing. Based on pricing proposals received and comparative market feedback from PFM, staff recommends the Board authorize staff to extend the LOC with Sumitomo for the 2008-A Bonds for four years at 0.315%, representing a 6.5 basis point reduction from the current rate of 0.38%. In addition, based on analysis of estimated costs associated with the remaining 1995 Bonds, staff recommends the Board approve an early redemption of the outstanding 1995 Bonds on July 1, 2017, which will provide net savings to IRWD of approximately \$118,000. Legal counsel has prepared resolutions approving the extension of the Sumitomo letter of credit and the early redemption of the 1995 bonds.

BACKGROUND:

Series 2008-A Bonds:

IRWD currently has \$51.0 million of 2008-A Bonds supported by a Sumitomo LOC priced at 0.38%, which is scheduled to expire on July 14, 2017. Sumitomo provided a proposal to extend the LOC for terms of three, four or five years at an annual rate of 0.30%, 0.315%, and 0.33%, respectively. Helaba provided a price quote of 0.30% for a three-, four-, or five-year period. Staff discussed the proposals with IRWD's Municipal Advisor, PFM, to ensure the proposals were competitive with current LOC pricing from other banks of similar credit quality. PFM confirmed the pricing was consistent with the current LOC market, and noted that Sumitomo has been one of the lowest cost providers in recent transactions. Helaba's price quote was slightly lower; but due to additional expenses required to substitute a new LOC provider (publishing new disclosure documents, legal and rating agency fees) estimated at \$123,000, an LOC replacement would be significantly more expensive.

Based on the pricing received, staff recommends the Board authorize staff to extend the Sumitomo LOC for the 2008-A Bonds for a four-year term at 0.315%. The Letter of Credit Pricing Analysis is attached as Exhibit "A".

Series 1995 Bonds:

IRWD currently has \$9.9 million of 1995 Bonds supported by a Sumitomo LOC priced at 0.38%, which will expire on July 14, 2017. A principal payment of \$2.3 million scheduled for January 1, 2018 will leave \$7.6 million outstanding. Sumitomo has offered the same pricing as listed above to extend the LOC on the 1995 Bonds; however, staff recommends an early redemption of the outstanding bonds on July 1, 2017, rather than extending the LOC until final maturity in 2021. The early redemption will provide the District with an estimated net savings of \$118,000 based on the calculation below:

<u>Cost of Debt 1995 Bond Issue</u>	
Interest Expense ⁽¹⁾	\$243,700
Letter of Credit Fees ⁽²⁾	68,400
Trustee and Rating Fees	63,800
LOC Extension Expense	17,000
Remarketing Fees ⁽³⁾	16,100
<u>Total Cost of Debt</u>	<u>\$409,000</u>
<u>Investment Interest⁽⁴⁾</u>	<u>291,000</u>
<u>Estimated Net Savings</u>	<u>118,000</u>

(1) Interest Expense Assumption - 0.90% 2017 to 1.75% 2021

(2) Letter of Credit Fee - Outstanding stated amount at 0.315% until maturity

(3) Remarketing Fee - Outstanding principal amount at 0.08% until maturity

(4) Investment Interest Assumption - 1.00% 2017 to 2.10% 2021

Legal counsel has prepared resolutions approving the extension of the Sumitomo letter of credit and the early redemption of the 1995 bonds, attached as Exhibits "B" and "C", respectively.

FISCAL IMPACTS:

Extending the Sumitomo LOC supporting the 2008-A Bonds for a four-year term at 0.315% will result in an estimated total cost of \$621,158. Early redemption of 1995 Bonds will result in an estimated total net savings of approximately \$118,000.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on May 2, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE STAFF TO EXTEND THE SUMITOMO MITSUI LETTER OF CREDIT SUPPORTING THE 2008-A REFUNDING BONDS FOR FOUR YEARS AT 0.315% ANNUALLY, APPROVE AN EARLY REDEMPTION OF THE OUTSTANDING SERIES 1995 BONDS ON JULY 1, 2017, AND ADOPT TWO RESOLUTIONS BY THE FOLLOWING TITLES:

RESOLUTION NO. 2017-___

RESOLUTION OF THE BOARD OF DIRECTORS OF
THE IRVINE RANCH WATER DISTRICT
AUTHORIZING CERTAIN ACTIONS IN CONNECTION
WITH EXTENSION OF LETTER OF CREDIT
(CONSOLIDATED REFUNDING SERIES 2008A)

RESOLUTION NO. 2017-___

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT CALLING BONDS OF
SAID DISTRICT FOR REDEMPTION AND AUTHORIZING
CERTAIN ACTIONS IN CONNECTION THEREWITH
(CONSOLIDATED SERIES 1995)

LIST OF EXHIBITS:

- Exhibit "A" – Letter of Credit Extension Pricing Analysis
- Exhibit "B" – Resolution Authorizing Certain Actions in Connection with the LOC extension
- Exhibit "C" – Resolution Authorizing Certain Actions in Connection with Calling Bonds

EXHIBIT "A"

**IRVINE RANCH WATER DISTRICT
2008-A Letter of Credit Pricing Analysis**

Term	Stated Amount ⁽¹⁾	Extension Sumitomo A1/A/A		Substitution Helaba A1/A/A+	
		Fee	Annual Cost	Fee	Annual Cost
FY 17-18	\$50,232,329	0.315%	\$158,232	0.300%	\$150,697
FY 18-19	48,710,137	0.315%	153,437	0.300%	146,130
FY 19-20	47,187,945	0.315%	148,642	0.300%	141,564
FY 20-21	45,665,753	0.315%	143,847	0.300%	136,997
4 Year Term Total			\$604,158		\$575,388
Cost of Extension/Substitution			17,000		123,000
Total Cost			\$621,158		\$698,388

⁽¹⁾ Stated amount represents the average par amount of bonds outstanding for the 2008-A Bonds, plus 45 days of interest at the maximum rate of 12%.

Exhibit "B"

RESOLUTION NO. 2017-___

RESOLUTION OF THE BOARD OF DIRECTORS OF
THE IRVINE RANCH WATER DISTRICT
AUTHORIZING CERTAIN ACTIONS IN CONNECTION
WITH EXTENSION OF LETTERS OF CREDIT
(CONSOLIDATED REFUNDING SERIES 2008A)

WHEREAS, the Irvine Ranch Water District ("IRWD") has issued the Bonds of Irvine Ranch Water District, Consolidated Refunding Series 2008A (the "Series 2008A Bonds"); and

WHEREAS, the irrevocable letter of credit of Sumitomo Mitsui Banking Corporation has been issued with respect to the Series 2008A Bonds (the "2008A Letter of Credit"); and

WHEREAS, the Letter of Credit is scheduled to expire on July 14, 2017; and

WHEREAS, consistent with IRWD's Debt Management Policy, the Board of Directors must approve all debt issuance or refunding proposals made by IRWD involving a pledge or other extension of IRWD's credit through the sale of securities, execution of loans or leases, or making guarantees or otherwise involving directly or indirectly the lending or pledging of IRWD's credit;

WHEREAS, after evaluating proposed terms and conditions for extending the Letter of Credit, the Board of Directors believes it is in the interest of IRWD to authorize the extension of the Letter of Credit as provided herein; and

WHEREAS, the 2008A Letter of Credit was issued and has previously been extended pursuant to the Reimbursement Agreement, dated as of April 1, 2011, as amended by the First Amendment to Reimbursement Agreement, dated as of July 15, 2013, each by and between the District and Sumitomo Mitsui Banking Corporation (collectively, the "2008A Reimbursement Agreement").

NOW THEREFORE, the Board of Directors of IRWD DOES HEREBY RESOLVE, DETERMINE and ORDER as follows:

Section 1. The Treasurer is hereby authorized and directed to cause the extension of the 2008A Letter of Credit, so as to expire on or about July 14, 2021. The form of a second amendment to the 2008A Reimbursement Agreement (inclusive of the form of an amended and restated fee letter) are hereby approved in substantially the forms presented to the Board with this resolution, and the President and Secretary are authorized and directed to execute such amendment and the President is authorized to execute such fee letter, each in the form so presented with such changes therein as are approved by, and on the date for delivery established by, the Treasurer with the concurrence of the President, which approval will be conclusively evidenced by execution and delivery thereof.

Section 2. The foregoing authorization to cause the extension of the Letter of Credit shall include the approval of the terms of any amendments to agreement and instrument to be delivered by and to the respective remarketing agent. The President and Secretary of IRWD are

authorized and directed to execute any amendment so approved.

Section 3. The foregoing authorization to cause the extension of the Letter of Credit shall further include any and all of the following: preparation and/or approval, execution and delivery of any notices, instruments, disclosure or other documents to be delivered or distributed in conjunction with the authorized actions, and any other actions to implement such extension of the Letter of Credit.

Section 5. The President, Secretary and each other officer of IRWD hereby is authorized and directed 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 this resolution.

ADOPTED, SIGNED AND APPROVED this 22nd day of May 2017.

President/Vice President
IRVINE RANCH WATER DISTRICT and
of the Board of Directors thereof

Secretary/Assistant Secretary
IRVINE RANCH WATER DISTRICT and
of the Board of Directors thereof

APPROVED AS TO FORM:

By: _____
NOSSAMAN LLP
Legal Counsel - IRWD

AMENDMENT NO. 2 TO
REIMBURSEMENT AGREEMENT

Dated as of July 3, 2017

Between

IRVINE RANCH WATER DISTRICT

and

SUMITOMO MITSUI BANKING CORPORATION,
acting through its New York Branch

Relating to the

\$60,215,000
original aggregate principal amount of
Bonds of Irvine Ranch Water District,
Consolidated Refunding Series 2008A

Amending that certain Reimbursement Agreement, dated as of April 1, 2011, between Irvine Ranch Water District and Sumitomo Mitsui Banking Corporation, acting through its New York Branch, as amended by that certain Amendment No. 1 to Reimbursement Agreement, dated as of July 15, 2013, between Irvine Ranch Water District and Sumitomo Mitsui Banking Corporation, acting through its New York Branch

**AMENDMENT NO. 2 TO
REIMBURSEMENT AGREEMENT**

THIS AMENDMENT NO. 2 TO REIMBURSEMENT AGREEMENT, dated as of July 3, 2017 (this "Amendment No. 2"), between IRVINE RANCH WATER DISTRICT, a California water district ("IRWD") and SUMITOMO MITSUI BANKING CORPORATION, acting through its New York Branch (the "Bank"), amending that certain Reimbursement Agreement, dated as of April 1, 2011, between IRWD and the Bank, as amended by that certain Amendment No. 1 to Reimbursement Agreement, dated as of July 15, 2013 (as so amended, the "First Amended Agreement" and as amended by this Amendment No. 2 and as it may be further amended and supplemented from time to time, the "Agreement").

W I T N E S S E T H

WHEREAS, IRWD issued \$60,215,000 aggregate principal amount of its Bonds of Irvine Ranch Water District, Consolidated Refunding Series 2008A (the "Bonds") constituting the consolidated several general obligations of Improvement District Nos. 105, 113, 135, 161, 182, 213, 235, 250 and 261 (the "Applicable Improvement Districts"), pursuant to an Indenture of Trust dated as of April 1, 2008 (the "Indenture"), by and between IRWD and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"), as the same may be amended or supplemented from time to time;

WHEREAS, the Bonds are Outstanding in the aggregate principal amount of [] Dollars (\$[]); and

WHEREAS, the current stated Termination Date of the Letter of Credit is July 14, 2017 and IRWD has requested the Bank to extend the stated Termination Date of the Letter of Credit. The Bank has agreed to extend the stated Termination Date of the Letter of Credit to July 3, 2021 pursuant to the Letter of Credit Amendment No. 2 (as more particularly defined herein) subject to amendment of the First Amended Agreement as reflected in this Amendment No. 2 and amendment of the Fee Letter, dated as of April 1, 2011, by and between IRWD and the Bank, as amended by that certain Amendment No. 1 to Fee Letter, dated as of July 15, 2013 (as so amended, the "First Amended Fee Letter"), by and between IRWD and the Bank, as reflected in the Amendment No. 2 to Fee Letter dated July 3, 2017, by and between IRWD and the Bank (the "Fee Letter Amendment No. 2").

NOW, THEREFORE, in consideration of the foregoing and the undertakings herein set forth and intending to be legally bound, and in order to induce the Bank to issue the Letter of Credit Amendment No. 2 on the Extension Effective Date (as more particularly defined herein), IRWD and the Bank hereby agree as follows:

SECTION 1. AUTHORITY AND DEFINITIONS

(a) This Amendment No. 2 is entered into pursuant to Section 8.1 of the First Amended Agreement.

(b) This Amendment No. 2 amends the First Amended Agreement.

(c) Capitalized terms used herein without definition shall have the meanings set forth in the First Amended Agreement.

(d) Subject to the satisfaction of the conditions precedent set forth in Section 3 hereof, this Amendment No. 2 shall become effective, and a letter of credit amendment substantially in the form of Exhibit A attached hereto (the "Letter of Credit Amendment No. 2") shall be delivered to the Trustee by the Bank, upon the execution and delivery hereof and of the Fee Letter Amendment No. 2, by IRWD and the Bank on July 3, 2017 (the "Extension Effective Date").

(e) The provisions of this Amendment No. 2 shall supersede and prevail over any conflicting provisions of the First Amended Agreement. If there is any conflict between the terms, conditions, and provisions of this Amendment No. 2 and those of any of the other Financing Documents, the terms, conditions and provisions of this Amendment No. 2, as applicable, shall prevail. Save and except as expressly amended hereby, all of the terms and provisions of the First Amended Agreement continue in full force and effect and are applicable to the provisions of this Amendment No. 2 and the obligations of the parties hereunder. Reference to this specific Amendment No. 2 need not be made in any note, document, agreement, letter, certificate, the Agreement or any communication issued or made subsequent to, or with respect to, the Agreement, it being hereby agreed that any reference to the Agreement shall be sufficient to refer to the First Amended Agreement as hereby amended. The parties hereto expressly agree that this Amendment No. 2 shall constitute a modification of the First Amended Agreement and does not constitute a novation or substitution with respect to the First Amended Agreement.

SECTION 2. AMENDMENT OF THE FIRST AMENDED REIMBURSEMENT AGREEMENT

(a) Section 1.1 of the First Amended Agreement is hereby amended by deleting the following definition in its entirety and substituting the following therefor:

"Governmental Authority" means the government of the United States of America or any other nation or any political subdivision thereof or any governmental or quasi-governmental entity, including any court, department, commission, board, bureau, agency, administration, central bank, service, district or other instrumentality of any governmental entity or other entity exercising executive, legislative, judicial, taxing, regulatory, fiscal, monetary or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the

European Union or European Central Bank), or any arbitrator, mediator or other Person with authority to bind a party at law.

(b) Section 1.1 of the First Amended Agreement is hereby amended by adding the following definitions in alphabetical order:

“*1-month LIBOR*” means, for any day, a rate per annum (rounded upwards, if necessary to the nearest 1/1000 of 1%) for deposits in United States Dollars for a period equal to one month, which appears on Reuters LIBOR01 Page (or such other commercially available source providing such quotations as may be designated by the Bank from time to time) as of 11:00 a.m. (London, England time) on such date (or, if such day is not a Business Day, on the immediately preceding Business Day); provided, that if such rate does not appear on such page on such date, the 1-month LIBOR shall be determined by an alternate method that is designed to produce a rate as similar as possible to the 1-month LIBOR which alternate method shall be reasonably selected by the Bank.

“*Anti-Corruption Laws*” means all laws, rules, and regulations of any jurisdiction applicable to IRWD from time to time concerning or relating to bribery or corruption.

“*OFAC*” means the U.S. Department of the Treasury’s Office of Foreign Assets Control, and any successor thereto.

“*PATRIOT Act*” means the USA PATRIOT Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), as amended from time to time, and any successor statute.

“*Sanctioned Country*” means, at any time, any country or territory which is itself the subject or target of any comprehensive Sanctions.

“*Sanctioned Person*” means, at any time, (a) any Person or group listed in any Sanctions-related list of designated Persons maintained by OFAC or the U.S. Department of State, the United Nations Security Council, the European Union or any EU member state, (b) any Person or group operating, organized or resident in a Sanctioned Country, (c) any agency, political subdivision or instrumentality of the government of a Sanctioned Country, or (d) any Person 50% or more owned, directly or indirectly, by any of the above.

“*Sanctions*” means economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by

OFAC or the U.S. Department of State or (b) the United Nations Security Council, the European Union or Her Majesty's Treasury of the United Kingdom.

(c) Section 2.2(b) of the First Amended Agreement is hereby amended by adding the following at the end thereof deleted in its entirety and the following substituted therefor:

(b) *The Letter of Credit Fees.* IRWD shall pay to the Bank all fees as set forth in the Fee Letter in the amounts and in the time and manner provided for in the Fee Letter, the terms of which Fee Letter are incorporated herein by this reference as if fully set forth herein.

(d) Section 2.2(g) of the First Amended Agreement is hereby deleted in its entirety and the following substituted therefor:

(g) *Increased Costs and Reduced Return.*

(i) If the Bank or any Participant shall have determined, as hereinafter provided, that the adoption or implementation or taking effect of, or any change in, any law, rule, treaty or regulation, or any policy, guideline or directive of, or any change in the interpretation, implementation, application or administration thereof by any Governmental Authority (in each case, whether or not having the force of law), or compliance by the Bank or such Participant with any request, rule, ruling, guidance, regulation or directive of any such Governmental Authority (whether or not having the force of law) (each, a "Change in Law"), shall (A) subject the Bank or such Participant to any Taxes of any kind whatsoever with respect to this Agreement, the Fee Letter, the Pledged Bonds or the Letter of Credit, or change the basis of taxation of payments to the Bank or such Participant of any amounts payable hereunder or under the Fee Letter or any Pledged Bonds (other than a change in the rate of tax based on the overall net income of the Bank or such Participant), (B) impose, modify or deem applicable any reserve, capital or liquidity ratio, special deposit, compulsory loan, assessment, insurance charge or similar requirement against making or maintaining its obligations under this Agreement or maintaining or honoring draws under the Letter of Credit or assets held by or deposited with or for the account of the Bank or such Participant, or (C) impose on the Bank or such Participant any other condition, cost or expense regarding this Agreement, the Pledged Bonds or the Letter of Credit, and

the result of any event referred to in clause (A), (B) or (C) above shall be to increase the cost to the Bank or such Participant of making or maintaining its obligations under this Agreement or maintaining or honoring draws under the Letter of Credit, or to reduce the amount of any sum received or receivable by the Bank or such Participant hereunder or under the Fee Letter or any Pledged Bonds, then, IRWD shall pay to the Bank, for its account or that of such Participant as may be applicable, at such time and in such amount as is set forth in paragraph (iv) of this Section 2.2(g), such additional amount or amounts as will compensate the Bank or such Participant for such increased costs or reductions in amount received or receivable.

(ii) If the Bank or any Participant shall have determined, as hereinafter provided, that the applicability of any Change in Law by any Governmental Authority, or compliance by the Bank or such Participant, or any corporation controlling the Bank or such Participant, with any directive of or guidance from any central bank or other authority (in each case, whether or not having the force of law), shall impose, modify or deem applicable any capital adequacy, liquidity or similar requirement (including, without limitation, a request or requirement that affects the manner in which the Bank or such Participant, or any corporation controlling the Bank or such Participant, allocates capital resources or liquidity to its commitments, including its obligations under the Letter of Credit) that either (A) affects or would affect the amount of capital or liquidity to be maintained by the Bank or such Participant, or any corporation controlling the Bank or such Participant, as it relates to making or maintaining its obligations under this Agreement and the Letter of Credit or (B) reduces or would reduce the rate of return on the Bank's or such Participant's capital or liquidity, or the capital or liquidity of any corporation controlling the Bank or such Participant, to a level below that which the Bank or such Participant or any corporation controlling the Bank or such Participant, could have achieved but for such circumstances (taking into consideration the policies of the Bank or such Participant or any corporation controlling the Bank or such Participant, with respect to capital adequacy or liquidity as it relates to making or maintaining its obligations under this Agreement and the Letter of Credit) IRWD shall pay to the Bank for its own account, or such Participant, as applicable, at such time

and in such amount as is set forth in paragraph (iv) of this Section 2.2(g), such additional amount or amounts as will compensate the Bank or such Participant or any corporation controlling the Bank or such Participant, for such cost of maintaining such increased capital or liquidity or such reduction of the rate of return on the Bank's or such Participant's capital or liquidity, or the capital or liquidity of any corporation controlling the Bank or such Participant related to the maintenance of this Agreement and the Letter of Credit. The provisions of this Section 2.2(g)(ii) shall be available to the Bank or any Participant regardless of any possible contention of invalidity or inapplicability of the law, regulation or condition which has been imposed.

(iii) Notwithstanding the foregoing, for purposes of this Agreement (x) all requests, rules, rulings, guidelines, regulations or directives in connection with the Dodd-Frank Wall Street Reform and Consumer Protection Act shall be deemed to be a Change in Law, regardless of the date enacted, adopted or issued, and (ii) all requests, rules, rulings, guidelines, regulations or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Regulations and Supervisory Practices (or any successor or similar authority) or any Governmental Authority (in each case pursuant to Basel III or any successor Basel Accord) shall be deemed a Change in Law regardless of the date enacted, adopted or issued.

(iv) The Bank may charge IRWD for amounts referred to in subsections (i) and (ii) of this Section 2.2(g) for any period from and after the date on which the Bank gives written notice to IRWD of the Bank's intention to recover increased costs pursuant to this Section. All payments of amounts referred to in subsections (i) and (ii) shall be due and payable thirty (30) days following IRWD's receipt of written notice thereof. Interest on the sums due as described in subsections (i) and (ii), and in the preceding sentence, shall begin to accrue from the date which is thirty (30) days following IRWD's receipt of notice thereof and shall otherwise be payable in accordance with Section 2.2(c) hereof; provided that from and after the required date of payment, interest shall begin to accrue on such obligations at a rate per annum equal to the Default Rate until such delinquent payments have been

paid in full. A certificate as to such increased cost, increased capital or liquidity or reduction in return incurred by the Bank or any Participant as a result of any event mentioned in subsections (i) or (ii) setting forth, in reasonable detail, the basis for calculation and the amount of such calculation shall be submitted by the Bank to IRWD and shall be conclusive as to the amount thereof absent manifest error. In making the determinations contemplated by the above referenced certificate, the Bank or such Participant may make such reasonable estimates, assumptions, allocations and the like that the Bank or such Participant, as applicable, in good faith determines to be appropriate.

(v) The obligations of IRWD under this Section 2.2(g) shall survive the payment of all Obligations owed under this Agreement and the expiration of the Letter of Credit, even if IRWD terminates the Letter of Credit and this Agreement because the Bank has given notice to IRWD of its intention to recover increased costs pursuant to this Section 2.2(g).

(e) Section 2.2(h)(iv) of the First Amended Agreement is hereby deleted in its entirety and the following substituted therefor:

(iv) *Survival of Obligations.* The obligations of IRWD under this Section 2.2(h) shall survive the payment of all Obligations owed under this Agreement and the expiration of the Letter of Credit.

(f) The last sentence of Section 2.8(a) of the First Amended Agreement is hereby deleted in its entirety and the following substituted therefor:

All computations of fees payable by IRWD hereunder or under the Fee Letter shall be made on the basis of a three hundred sixty (360) day year but calculated on the actual number of days elapsed.

(g) Article IV of the First Amended Agreement is hereby amended by adding the following at the end thereof:

(q) *Anti-Corruption Laws; Sanctions; Anti-Terrorism Laws.*

(i) IRWD and its officers and employees and to the knowledge of IRWD the members of the Board of Directors of IRWD, are in compliance with Anti-Corruption Laws and applicable Sanctions in all material respects. None of IRWD or to

the knowledge of IRWD any of the members of the Board of Directors of IRWD or its officers or employees is a Sanctioned Person. None of the Letter of Credit, use of the proceeds of the Bonds or the Letter of Credit or other transactions contemplated hereby will violate Anti-Corruption Laws or applicable Sanctions.

(b) Neither the issuance of the Letter of Credit by the Bank nor the use of the proceeds of the Letter of Credit or the Bonds will violate the PATRIOT Act, the Trading with the Enemy Act, as amended, or any of the foreign assets control regulations of the United States Treasury Department (31 C.F.R., Subtitle B, Chapter V, as amended) or any enabling legislation or executive order relating thereto or successor statute thereto. IRWD is in compliance in all material respects with the PATRIOT Act.

(h) Section 5.1 of the First Amended Agreement is hereby amended by adding the following at the end thereof:

(u) *Anti-Corruption Laws; Sanctions.*

(i) IRWD shall comply in all material respects with all Anti-Corruption Laws and applicable Sanctions.

(ii) IRWD shall provide such information and take such actions as are reasonably requested by the Bank in order to assist the Bank in maintaining compliance with the PATRIOT Act.

(i) Section 5.2 of the First Amended Agreement is hereby amended by adding the following at the end thereof:

(k) *Anti-Corruption Laws; Sanctions.* IRWD shall not use, and IRWD shall ensure that the members of the Board of Directors of IRWD and its officers, employees and agents shall not use, the proceeds of the Bonds or the Letter of Credit (i) in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any Person in violation of any Anti-Corruption Laws or (ii) in any manner that would result in the violation of any applicable Sanctions.

(j) Section 7.1(b) of the First Amended Agreement is hereby deleted in its entirety and the following substituted therefor:

(b) IRWD shall default in the performance or observance of any term, covenant or agreement set forth in Section 5.1(a) (and such default shall continue after the applicable grace period, if any, specified in the agreement or instrument

relating thereto), 5.1(e), 5.1(1), 5.1(u), 5.2(b), 5.2(c), 5.2(d), 5.2(i) or 5.2(k) hereof; or

(k) Section 8.2 of the First Amended Agreement is hereby deleted in its entirety and the following substituted therefor:

Section 8.2 *Payment on Non-Business Days.* Whenever any payment hereunder or under the Fee Letter shall be stated to be due on a day which is not a Business Day, such payment may be made on the next succeeding Business Day, and such extension of time shall in such case be included in the computation of the amount due.

(l) Section 8.5 of the First Amended Agreement is hereby amended by adding the following at the end thereof:

The obligations of IRWD under this Section shall survive the payment of all Obligations owed under this Agreement and the expiration of the Letter of Credit.

(m) The first sentence of the second full paragraph of Section 8.14(e) of the First Amended Agreement is hereby deleted in its entirety and the following substituted therefor:

The obligations of IRWD under this Subsection (e) shall be in addition to any rights that any Indemnitee may have at common law or otherwise and shall survive the payment of all Obligations owed under this Agreement and the expiration of the Letter of Credit.

(n) Article VIII of the First Amended Agreement is hereby amended by adding the following at the end thereof:

Section 8.17 *PATRIOT Act Notice.* The following notification is provided to IRWD pursuant to Section 326 of the PATRIOT Act: The Bank hereby notifies IRWD that pursuant to the requirements of the PATRIOT Act, it is required to obtain, verify and record information that identifies IRWD, which information includes the name and address of IRWD and other information that will allow the Bank to identify IRWD in accordance with the PATRIOT Act, and IRWD hereby agrees to take any action necessary to enable the Bank to comply with the requirements of the PATRIOT Act.

Section 8.18 *No Advisory or Fiduciary Relationship.* In connection with any aspect of the transactions contemplated by this Agreement or the Financing Documents (including in connection with any amendment, waiver or other modification hereof or of any Financing Document), IRWD acknowledges and

agrees that (i) (A) the Letter of Credit issued by the Bank pursuant to this Agreement was negotiated in arm's-length commercial transactions between IRWD, on the one hand, and the Bank, on the other hand, (B) IRWD has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate, and (C) IRWD is capable of evaluating, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement; (ii) (A) in connection with the issuance of the Letter of Credit by the Bank pursuant to this Agreement and with the discussions, undertakings and procedures leading up to the consummation of the transactions contemplated by this Agreement, the Bank is and has been acting solely as a principal and, except as expressly agreed in writing by the relevant parties, has not been, is not, and will not be acting as an advisor, agent or fiduciary for IRWD or any other Person in connection with the transactions contemplated by this Agreement or the discussions, undertakings and procedures leading thereto and (B) the Bank has no obligation to IRWD with respect to the transactions contemplated by this Agreement except those obligations expressly set forth in the Letter of Credit; and (iii) the Bank may be engaged in a broad range of transactions that involve interests that differ from those of IRWD, and the Bank has no obligation to disclose any of such interests to IRWD. To the fullest extent permitted by law, IRWD hereby waives and releases any claims that it may have against the Bank with respect to any breach or alleged breach of agency or fiduciary duty in connection with any aspect of the transactions contemplated by this Agreement.

Section 8.19 *Redaction*. In the event IRWD delivers or permits, authorizes or consents on or subsequent to the Effective Date to the delivery of this Agreement or the Letter of Credit (including without limitation any amendments hereto or thereto) to the Remarketing Agent or any other Person for delivery to the Municipal Securities Rulemaking Board pursuant to Rule G-34 ("CUSIP Numbers, New Issue, and Market Information Requirements"), then prior to such delivery IRWD shall redact (i) such confidential information contained in this Agreement or the Letter of Credit (including without limitation any amendments hereto or thereto) which could be used in a fraudulent manner, such as any variable rate demand obligation liquidity bank routing or account numbers, staff names and contact information and (ii) fees assessed by the Bank, all as may be requested by the Bank in writing and which redaction is consistent with MSRB Notice 2011-17 (February 23, 2011) and IRWD shall not provide or cause to be provided a copy of the Fee Letter. Only such copy of this Agreement and the Letter of Credit (including without

limitation any amendments hereto or thereto) reflecting such redacted material shall be delivered to the Municipal Securities Rulemaking Board.

Section 8.20 *Entire Agreement*. This Agreement and the Fee Letter constitutes the entire understanding of the parties with respect to the subject matter thereof and any prior agreements, whether written or oral, with respect thereto are superseded hereby and thereby.

SECTION 3. CONDITIONS PRECEDENT. The obligation of the Bank to issue and deliver the Letter of Credit Amendment No. 2 to the Trustee shall be subject to the fulfillment, at or before the issuance of the Letter of Credit Amendment No. 2, of each of the following conditions, in form and substance satisfactory to the Bank:

(a) This Amendment No. 2 and the Fee Letter Amendment No. 2 shall have been duly executed and delivered by each of the respective parties thereto and shall not have been modified, amended or rescinded, shall be in full force and effect on and as of the Extension Effective Date and executed originals of each thereof shall have been delivered to the Bank.

(b) All other legal matters pertaining to the execution and delivery of this Amendment No. 2 and the Fee Letter Amendment No. 2 and the issuance of the Letter of Credit Amendment No. 2 shall be satisfactory to the Bank, and the Bank shall have received such other certificates, approvals or filings, opinions and documents as shall be reasonably requested by the Bank.

SECTION 4. REPRESENTATIONS AND WARRANTIES. IRWD hereby represents and warrants as of the Extension Effective Date as follows:

(a) Each representation and warranty on the part of IRWD contained in this Amendment No. 2 and in the Agreement (including as amended by this Amendment No. 2) and in any and all documents delivered to the Bank in connection herewith are true and correct in all material respects;

(b) no Default or Event of Default has occurred and is continuing or will occur upon the issuance of the Letter of Credit Amendment No. 2;

(c) since June 30, 2016, there has been no material adverse change in such condition or operation, the business properties, or conditions (financial or otherwise) of IRWD, except as disclosed to the Bank in writing;

(d) IRWD is in compliance with the terms and conditions of the First Amended Agreement and has performed or complied with all of its obligations, covenants and conditions to be performed or complied with pursuant to the Agreement on or prior to the Extension Effective Date;

(e) this Amendment No. 2 and the Fee Letter Amendment No. 2 have been duly authorized, executed and delivered by IRWD; and

(f) there are no facts that IRWD has failed to disclose to the Bank that, individually or in the aggregate, could have a materially adverse effect on the assets, financial condition, business or operations of IRWD or its ability to perform its obligations under the Financing Documents [and all information, reports and other papers and data with respect to IRWD furnished to the Bank or its counsel by IRWD in connection with this Amendment No. 2 and the Fee Letter Amendment No. 2, taken in the aggregate and as supplemented, replaced, substituted or modified by any subsequent information, reports, paper and data so furnished, are true and correct in all material respects and do not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements contained therein not misleading, and were provided in expectation of the Bank's reliance thereon in issuing the Letter of Credit Amendment No. 2].

SECTION 5. COSTS AND EXPENSES. IRWD agrees to pay on demand, whether or not the transactions contemplated by this Amendment No. 2, the Fee Letter Amendment No. 2 and the Letter of Credit Amendment No. 2 are consummated, all costs and expenses paid or incurred by the Bank (including the reasonable fees and out-of-pocket expenses of counsel for the Bank) in connection with the preparation, review, execution and delivery of this Amendment No. 2, the Fee Letter Amendment No. 2 and the Letter of Credit Amendment No. 2. IRWD hereby agrees that all costs and expenses incurred by the Bank in connection with the transactions contemplated herein and the satisfaction of the foregoing conditions (whether or not this transaction closes), including, without limitation, costs and expenses of United States counsel to the Bank, are included as obligations under the First Amended Agreement.

SECTION 6. NO WAIVER. IRWD acknowledges and agrees that, if and to the extent that the Bank has not heretofore required strict compliance with the performance by IRWD of the covenants, agreements and obligations of IRWD under the Agreement or the other Financing Documents, such action or inaction shall not constitute a waiver of, or otherwise affect in any manner, the Bank's rights and remedies under the Agreement or the other Financing Documents, as amended hereby, including the right to require performance of such covenants, agreements and obligations strictly in accordance with the terms and provisions thereof.

SECTION 7. EXECUTION IN COUNTERPARTS. This Amendment No. 2 may be executed in counterparts, each of which when so executed and delivered shall be deemed to be an original and all of which counterparts, taken together, shall constitute but one and the same agreement.

SECTION 8. GOVERNING LAW. The Bank's rights and obligations hereunder shall be deemed to be a contract made under the laws of the State of New York and for all purposes shall be construed in accordance with the laws of said State, without regard to principles of conflicts of law. For purposes of IRWD's rights and obligations hereunder, this Amendment No. 2 shall be deemed to be a contract made under the laws of the State of California and for all purposes shall be construed in accordance with the laws of said State, without regard to principles of conflicts of law.

SECTION 9. SEVERABILITY OF PROVISION. Any provision of this Amendment No. 2 which is prohibited, unenforceable or not authorized in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition, unenforceability or non-

authorization without invalidating the remaining provisions hereof or affecting the validity, enforceability or legality of such provision in any other jurisdiction.

SECTION 10. ENTIRE AGREEMENT. This Amendment No. 2 and the Fee Letter Amendment No. 2 constitutes the entire understanding of the parties with respect to the subject matter thereof and any prior agreements, whether written or oral, with respect thereto are superseded hereby and thereby. Taken together with the First Amended Agreement and the and the First Amended Fee Letter and the other instruments and documents delivered in compliance herewith, this Amendment No. 2 and the Fee Letter Amendment No. 2 are a complete memorandum of the agreement of IRWD and the Bank.

SECTION 11. HEADINGS. Section headings used in this Amendment No. 2 are for convenience of reference only and shall not affect the construction of this Amendment No. 2.

[The remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment No. 2 to Reimbursement Agreement to be duly executed and delivered by their respective officers duly authorized as of the date first above written.

IRVINE RANCH WATER DISTRICT

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

**SUMITOMO MITSUI BANKING
CORPORATION, acting through its New York
Branch**

By: _____
Name: _____
Title: _____

Exhibit A

Form of Letter of Credit Amendment No. 2

SUMITOMO MITSUI BANKING CORPORATION
277 Park Avenue
New York, New York 10172

**Bonds of Irvine Ranch Water District
Consolidated Refunding Series 2008A**

ANNEX 10
**[FOR BANK TO EXTEND TEMRINATION DATE OF
LETTER OF CREDIT UPON REQUEST OF IRWD]**

The Bank of New York Mellon Trust Company, N.A., as Trustee
400 South Hope Street, Suite 500
Los Angeles, CA 90071
Attention: Christopher Johnson

CERTIFICATE EXTENDING THE TERMINATION DATE OF LETTER OF CREDIT

You are hereby notified pursuant to Section 2.6 of the Reimbursement Agreement, dated as of April 1, 2011, by and between Irvine Ranch Water District and Sumitomo Mitsui Banking Corporation, acting through its New York Branch (the "Bank") that the Bank has approved a four-year extension of Letter of Credit No. LG/MIS/NY-037710 (the "Letter of Credit"), dated April 15, 2011. The new Termination Date is July 3, 2021.

You are hereby authorized to attach this Certificate Extending the Termination Date of Letter of Credit to the Letter of Credit and to treat this Certificate Extending the Termination Date of Letter of Credit as an amendment to the Letter of Credit.

Date: July 3, 2017

**SUMITOMO MITSUI BANKING
CORPORATION, acting through its New York
Branch**

By: _____
Name: _____
Title: _____

AMENDMENT NO. 2 TO FEE LETTER

July 3, 2017

\$60,215,000

original aggregate principal amount of
Bonds of Irvine Ranch Water District,
Consolidated Refunding Series 2008A

Reference is hereby made to that certain Reimbursement Agreement, dated as of April 1, 2011, between Irvine Ranch Water District (together with any successors and permitted assigns, the “*Issuer*”) and Sumitomo Mitsui Banking Corporation, acting through its New York Branch (the “*Bank*”), as amended by that certain Amendment No. 1 to Reimbursement Agreement, dated as of July 15, 2013, between the Issuer and the Bank and that certain Amendment No. 2 to Reimbursement Agreement, dated as of July 3, 2017, between the Issuer and the Bank (as so amended and as it may be further amended or supplemented from time to time, the “*Agreement*”), relating to the above-captioned bonds (the “*Bonds*”). This Amendment No. 2 to Fee Letter (this “*Amendment No. 2*”) amends that certain Fee Letter, dated April 1, 2011 (the “*Original Fee Letter*”), between the Issuer and the Bank, as amended by that certain Amendment No. 1 to Fee Letter, dated as of July 15, 2013, between the Issuer and the Bank (as so amended, the “*First Amended Fee Letter*”). Capitalized terms used herein without definition shall have the meanings assigned thereto in the Agreement.

1. Authority and Definitions.

(a) This Amendment No. 2 is entered into in compliance with the provisions of the First Amended Fee Letter.

(b) This Amendment No. 2 amends the First Amended Fee Letter.

(c) Capitalized terms used herein without definition shall have the meanings set forth in the First Amended Fee Letter.

(d) This Amendment No. 2 shall become effective upon the execution and delivery hereof by the Issuer and the Bank on July 3, 2017 (the “*Extension Effective Date*”).

(e) The provisions of this Amendment No. 2 shall supersede and prevail over any conflicting provisions of the First Amended Fee Letter. If there is any conflict between the terms, conditions and provisions of this Amendment No. 2 and those of any of the Financing Documents, the terms, conditions and provisions of this Amendment No. 2, as applicable, shall prevail. Save and except as expressly amended hereby, all of the terms and provisions of the First Amended Fee Letter continue in full force and effect and are applicable to the provisions of this Amendment No. 2 and the obligations of the parties hereunder. Reference to this specific Amendment No. 2 need not be made in any note, document, agreement, letter,

certificate, the Fee Letter or any communication issued or made subsequent to, or with respect to, the Fee Letter, it being hereby agreed that any reference to the Fee Letter shall be sufficient to refer to the First Amended Fee Letter as hereby amended. The parties hereto expressly agree that this Amendment No. 2 shall constitute a modification of the First Amended Fee Letter and does not constitute a novation or substitution with respect to the First Amended Fee Letter.

(f) The terms of the First Amended Fee Letter, as amended by this Amendment No. 2, are incorporated by reference into the Agreement as if fully set forth therein.

2. Amendment of the First Amended Fee Letter.

(a) The first full paragraph and the table of Facility Fee Rates set forth in Section 1 of the First Amended Fee Letter are hereby deleted in their entirety and the following substituted therefor:

1. Facility Fee. The Issuer hereby agrees to pay to the Bank a non-refundable facility fee (the “*Facility Fee*”) payable quarterly in arrears on the first Business Day of each January, April, July and October (commencing on July 1, 2011, for the period from and including the Effective Date to but not including July 1, 2011) (each, a “*Quarterly Payment Date*”) for the period from and including such Quarterly Payment Date to but not including the next succeeding Quarterly Payment Date occurring thereafter to the Termination Date, in an amount set forth below. The amount of the Facility Fee for the period from and including the Effective Date to but not including July 15, 2013 shall be as set forth in the Fee Letter, dated April 15, 2011 (the “*Original Fee Letter*”), between the Issuer and the Bank. The amount of the Facility Fee for the period from and including July 15, 2013 to but not including July 15, 2017 shall be as set forth in the Original Fee Letter, as amended by that certain Amendment No. 1 to Fee Letter, dated as of July 15, 2013, between the Issuer and the Bank, and shall be payable on October 2, 2017 for the period from and including April 3, 2017 to but not including July 15, 2017. The Facility Fee for the period from and including July 15, 2017 and thereafter shall be an amount equal to the rate per annum associated with the lowest Rating as specified below (the “*Facility Fee Rate*”) on the undrawn Stated Amount of the Letter of Credit for each day during each related period.

Level	S&P Rating	Moody’s Rating	Fitch Rating	Facility Fee Rate
Level 1	AA- or above	Aa3 or above	AA- or above	0.315%
Level 2	A+	A1	A+	0.615%
Level 3	A	A2	A	0.950%
Level 4	A-	A3	A-	1.250%
Level 5	BBB+	Baa1	BBB+	1.750%
Level 6	BBB	Baa2	BBB	2.000%
Level 7	BBB-	Baa3	BBB-	2.250%

Level 8	Below BBB-	Below Baa3	Below BBB-	3.000%
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(b) The first two sentences of the paragraph following the table of Facility Fee Rates set forth in Section 1 of the First Amended Fee Letter are hereby deleted in their entirety and the following substituted therefor:

At any time the Rating is withdrawn, suspended or otherwise unavailable by S&P, by Moody's or by Fitch, or if any Event of Default shall occur, the Facility Fee Rate shall be three percent (3.00%). Any increase or decrease in such fees pursuant to the above schedule shall begin accruing at the increased or decreased rate upon the release or announcement thereof or the occurrence of such Event of Default, and the next quarterly fee payment shall be adjusted accordingly.

3. Miscellaneous.

(a) This Amendment No. 2 may be executed in counterparts, each of which when so executed and delivered shall be deemed to be an original and all of which counterparts, taken together, shall constitute but one and the same agreement.

(b) This Amendment No. 2 and the First Amended Fee Letter shall be construed as one agreement between the Issuer and the Bank and shall be governed by the provisions of the First Amended Fee Letter.

(c) The Bank's rights and obligations hereunder shall be deemed to be a contract made under the laws of the State of New York and for all purposes shall be construed in accordance with the laws of said State, without regard to principles of conflicts of law. For purposes of the Issuer's rights and obligations hereunder, this Amendment No. 2 shall be deemed to be a contract made under the laws of the State of California and for all purposes shall be construed in accordance with the laws of said State, without regard to principles of conflicts of law.

(d) Any provision of this Amendment No. 2 which is prohibited, unenforceable or not authorized in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition, unenforceability or non-authorization without invalidating the remaining provisions hereof or affecting the validity, enforceability or legality of such provision in any other jurisdiction.

[The remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the Issuer and the Bank have caused this Amendment No. 2 to Fee Letter to be duly executed and delivered as of the date first above written.

IRVINE RANCH WATER DISTRICT

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

SUMITOMO MITSUI BANKING
CORPORATION, acting through its New York
Branch, as the Bank

By: _____
Name: _____
Title: _____

RESOLUTION NO. 2017 - _____

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT CALLING BONDS OF
SAID DISTRICT FOR REDEMPTION AND AUTHORIZING
CERTAIN ACTIONS IN CONNECTION THEREWITH
(CONSOLIDATED SERIES 1995)

WHEREAS, the Irvine Ranch Water District ("IRWD") issued the series of bonds designated Bonds of Irvine Ranch Water District, Consolidated Series 1995 (the "Bonds"), pursuant to an Indenture of Trust, dated as of December 1, 1995, amended and supplemented by a First Supplemental Indenture of Trust, dated as of April 1, 2011 (as so amended and supplemented, the "Indenture"), each by and between the District and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the "Trustee"); and

WHEREAS, Sumitomo Mitsui Banking Corporation (the "Bank") has issued an irrevocable letter of credit relating to the Bonds (the "Letter of Credit"); and

WHEREAS, pursuant to the reimbursement agreement entered into between IRWD and the Bank relating to the Letter of Credit, the Letter of Credit presently expires on July 14, 2017; and

WHEREAS, consistent with IRWD's Debt Management Policy, the Board of Directors must approve all debt issuance or refunding proposals made by IRWD involving a pledge or other extension of IRWD's credit through the sale of securities, execution of loans or leases, or making guarantees or otherwise involving directly or indirectly the lending or pledging of IRWD's credit;

WHEREAS, in consideration of the remaining principal amount outstanding, the time remaining to final maturity and other factors associated with the Bonds, the Board of Directors of IRWD has determined that it is in the interest of IRWD to call for redemption and redeem all of the outstanding Bonds prior to July 14, 2017; and

WHEREAS, the Bonds were issued as the consolidated, several general obligations of IRWD's Improvement District Nos. 105, 140, 240 and 250; on November 11, 2013, Improvement District Nos. 105, 140 and 250 were ordered by the Board of Directors to be consolidated along with other coterminous improvement districts into a consolidated improvement district. Improvement District Nos. 105 and 140 were designated "Improvement District No. 125" and Improvement District No. 250 was designated "Improvement District No. 225." As a result of the foregoing actions, the Bonds currently constitute the consolidated, several general obligations of Improvement District Nos. 125, 240 and 225. Pursuant to the California Water Code, Improvement District No. 125 and 225 are authorized to levy and collect the assessments and charges necessary to satisfy the obligations of its predecessor improvement districts, including the assessments and charges necessary to satisfy payment of the Bonds for Improvement District Nos. 105, 140 and 225, respectively

WHEREAS, the Board has identified funds of Improvement District No. 240, Improvement District No.125 and 225 (as the legal successor improvement district to Improvement District Nos. 105, 140 and 250, respectively) that are available and sufficient for the purpose of reimbursing the Bank pursuant to the draws to be made in connection with the redemption of the Bonds in accordance with the Letter of Credit; and

WHEREAS, this Board desires to authorize the execution and delivery of any and all documents and instruments and the performance of any and all acts and things necessary or proper for carrying out the transactions contemplated by this resolution and the Indenture relating to the redemption of the Bonds.

NOW, THEREFORE, the Board of Directors of IRWD DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

Section 1. Pursuant to the Indenture, the Treasurer of IRWD (the “Treasurer”) is authorized and directed to cause all outstanding Bonds to be called for redemption and redeemed on July 3, 2017. The Treasurer is hereby authorized and directed to give instructions to the Trustee to cause a notice of redemption for the Bonds to be given in accordance with the Indenture.

Section 2. The Treasurer is authorized and directed to cause available funds of Improvement District Nos. 125, 240 and 225 to be applied to the reimbursement of draws on the Letter of Credit in connection with the redemption and to take any other actions as may be required by the Letter of Credit or reimbursement agreement in such connection.

Section 3. The President, the Treasurer, the Secretary and each other officer of IRWD, acting singly, be and each of them hereby is authorized and directed 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 this resolution and as required by the Indenture and the other documents and instruments relating to the Bonds.

Section 4. This resolution shall take effect immediately upon its adoption.

ADOPTED, SIGNED AND APPROVED this 22nd day of May, 2017.

President/Vice President
IRVINE RANCH WATER DISTRICT
and of the Board of Directors
thereof

Secretary/Assistant Secretary
IRVINE RANCH WATER DISTRICT
and of the Board of Directors
thereof

APPROVED AS TO FORM:

By: _____

NOSSAMAN, LLP
Legal Counsel - IRWD

May 22, 2017

Prepared by: T. Fournier

Submitted by: R. Jacobson / C. Clary

Approved by: Paul Cook

CONSENT CALENDAR

DEBT MANAGEMENT POLICY

SUMMARY:

On September 12, 2016, Governor Brown signed legislation expanding the reporting requirements for state and local government debt issuers to the California Debt and Investment Advisory Commission (CDIAC). Under Senate Bill 1029, issuers must include a certification to CDIAC that the issuer has adopted a Debt Management Policy prior to any new debt issuance. Additionally, a Debt Management Policy has been requested by rating agencies during recent annual ratings updates and during the 2016 debt issuance process. Based on input from the District's municipal advisor, PFM Financial Advisors LLC (PFM), and "best practices" published by the Government Finance Officers Association (GFOA), staff recommends adopting a Debt Management Policy.

BACKGROUND:

Existing law requires that issuers of debt report issue-specific information to CDIAC 30 days prior to any proposed debt issuance. On September 12, 2016, Governor Brown signed legislation expanding the reporting requirements to CDIAC to include a certification by the issuer that it has adopted a debt policy. The policy must address the following:

- Purpose for which debt proceeds may be used (e.g., design, construction, and refinancing);
- The types of debt that may be issued (e.g., tax-exempt, taxable, short-term, long-term, fixed or variable rate);
- The relationship of the debt to, and integration with, the issuer's capital improvement plan or budget;
- Policy objectives (e.g., matching useful life of projects financed); and,
- Internal controls for monitoring the expenditures of bond proceeds for intended purposes.

The proposed Debt Management Policy includes the requirements outlined in SB 1029 as well as appropriate portions of "Best Practice" recommendations from the GFOA which generally reflect debt management and planning processes already used by IRWD. Although it is not anticipated that the District will issue additional debt in the near future, staff recommends that the Board adopt a Debt Management Policy (as provided in Exhibit "A") for rating agencies when requested during annual debt surveillance meetings. A resolution approving the Debt Management Policy is provided as Exhibit "B".

FISCAL IMPACTS:

None.

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 reviewed by the Finance and Personnel Committee on May 2, 2017.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2017-

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT
TO APPROVE THE DEBT MANAGEMENT POLICY

LIST OF EXHIBITS:

Exhibit "A" – 2017 Debt Management Policy
Exhibit "B" – Resolution

Exhibit "A"
IRVINE RANCH WATER DISTRICT
DEBT MANAGEMENT POLICY
May 2017

Purpose

The Debt Management Policy Statement sets forth comprehensive guidelines for the financing of capital expenditures and refinancing of existing debt obligations. The objective of the policy is to:

- 1) Ensure Irvine Ranch Water District (District) obtains financing only when necessary;
- 2) Determine that the timing and amount of debt or other financing is appropriate based on District needs;
- 3) Minimize the cost of debt and related issuance expenses; and,
- 4) Ensure future financial flexibility is maintained, as appropriate.

Debt financing, which includes general obligation bonds, special assessment bonds, revenue bonds, certificates of participation, temporary notes, lease/purchase agreements, state revolving fund loans, and other District obligations permitted to be issued or incurred under California law, shall be used to fund capital assets. The useful life of the asset or project financed with debt proceeds shall exceed the payout schedule of any debt the District assumes.

To promote prudent financial management, the District is committed to systematic capital planning and long-term financial planning. Evidence of this commitment to capital planning will be demonstrated through periodic review and update of the District's Enterprise Model, which incorporates the Long-term Capital Program and the annual adoption of a Capital Budget identifying the costs and funding source for capital improvements.

Use of Debt

The District will utilize debt financing as an appropriate approach to fund long-term capital improvements and ensure that existing and future users pay their fair share of infrastructure costs. Long-term improvements include the acquisition and/or construction of land, facilities, infrastructure, and enhancements or expansions to existing water, sewer and recycled water capacity and facilities. Debt can be issued to fund the planning, pre-design, design, land and/or easement acquisition, construction and related fixtures, equipment and other costs as permitted by law. The District will not issue debt to fund operating needs.

The Treasurer will periodically evaluate the District's existing debt and execute re-financings or prepayment (refunding) when economically beneficial. A refinancing may include the issuance of bonds or other obligations to refund existing bonds or other obligations, such as commercial paper or loans.

All debt issuance or refunding proposals made by the District involving a pledge or other extension of the District's credit through the sale of securities, execution of loans or leases, or making of guarantees or otherwise involving directly or indirectly the lending or pledging of the District's credit shall be approved by the Board. The District's Finance and Personnel Committee (F&P Committee), with analysis provided by the Treasurer, shall be responsible for reviewing debt financing proposals to determine if they are beneficial to the District and comply with the District's long-term financial planning objectives, including maintaining or improving the current credit ratings assigned to outstanding debt by the major credit rating agencies.

**IRVINE RANCH WATER DISTRICT
DEBT MANAGEMENT POLICY
May 2017**

Debt may only be issued under Board authorization and when the District has appropriated sufficient funds to pay the obligation of principal and interest.

Debt Management

There are no specific provisions within the California Government Code that limit the amount of debt that can be issued by the District. The District will provide periodic reviews of its financial performance and evaluate its performance relative to the financial policies outlined herein. Necessary appropriations for annual debt service requirements will be routinely included in the District's annual budget.

The District's Debt Management Policy, Investment Policy, and Interest Rate Swap Policy are integrated into the decision-making framework utilized in the budgeting, long-term capital program and financing process. As such, the following principles outline the District's approach to debt management:

- The District will issue debt only in the case where there is an identified source of repayment. Debt will be issued to the extent that (i) projected revenues are sufficient to pay for the proposed debt service together with existing debt service covered by such existing revenues, or (ii) additional revenues have been identified as a source of repayment in an amount sufficient to pay for the proposed debt.
- The proceeds of any debt obligation shall be expended only for the purpose for which it was authorized. Debt will be structured for the shortest period possible, consistent with a fair allocation of costs to current and future users. Borrowings by the District will be of a duration that does not exceed the projected useful life of the improvement that it finances and where feasible, should be shorter than the projected economic life.
- The District currently issues debt instruments on a fixed and variable interest rate basis. Fixed rate securities ensure budget certainty through the life of the securities and can be advantageous in a low interest rate environment. When appropriate, the District may choose to issue securities that pay a rate of interest that varies according to a predetermined formula or results from a periodic remarketing of the securities. It may be appropriate to issue short-term or long-term variable rate debt or utilize interest rate swaps to diversify the District's debt portfolio, reduce interest costs or provide interim funding for capital projects.
- In October 2002, the Board adopted Resolution 2002-31, which provides a policy to maintain a target amount of investment assets equal to 75% or more of the District's outstanding unhedged variable rate indebtedness. The Board of Directors of the District may modify such policy in the future.

The proceeds of bond sales will be invested until used for the intended project(s) in order to maximize utilization of the public funds. The investments will be made to obtain the highest level of safety of principal. The District's Investment Policy and the specific bond indentures govern objectives and criteria for investment of bond proceeds.

Bond proceeds will be deposited and recorded in separate accounts to ensure funds are not comingled with other forms of District cash. The District's trustee will administer the disbursement

**IRVINE RANCH WATER DISTRICT
DEBT MANAGEMENT POLICY
May 2017**

of bond proceeds pursuant to that certain Indenture of Trust. Requisition for the disbursement of bonds funds will be approved by the District's Treasurer.

The Treasurer will monitor dedicated debt reserve fund balances, if any, and periodically review and recommend on the advisability of prepayment or refunding of related debt with the F&P Committee. A potential refunding will be assessed in combination with any new capital projects requiring financing, and the benefits of the refunding will be evaluated in relation to its costs and risks.

Debt can be refunded to achieve one or more of the following objectives:

- Restructure or reduce future debt service in response to evolving conditions regarding anticipated revenue sources and lower market interest rates; and
- Restructure the legal requirements, termed covenants of the original issue to reflect more closely the changing conditions of the District or the type of debt.

Debt Coverage Target

The District will not engage in debt financing unless the proposed obligation, when combined with all existing debts, will result in acceptable debt ratios. In determining the affordability of proposed bonds, the District will perform an analysis comparing projected annual net revenues (after payment of operating and maintenance expenses) to estimated annual debt service and the resulting estimated debt coverage ratio (DCR). DCR represents the total net revenues divided by the total parity (senior) debt service. The District's existing bond indentures require a minimum DCR of 125% for senior/parity bonds.

Debt Structuring

The Treasurer will evaluate and recommend to the Board the use of a call option, if any, and call protection period for each issuance. A call option, or optional redemption provision, gives the District the right to prepay or retire debt prior to its stated maturity. This option may permit the District to achieve interest savings in the future through refunding of the bonds. Because the cost of call options can vary widely, depending largely on market conditions, an evaluation of factors such as the call premium, time until the bonds may be called at a premium or at par, and interest rate volatility will be considered.

Type of Debt

The District may use general obligation and revenue bonds, certificates of participation, state revolving fund (SRF) loans, bank loans, notes, commercial paper, direct placements, securitizations, lease-purchase financing and other debt obligations as approved by the Board.

In addition to the aforementioned long and short-term financing instruments, the District is authorized to form and/or join with other special districts and/or municipal agencies to create a separate entity, such as a Joint Powers Authority (JPA), to issue debt on behalf of the District, the special district or municipality. The District will only be liable for its share of cost of issuance and debt service, as specified in a contract executed in connection with the joint venture debt.

IRVINE RANCH WATER DISTRICT
DEBT MANAGEMENT POLICY
May 2017

Credit Enhancement

Credit enhancement may be used to improve or establish a credit rating on a District debt obligation. Types of credit enhancement include letters of credit, bond insurance or surety policies. The Treasurer, with input from the District's financial advisor, will recommend to the Board the use of credit enhancement if the use of such credit enhancement furthers the District's overall financial objectives.

Credit Ratings

The District will seek to maintain the highest possible credit ratings that can be achieved for debt instruments without compromising the District's policy objectives. To enhance creditworthiness, the District is committed to prudent financial management, systematic capital planning and long-term financial planning. The District recognizes that external economic, natural, or other events may from time to time affect the creditworthiness of its debt. Each proposal for additional debt will be analyzed for its impact upon the District's debt rating on outstanding debt.

The F&P Committee, with input from the Treasurer (and the District's financial advisor as appropriate), shall be responsible for determining whether a rating shall be requested for a particular financing, and which of the major rating agencies shall be asked to provide such a rating.

Rating Agency Relationships

The District shall be responsible for maintaining relationships with rating agencies Standard & Poor's, Moody's Investors Service, and Fitch Ratings, as appropriate. This effort shall include providing periodic updates, both formal and informal, regarding the District's general financial condition and coordinating meetings and presentations in conjunction with a new debt issuance as appropriate. The District will provide written disclosure documents and annual audited financial statements to the rating agencies.

Method of Sale

The District will select the method of sale that best fits the type of bonds being sold. Three general methods exist for the sale of municipal bonds, each requiring Board approval.

- 1) Competitive Sale: Bonds will be marketed to a number of prequalified investment banking (underwriting) firms. The underwriter is selected based on the best bid for the District's securities (highest price/lowest yield). The District will award the sale of the competitively sold bonds on a true interest cost (TIC) basis. Pursuant to this Policy, the Treasurer or Board President is hereby authorized to sign the bid form on behalf of the District fixing the interest rates on bonds sold on a competitive basis.
- 2) Negotiated Sale: The Board approves selection of the underwriter, or team of underwriters, of its securities in advance of the bond sale. The Treasurer works with the underwriter to bring the issue to market and negotiates all rates and terms of the sale. In advance of the debt issuance, the Board will determine compensation for and liability of each underwriter employed and the designation rules and priority of orders under which the sale will be

IRVINE RANCH WATER DISTRICT
DEBT MANAGEMENT POLICY
May 2017

conducted. Pursuant to this Policy, the Treasurer or the Board President are hereby authorized to sign the bond purchase agreement on behalf of the District.

- 3) Direct Purchase/Private Placement: The District may elect to issue debt through a direct purchase with a bank counterparty or on a private placement basis. Such methods of sale shall be considered if it is demonstrated to result in cost savings or provide other advantages relative to other methods of debt issuance. Private placement financing shall also be considered if it is determined that access to the public market is limited and timing considerations require that a financing be completed.

Underwriters

For negotiated sales, the District will generally select or pre-qualify underwriters through a competitive process. This process may include a request for proposal or qualifications to all firms considered appropriate for the underwriting of a particular issue or type of bonds. The Treasurer will recommend the appropriate method to evaluate the underwriter submittals and then select or qualify firms on that basis. Final underwriter selection will require F&P Committee and Board approval.

District Roles and Responsibilities

The primary responsibility for developing debt financing recommendations resides with the Treasurer and Executive Director of Finance and Administration. All proposed debt financings shall be presented to the F&P Committee for review and feedback. The Board authorizes and approves all debt financings.

Debt is to be issued pursuant to the authority of and in full compliance with provisions, restrictions and limitations of the Constitution and laws of the State of California Government Code (CGC) §54300 et seq.

Bond Counsel

The District will retain external bond counsel for all debt issues. As part of their responsibility to oversee and coordinate the issuance of all District indebtedness, the Treasurer shall make recommendations for approval by the Board on the retention of bond counsel.

Bond counsel will prepare the necessary authorizing resolutions, agreements and other documents necessary to execute the financing. All debt issued by the District will include a written opinion by bond counsel affirming that the District is authorized to issue the debt, stating that the District has met all state constitutional and statutory requirements necessary for issuance and determining the debt's federal income tax status.

Financial Advisors

The District, at its discretion, will select financial advisors who may either be independent financial advisors or firms who engage in municipal bond underwriting or brokerage services. While serving as the District's financial advisor, a firm may not also engage in the underwriting of the District's bond issue for which that firm acts as financial advisor. A firm may also not switch roles (i.e., from

IRVINE RANCH WATER DISTRICT
DEBT MANAGEMENT POLICY
May 2017

financial advisor to underwriter) after a financial transaction has begun. Financial advisors shall be selected by the District through a competitive process on a periodic basis.

The financial advisor may advise the District on refunding opportunities for current outstanding debt, assist in evaluating the merits of competitive, negotiated or private placement of new debt, and determining the most appropriate structure to ensure effective pricing that meets the District's near-term and long-term cash flow needs. The financial advisor may also be retained to work with all parties involved in the financing transaction, including the District's bond counsel, trustee, underwriter(s), rating agencies and credit liquidity providers, to develop and monitor the financing schedule and preparation of the Official Statement. The financial advisor may be requested to assist the District in developing and distributing bid specifications for desired services such as, trustee and paying agents, printing, remarketing and credit liquidity service providers, and assist the District in its review process.

The District expects that its financial advisor, acting as a fiduciary, will provide objective advice and analysis, maintain confidentiality of the District's financial plans and be free from any conflict of interest.

Federal arbitrage and Rebate Compliance

The District will fully comply with federal arbitrage and rebate regulations. Concurrent with this policy, the Treasurer will take all permitted steps to minimize any rebate liability through proactive management in the structuring and oversight of its individual debt issues.

The District's Treasury Department shall be responsible for the following:

- 1) Monitoring the expenditure of bond proceeds to ensure they are used only for the purpose and authority for which the bonds were issued, and exercising best efforts to spend bond proceeds in such a manner that the District shall meet one of the spend-down exemptions from arbitrage rebate. Tax-exempt bonds will not be issued unless it can be reasonably expected that 85% of the proceeds will be expended within the three-year temporary period. The expenditure of bond proceeds shall be reported to the F&P Committee on a periodic basis.
- 2) Monitoring the investment of bond proceeds with awareness of rules pertaining to yield restrictions. Maintaining detailed investment records, including purchase prices, sale prices and comparable market prices for all securities.
- 3) Contracting the services of outside arbitrage consultants to establish and maintain a system of recordkeeping and reporting to meet the arbitrage rebate compliance requirements of the federal tax code.

To the extent any arbitrage rebate liability exists, the District will report such liability in its annual Comprehensive Annual Financial Report (CAFR).

**IRVINE RANCH WATER DISTRICT
DEBT MANAGEMENT POLICY
May 2017**

Continuing Disclosure

The District will meet secondary disclosure requirements in a timely and comprehensive manner, as stipulated by the Securities Exchange Commission (SEC) Rule 15c2-12 and consistent with the District's Disclosure Procedures. The Treasury Department shall be responsible for providing ongoing disclosure information to the Municipal Securities Rulemaking Board's (MSRB's) Electronic Municipal Market Access (EMMA) system, the central depository designated by the SEC for ongoing disclosures by municipal issuers. The District will annually provide required financial information and operating data no later than the required due date, following the end of the District's fiscal year, and will provide notice of certain enumerated events with respect to the bonds, if material, as defined in the District's bond covenants.

The District will remain current with changes in both the administrative aspects of its filing requirements and the national repositories responsible for ensuring issuer compliance with the continuing disclosure regulations. In the event a 'material event' occurs requiring immediate disclosure, the District will ensure information is filed with the appropriate disclosure notification parties.

Policy Review

On an as-needed basis, the District's Treasurer will be responsible for updating and revising this Policy. Any modifications to this Policy shall require approval of the F&P Committee and adoption by the Board.

RESOLUTION NO. 2017 - ____

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT
TO APPROVE THE DEBT MANAGEMENT POLICY

WHEREAS, existing law requires state and local debt issuers to report certain information regarding debt authorization and issuance to the California Debt and Investment Advisory Commission ("CDIAC"); and

WHEREAS, Senate Bill 1029 ("SB 1029") was signed into law on September 12, 2016, amending California Government Code Section 8855 to require state and local debt issuers to additionally certify to the CDIAC that the issuer has adopted a comprehensive debt policy, which includes specified provisions concerning: the purpose for which debt proceeds may be used; the types of debt that may be issued; the relationship of the debt to, and integration with, the issuer's capital improvement plan or budget; policy objectives; and internal controls for monitoring the expenditures of bond proceeds for intended purposes; and

WHEREAS, the attached Debt Management Policy was drafted by Irvine Ranch Water District ("IRWD") staff with input from IRWD's municipal advisor firm, and has been reviewed by IRWD's Finance and Personnel Committee and legal counsel; and

WHEREAS, the proposed Debt Management Policy includes all required components of SB 1029 as well as "best practice" recommendations from the Government Finance Officers Association ("GFOA") and will advance sound financial management practices; and

WHEREAS, the Debt Management Policy was reviewed by the IRWD Board of Directors at its regularly scheduled Board Meeting on May 22, 2017.

NOW, THEREFORE, the Board of Directors of IRWD DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

Section 1. The Board of Directors hereby finds that the facts set forth in the recitals to this Resolution are true and correct, and establish the factual basis for the adoption of this Resolution.

Section 2. The Board of Directors hereby approves and adopts the Debt Management Policy, pursuant to SB 1029.

Section 3. This Resolution shall take effect immediately upon its adoption.

ADOPTED, SIGNED AND APPROVED this 22nd day of May, 2017

President/Vice President
IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

Secretary/Assistant Secretary
IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

APPROVED AS TO FORM:

By: _____

NOSSAMAN LLP

Legal Counsel - IRWD

May 22, 2016

Prepared by: S. Malloy

Submitted by: K. Burton 

Approved by: Paul Cook 

ACTION CALENDAR

MICHELSON WATER RECYCLING PLANT BIOSOLIDS ODOR MONITORING SYSTEM

SUMMARY:

The Michelson Water Recycling Plant (MWRP) Biosolids and Energy Recovery Facilities (Biosolids Project) has the potential to produce odors that could impact the local area. To monitor odors and allow staff to take prompt action, staff recommends that the Board authorize the General Manager to execute a contract with Odotech for the purchase of an OdoWatch odor monitoring system in the amount of \$137,000 for the MWRP Biosolids Project.

BACKGROUND:

IRWD is constructing the MWRP Biosolids Project near the existing recycled water production facilities. The liquid and the biosolids treatment plants include extensive odor control facilities, and both have the potential to generate odors. As a mitigation measure included in the Supplemental Environmental Impact Report for the Biosolids Project, IRWD committed to install an odor monitoring system.

Since the MWRP facilities are located near many residential developments and several preschools, an odor monitoring system is recommended to quickly warn staff if an odor event occurs to ensure that immediate action could be taken to minimize impacts. As there are other sources of odors in the area, such as the pond at the San Joaquin Golf Course, a system that monitors wind direction is also recommended to correlate odor complaints with atmospheric conditions.

Odotech's OdoWatch System:

Odotech of Montreal, Canada offers the OdoWatch system that allows for proactive management of odor emission and provides the odor monitoring features outlined above. OdoWatch provides the following benefits:

- Provides continuous monitoring on a 24-hour/7-day basis;
- Uses "electronic noses" (eNose) for real-time tracking of odor concentrations;
- Uses an on-site weather station with specialized sensors for real-time atmospheric dispersion modeling;
- Alerts staff when an event occurs, such as a threshold exceedance for odors, to allow staff to mitigate impacts;
- Provides real-time data display of atmospheric conditions and potential for odor plumes; and
- Archives data to make it readily available for staff to conduct operational analysis or for regulatory compliance.

The greatest benefit of the OdoWatch system is the Odotech proprietary software that incorporates atmospheric dispersion modeling specific to IRWD's site, a weather station, and data from the eNose devices. If an eNose detects an odor, then the software predicts if the odor will be detected downwind and how long it will take to reach a given location; it will also immediately alerts staff of the information so that action can be taken. Additional detail, including a photo of an eNose and sample displays of OdoWatch information, is included in the OdoWatch brochure, attached as Exhibit "A".

The OdoWatch system will be installed in phases. This proposal is for one weather station and two eNose devices within the recycled water production portion of the MWRP. Previous odor monitoring with Odotech determined the two most likely locations within MWRP. The two eNose devices will be installed at the Headworks odor scrubber and the Flow Equalization Basins. As the Biosolids facilities are completed, additional eNose devices will be installed and incorporated into the OdoWatch system.

Odotech is the only vendor that supplies such an odor monitoring system as described in the Odotech sole source letter, attached as Exhibit "B". Staff recommends the Board authorize the General Manager to execute a contract in the amount of \$137,000 with Odotech for the OdoWatch system as detailed in the Odotech proposal, attached as Exhibit "C". This system will include:

- OdoWatch Platform (two eNose devices, a weather station, and Odotech's web-based software);
- Commissioning;
- Mobile Data Plan for the first 12 months;
- Cloud Services for the first 12 months;
- Shipping of equipment and training;
- Maintenance and support for the first year; and
- Operations & Maintenance Manual.

Staff inspected an installation of the OdoWatch system at Orange County Sanitation District (OCSD). As OCSD's plants are located very close to residential areas, OCSD has the OdoWatch system with several eNose devices mounted on a digester guardrail. OCSD indicated it has been very pleased with the OdoWatch system.

FISCAL IMPACTS:

Project 04286 is included in the FY 2016-17 Capital Budget. The existing budget is sufficient to fund the requested purchase 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 May 16, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONTRACT WITH ODOTECH FOR THE PURCHASE OF AN ODOWATCH ODOR MONITORING SYSTEM IN THE AMOUNT OF \$137,000 FOR THE MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES, PROJECT 04286.

LIST OF EXHIBITS:

- Exhibit "A" – OdoWatch Brochure
- Exhibit "B" – Odotech's Sole Source Letter / OdoWatch
- Exhibit "C" – Odotech's OdoWatch Proposal

OdoWatch

Continuous Monitoring Platform



SEEING ODOURS



Wastewater
Treatment
Plants



Composting



Solid Waste
Management



Mining



Chemicals



Pulp & Paper



Industrial
Livestock



Agro-food

THE ODOWATCH PLATFORM HELPS REDUCE COSTS RELATED TO ODOUR MANAGEMENT

AVANTAGES

- Alert operators when an event occurs such as threshold exceedance for odours, gaseous contaminants or dust and to allow them to take steps to mitigate impacts;
- Archive data to make them readily available for managers to do operational analysis or for regulatory compliance;
- Automatically integrate observations made by employees or residents and display them directly on the site map;
- Facilitates effective communication between the site operators, the community and local authorities;
- Combines in one platform all the elements of a modern management solution for environmental events occurring at the site;
- Helps the decision process for the selection of the right odour reduction techniques and their dimensioning;
- Allows control of the deodorization systems, creating cost savings.



Measurements displayed in odour units per cubic meter (o.u. / m³) based on an olfactometric calibration performed according to EN 13725 and ASTM E679-04 standards.

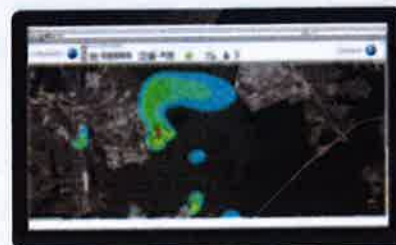
Electronic Nose (eNose)

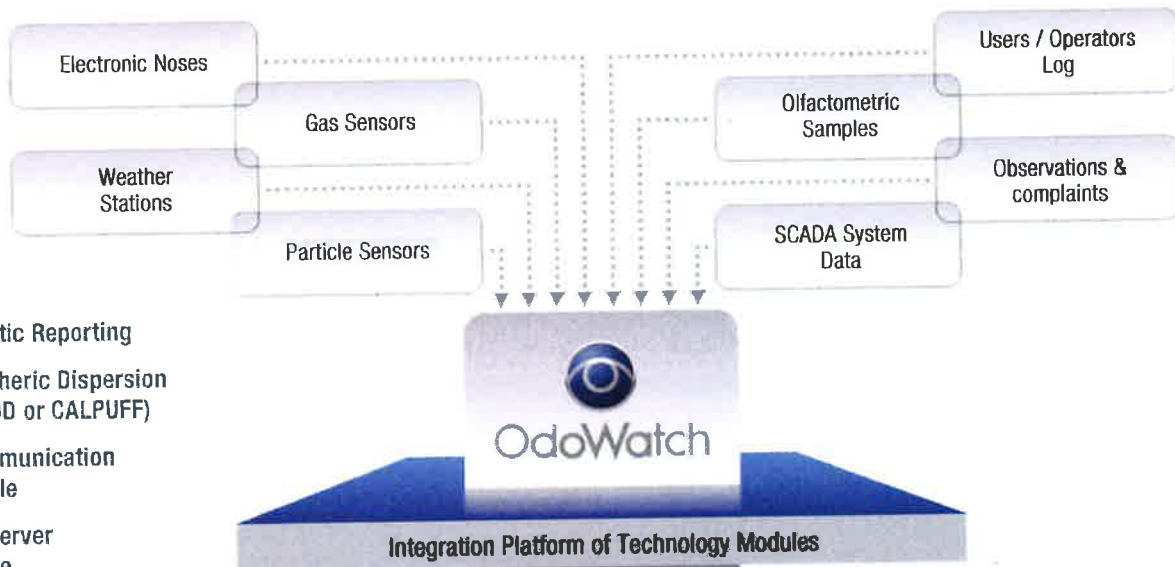
THE ODOWATCH PLATFORM ALLOWS A PROACTIVE MANAGEMENT OF ENVIRONMENTAL REALITY BY MONITORING IN REAL-TIME SITES ODOUR, GASEOUS CONTAMINANT AND / OR DUST.

FEATURES

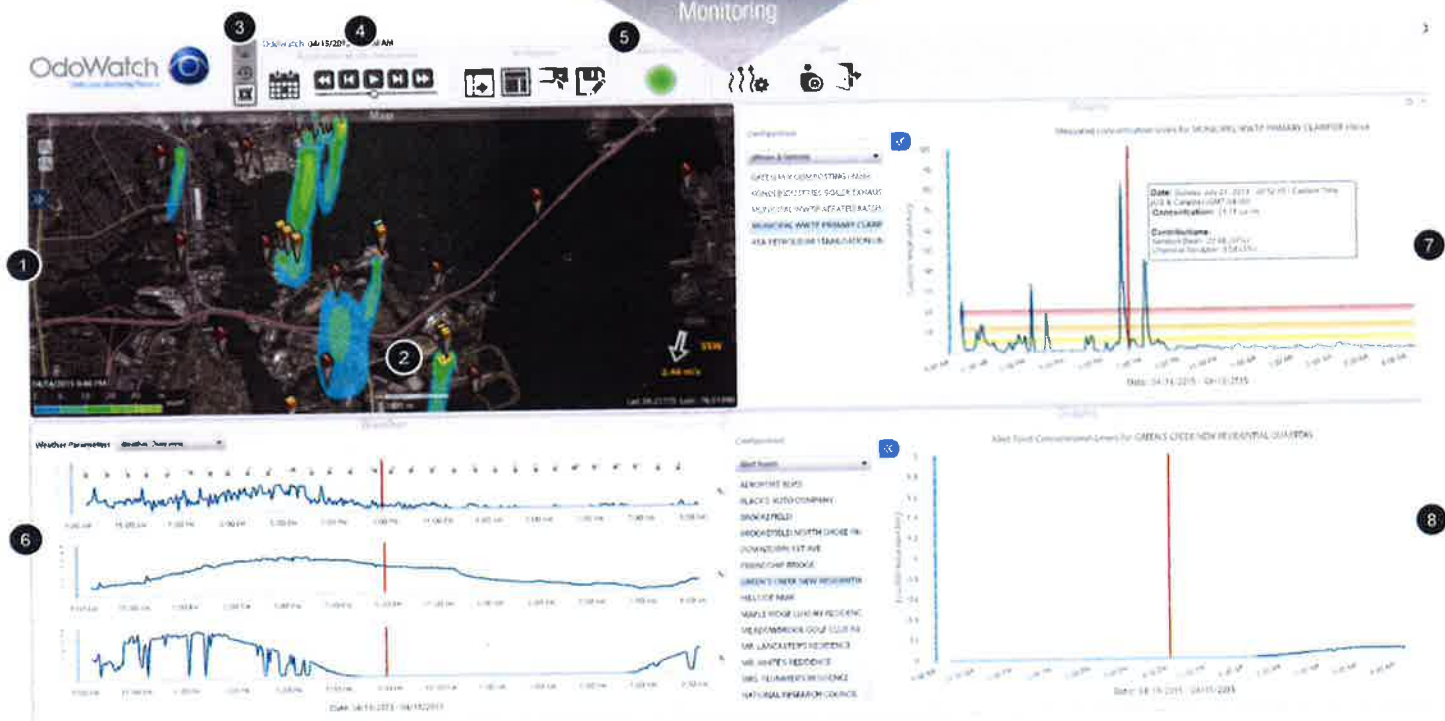
- Provides continuous monitoring on a 24-hour / 7-day basis;
- Centralizes and automates the monitoring of odours, gas and / or dust contaminants
- Models atmospheric dispersion (AERMOD or CALPUFF) as recommended by the US EPA and others agencies;
- Integration on site of:
 - Gas sensors (H₂S, CH₄, NH₃, etc.);
 - Electronic noses (eNose) for real-time tracking of odour concentrations;
 - On-site weather stations with specialized sensors for real-time atmospheric dispersion modeling;
- Automatic integration of community observations / complaints (web, tablet and smartphone);
- Integration of management tools for site operators (logbook and others);
- Provides alert when exceeding predetermined olfactory thresholds;
- Real-time data display including atmospheric dispersion;
- Multi-user interface accessible through a Web browser;
- Automatic report generation;
- Archiving of all collected and calculated data;
- And many others.

The OdoWatch platform allows the continuous and real-time monitoring of environmental events occurring at sites managed by private companies and public utilities.





- Automatic Reporting
- Atmospheric Dispersion (AERMOD or CALPUFF)
- RF Communication or mobile
- Cloud Server or onsite



- 1 Site Map Window
- 2 Odours Plume (colour code depending on the concentration)
- 3 Replay the last hours movie
- 4 Access to historical data
- 5 Alert Points Status
- 6 Weather Data Window
- 7 Concentrations / Alerts / Reports window
- 8 Events / Alerts Window

Site Map

By merging the data received from the weather stations with the data received from the sensors (eNose / gas / dust) installed on site, the OdoWatch platform will perform real-time modeling of the atmospheric dispersion and display the plume superimposed on an aerial view of the site.

EXHIBIT "B"



Steve Malloy, P.E.
Principal Engineer
Irvine Ranch Water District-IWRD
3512 Michelson Drive
Irvine, CA, 92612

April 10, 2017

Subject: Official Sole Source Letter / OdoWatch

3333 Queen-Mary Rd
Suite 301
Montreal, Quebec
H3V 1A2, Canada

Reference: Competitive Bid Exception for OdoWatch real-time odor and gas pollutants monitoring platform

www.odotech.com

Mr. Malloy:

+1 514 340 5250

This is to confirm that Odotech Inc. is the only manufacturer of OdoWatch real-time odor and gas pollutants monitoring platform in the world. We sell direct to end-users in the United States. The only way to procure OdoWatch equipment is thus through Odotech Inc.

If you should have any questions regarding this letter, please contact me at 514-340-5250 ext 701.

I trust this is to your convenience and we look forward to continue doing business with you in the near future.

In the meantime, please accept my kindest regards.

Sincerely,

Guy Laliberté
Chief Executive Officer

EXHIBIT "C"

**PROPOSAL SUBMITTED
TO: IRVINE RANCH WATER DISTRICT
Michelson Water Recycling Plant**

**Object: OdoWatch Real-time
Odor Monitoring Platform
for the Water Recycling Plant**

Odotech
Leader in Odour Science



**CITIZENS AT
THE CENTER OF
OUR BUSINESS**

PRESENTED BY ODOTECH
CONTACT PERSON: Mr. Yves Martin (ymartin@odotech.com)
North America Sales Director – 514-340-5250 (706)

Proposal No: P2105
April 20, 2017
Valid for 90 days

CONFIDENTIAL & PROPERTY OF ODOTECH

LETTER OF INTRODUCTION

Montreal, April 20, 2017

Irvine Ranch Water District
C/O Steve Malloy
3152 Michelson Dr.
Irvine, Ca
92612

Object: Proposal for an OdoWatch real-time odor monitoring platform

Mr. Malloy:

We are pleased to forward you a proposal for the delivery of a comprehensive OdoWatch technological platform for the real-time (24/7) monitoring of odor emissions from the Michelson Water Recycling Plant). This platform will help you monitor in real-time possible odor impacts off-site. We understand what is at stake and we have worked with numerous such plants in the USA and abroad.

Odotech has been focusing on one thing for the last 18 years: developing tools and services to help its clients track odors. With its headquarters in Montreal, and offices in Europe and South America, we have successfully conducted over 700 similar interventions, in more than one hundred sites on all continents. We can safely say that we are among the world leaders in that expertise.

We are fully confident that our technology, backed by years of experience in similar projects, will help the IRWD in preventing any such problems evolving into an odor nuisance situation.

I am available to review the proposal at your earliest convenience. Please suggest a time and day to do so.

Until then, Mr. Malloy, please accept our kindest regards.

Yves Martin
Sales Director North America
514-340-5250 (706); 514-865-1870 (cel)
ymartin@odotech.com

6 COSTS OF PROPOSED SOLUTION

Item	Description	Comments
1	OdoWatch Platform (as described in proposed OdoWatch Platform - section 3, excluding Observation module)	Included
2	Commissioning	Installation not included
3	Mobile Data Plan for 1 st 12 months	Included
4	Cloud Services for 1 st 12 months	Included
5	Shipping of equipment & Training – via WEB	Included
6	Maintenance & Support for 1 st year	Included
7	Operational and Maintenance Manual (PDF Format)	Included

Total Price: 137,000\$

Travel related expenses are included in the lump sum costs. Taxes are not included and are to be paid by client. This price is DAP, Irvine, CA.

The observation module is not included and would add \$5,000 to costs.

PAYMENT TERMS

Payment terms are as follows:

- Fifty percent (50%) of the Agreement total value at the time of order.
- Forty percent (40%) at shipment of main equipment.
- Ten percent (10%) upon commissioning (final acceptance) or no later than 6 months from PO.

All invoices are payable upon receipt.

LEAD TIME

The estimated lead time from the time of the PO to the shipment of the equipment is approximately 8-10 weeks from payment of first invoice. The exact lead time may be impacted by the timing of the Purchase Order. ODOTTECH will reconfirm the lead time at PO. ODOTTECH will do its best efforts to lower lead time.

May 22, 2017

Prepared by: T. Lynch/J. McGehee/R. Mori

Submitted by: K. Burton *(KLB)*

Approved by: Paul Cook *(Signature)*

ACTION CALENDAR

IRVINE INDUSTRIAL COMPLEX EAST ZONE A TO B BOOSTER PUMP STATION UPGRADES CONSULTANT SELECTION

SUMMARY:

Upgrades to the Irvine Industrial Complex (IIC) East Zone A to B Booster Pump Station (BPS) are required to meet increased recycled water demands in Zone B. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$213,757 with Lee & Ro for engineering services for the IIC East Zone A to B BPS Upgrades.

BACKGROUND:

As described in the Recycled Water Distribution System Analysis prepared by Stantec in March 2016, IRWD's non-potable water distribution system has undergone significant changes in operations, demands, and facility planning over the past several years. The most significant changes to the demands and operation are anticipated within the recycled water system, specifically the Zone B and Zone C pressure zones north of the I-5 freeway.

The IIC East Zone A-B BPS, which is located near the intersection of Irvine Center Drive and Odyssey as shown on Exhibit "A", currently feeds the East Irvine and Quail Hill Zone B service areas. As neighborhood development construction progresses, the pump station will also supply the Planning Area 51 and Northwood Zone B service areas. To accommodate the additional system demands, the pump station capacity needs to be increased. This project will install an additional pump in the station along with needed electrical upgrades including the installation of a new control panel. The pump station currently contains a spare available pump can, pump suction and discharge piping, and electrical conduit, so no significant underground work is anticipated.

Engineering Services Consultant Selection:

In June 2016, the Board authorized the General Manager to execute a Professional Services Agreement with Lee & Ro for design of the Santiago Hills II (SHII) Zone 5-6 and Zone C+ to E Booster Pump Station Project. Shortly after Lee & Ro completed the preliminary design, the Irvine Company postponed the SHII development, which subsequently resulted in the cancellation of the SHII pump station design project.

With the cancellation of the SHII pump station project, staff determined that Lee & Ro was the best available candidate to complete the design of the IIC East BPS Upgrades project as the same project team that had been working on the SHII pump station project was immediately available to work on this pump station project. Additionally, Lee & Ro previously completed a similar pump station upgrades project for the Foothill Zone 6A BPS and recently completed the design

Action Calendar: Irvine Industrial Complex East Zone A to B Booster Pump Station Upgrades
Consultant Selection
May 22, 2017
Page 2

of the Hidden Canyon Booster Pump Station project. A copy of Lee & Ro's scope of work and fee proposal, in the amount of \$213,757, is attached as Exhibit "B".

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$213,757 with Lee & Ro since its design approach, schedule, and staff hours are consistent with the project goals. The Lee & Ro team also provides substantial recent IRWD pump station design experience and the proposed project manager is the same individual who successfully managed the Hidden Canyon Booster Pump Station, SHII Pump Station, and Foothill Zone 6A Pump Station Upgrade projects.

FISCAL IMPACTS:

The IIC East Zone A to B BPS Upgrades, project 06198, is included in the FY 2016-17 Capital Budget. The existing budget is sufficient to fund engineering services.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental 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. It is expected that preliminary analysis will lead to the preparation of a Notice of Exemption from the project.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 16, 2017.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT IN THE AMOUNT OF \$213,757 WITH LEE & RO FOR ENGINEERING SERVICES FOR THE IIC EAST ZONE A TO B BOOSTER PUMP STATION UPGRADES, PROJECT 06198.

LIST OF EXHIBITS:

Exhibit "A" – Location Map
Exhibit "B" – Lee & Ro's Scope of Work and Fee

EXHIBIT "A"
LOCATION MAP

IIC EAST BOOSTER PUMP STATION UPGRADES PROJECT





April 25, 2017

Toni Lynch, Assistant Engineer
 IRVINE RANCH WATER DISTRICT
 15600 Sand Canyon Avenue
 Irvine, CA 92618

**Subject: FEE PROPOSAL for
 Zone A to B Recycled Water Pump Station Upgrades (Rev 2)**

LRI: 1167

Dear Toni Lynch:

We present the following fee proposal for engineering and design services for the Zone A to B Recycled Water Pump Station Upgrades based on our site visit on 3/21/2017 and the Memorandum dated 3/7/2017, title Multi-Zone Pump Station – Irvine IIC East Pump Station Upgrades.

SCOPE OF WORK

The existing Zone A-B Booster Pump Station contains four Goulds pumps (three duty and one standby), model 14RHMC, and one spare pump can for an additional pump. Each pump has a capacity of 2,000 gpm at a TDH of 201 feet, as verified by efficiency testing (by others). The pumps are housed in a 24-inch diameter pump barrel. The Recycled Water Distribution System Analysis, (by others) recommends installing an additional Goulds pump, model 14RHMC, with the same capacity of 2,000 gpm at a TDH of 201 feet. IRWD has requested that we add a 5th similar pump. The PDR letter report will confirm the selection.

Currently, two pumps are driven by soft-starters, and the other two pumps are driven by VFDs. The two existing VFDs that are not currently functional. Operations has requested that as part of this upgrade project, the two VFDs shall be replaced. Replacing the two VFDs will give Operations Staff more flexibility to meet system demand in Zone B when the Zone B reservoir is offline. The Water District prefers the fifth pump be driven by a soft starter.

The current PLC utilizes a combination of the original PLC, Modicon 984, and a later installed updated PLC, Modicon M340. All of the existing I/O is routed to the Modicon 984 that utilizes Ethernet to communicate to the Modicon M340. The Modicon 984 is antiquated and is no longer produced or supported by Modicon. The anticipated electrical upgrades will consist of replacing the PLC and all other equipment in the PLC cabinet including, the light board, analog displays, and battery backup. There are several possible options and outcomes on how to complete the upgrades depending on the final design criteria. There are significant engineering and construction costs difference between the low end and the high end of the range of possible PLC improvements. The cost proposed herein assumes the more difficult complete replacement of the

PLC and all apparatus with new for the entire station. During the workshops and PDR development, the project team will come to consciences on the most appropriate way to modernize the existing PLC system for the station. In addition, the cost proposal is a not-to-exceed amount and will only be billed on actual effort of hours expended.

In addition, temporary communication may also be required while facilities are upgraded and switched over. There are two sites that are repeated through the pump station: Aufdenkamp 2 turnout and East Irvine (Laguna) Zone B reservoir.

During the PDR development, we will coordinate with Operations Staff and review the mechanical and electrical reliability of the ancillary equipment (such as lighting, HVAC) at the pump station and make recommendations and necessary design improvements.

Work shall generally consist of, but not be limited to, the following tasks.

Task 1 Project Management

LEE & RO will conduct project management activities to ensure adherence to scope, schedule, and budget; promote efficient communication between the Engineer, IRWD, and others as required; and implement an effective quality assurance/quality control (QA/QC) program.

- A. Preparation of Project Status Reports. Prepare weekly and monthly status reports. Each weekly status report shall be submitted on Monday and shall consist of a brief (one or two paragraphs) e-mail summarizing the activities completed the previous week, the activities planned for the upcoming week, and critical decisions that need to be made. Each monthly status report shall be submitted on the last Thursday of the month and shall provide more detail, summarizing the work completed and reviewing work status relative to budget and schedule. The project schedule shall also be updated on a monthly basis for inclusion in the monthly status report.
- B. Meetings and Workshops. LEE & RO will organize, attend, and conduct meetings and workshops as required; prepare and submit meeting agendas for IRWD review and concurrence at least five days prior to the meeting; and prepare draft and final minutes for all meetings and workshops and submit them to IRWD within one week of the meeting.

Meeting/Workshop	Description
General project management and design development meeting	One (1) two-hour meeting
Site Visits	Two (2) two-hour meetings
Preliminary Design Workshop	One (1) two-hour workshop
Present the 60% design, discuss IRWD's comments, and discuss how the outstanding items were addressed	One (1) two-hour meeting
Present the 90% design, discuss IRWD's comments, and discuss how the outstanding items were addressed	One (1) two-hour meeting
Present the 100% design, discuss IRWD's comments, and discuss how the outstanding items were addressed	One (1) two-hour meeting

- C. Quality Assurance/Quality Control. LEE & RO will develop and implement proven QA/QC measures throughout the project to ensure ongoing and consistent quality control throughout all project phases. As part of the QA/QC measures, the Engineer shall capture comments from review meetings and submittals and thoroughly check the work product to ensure that comments are addressed.

Task 2 Preliminary Design

LEE & RO will perform the following subtasks as part of the preliminary design phase. The subtasks shall be documented and compiled into a Preliminary Design Report (PDR) letter report as summarized below.

- A. Background Information. LEE & RO will review existing documents available and develop baseline CAD files for the projects use. These baseline CAD files include, mechanical layouts, structural walls, ventilation systems, electrical equipment layouts, lighting, and electrical wiring for the PLC and field devices.
- B. Mechanical and Pump Selection. The Recycled Water Distribution System Analysis, (by others) recommends installing an additional Goulds pump, model 14RHMC, with the same capacity of 2,000 gpm at a TDH of 201 feet. We will review the Recycled Water Distribution System Analysis report. The four existing pumps will remain as is and a fifth pump of the same make and manufacture will be specified. LEE & RO will determine specific improvements or modifications required to the mechanical and ancillary systems for the pump station upgrades. In addition, a surge analysis will be provided based on the enclosed fee proposal from Flow Science.
- C. Electrical and Controls. LEE & RO will develop electrical and controls design requirements for the pump station. The anticipated electrical upgrades will consist of replacing the PLC and all other equipment in the PLC cabinet including, the light board, analog displays, and battery backup. LEE & RO will determine specific improvements or modifications required to the overall power and control system upgrades.
- D. Project Schedule. LEE & RO will prepare a project schedule, which shall include detailed schedules for both design and construction activities. The schedule shall include all critical factors impacting the project schedule including implementation, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule shall be prepared in Microsoft Project.
- E. Opinion of Probable Construction Cost. LEE & RO will prepare a detailed and itemized opinion of probable construction cost for the proposed facilities.
- F. Preliminary Design Report (PDR). LEE & RO will determine specific improvements or modifications required for the overall upgrades at the pump station. The work described herein shall be summarized and compiled into a PDR letter report. At a minimum, the PDR shall

summarize the results along with additional design criteria identified by the Engineer during the preliminary design.

Five (5) copies of Draft PDR and one (1) electronic copy in PDF shall be submitted for review. Upon resolution and incorporation of review comments, five (5) copies of the final PDR and one (1) electronic copy in PDF shall be submitted. The final PDR shall be submitted prior to proceeding with the 60 percent design deliverable.

Task 3 Final Design

The final design shall result in the preparation of the Contract Documents. In the final design phase, the Engineer shall address the items discussed hereunder.

- A. Project Manual. LEE & RO will prepare a Project Manual in standard IRWD format. IRWD's front end documents shall be utilized, and LEE & RO will assess IRWD's documents to determine any needed supplemental general/special provisions that should be added to comply with IRWD's general provisions and front end requirements. The Project Manual shall describe the allowable shutdown durations and sequencing associated with any connections and tie-ins to existing IRWD facilities. The Project Manual shall also include the IRWD General Technical Specifications, modifications thereto, and any project specific technical specifications. LEE & RO will familiarize themselves with IRWD's standards, use the standards as a starting point, and modify them as needed for the project.
- B. Construction Plans. LEE & RO will prepare detailed construction drawings in the latest version of AutoCAD and using NCS V4.0 layering standards, on 22-inch x 34-inch sheets utilizing IRWD's standard border template. Separate sheets with sheet index/location map/legend, general notes, index map, construction notes, condensed profiles, phasing, and detail connections shall be included. Construction notes shall be used (callouts on the plans are not allowed) on all construction drawings. Existing IRWD utilities shall be identified on the plan view by as-built plan set number with the pipeline material and IRWD pressure zone labeled. The index map shall include sheet legend, final alignment, valve locations, surrounding streets, and significant project site locations. Construction plans shall be prepared using the NAVD 88 and NAD 83 survey standards.
- C. Electrical/Instrumentation. LEE & RO will prepare an operational scheme including P&IDs, single line diagrams, PLC loop drawings, control equipment list, and method of integrating the proposed facilities into IRWD's existing SCADA system. Prior to this process, LEE & RO will meet with IRWD electrical/automation staff to incorporate IRWD's standard operations, PLC and SCADA programming, and equipment tagging requirements into the design. LEE & RO will develop and provide the operational scheme and functional descriptions (in plain English) for District review and approval.
- D. SCE Coordination. LEE & RO will coordinate with SCE early in the design process to assure the existing service is sufficient. This task shall include the coordination efforts necessary to communicate the project requirements, address any comments from SCE, and implement all requirements into the project design.

- E. Project Schedule. LEE & RO will maintain and consistently update the project schedule, which shall include detailed schedules for both design and construction activities. The schedule shall include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule shall be prepared in Microsoft Project. A preliminary schedule outlining the preliminary and final design phase activities shall be included in the proposal.
- F. Liquidated Damages Spreadsheet. LEE & RO will assist in calculating the liquidated damages value for the construction project, should the contract time be exceeded. IRWD's standard liquid damage calculation form will be provided to the Engineer for use.
- G. Opinion of Probable Construction Cost. LEE & RO will prepare a detailed and itemized opinion of probable construction cost for the proposed facilities, which shall be updated and submitted with each of the design deliverables described below.
- H. Final Design Deliverables. Deliverables shall be made as follows:
- a. Five (5) 11"x17" bound copies of the 60 percent submittal and one (1) CD containing a single PDF file of the entire plan set. Show civil/site, mechanical, and electrical plans. Show basic mechanical equipment, structural and architectural layouts, pipeline alignments, preliminary profiles, and existing utilities at a minimum. Provide a complete table of contents for the Project Manual.
 - b. Five (5) 11"x17" bound copies of the 90 percent submittal and one (1) CD containing a single PDF file of the entire plan set. Show concepts of each component of the design such as civil, structural, mechanical, architectural, electrical and instrumentation. Show plan, profile, connections, details, and location of appurtenances. Plan and profile drawings and mechanical details/drawings shall be developed to a high level of detail. Provide three (3) color coded copies of the 90 percent Project Manual, including all sections; contract documents, general provisions, special provisions, general requirements, technical specifications, and appendix.
 - c. Five (5) 11"x17" bound copies of the 100 percent submittal, one (1) CD containing AutoCAD files for the entire plan set, and one (1) CD containing a single PDF file of the entire plan set. Include complete plans and three (3) color coded copies of the Project Manual, a notebook with the design calculations (including, but not limited to, mechanical, civil, structural, HVAC, electrical, pipe thickness and restraint), and one (1) CD containing all MS Word files used in the preparation of the Project Manual.
 - d. One (1) full size final stamped and signed reproducible plan set on mylar and one (1) original signed Project Manual for District's signatures.
- I. Addenda Preparation and Pre-Bid Meeting. During the bidding period, LEE & RO will assist with providing information and clarification of bid documents to prospective bidders. This shall include the preparation of up to one (1) addenda including revisions to the design plans

and specifications and assistance with addressing bidder questions. Anticipated addenda preparation activities include:

- Plan Revisions: LEE & RO has budgeted eight (8) hours of appropriate staff time for plan revisions to the construction drawings.
- Specification Revisions: LEE & RO has budgeted four (4) hours of appropriate staff time for revisions or additions to the project specifications.
- Bidder Questions: LEE & RO has budgeted eight (8) hours of appropriate staff time to address and respond to bidder questions.
- Pre-Bid Meeting: During the bidding period, LEE & RO will prepare for and conduct one (1) two-hour pre-bid meeting and shall provide agendas, exhibits, sign-in sheet, and minutes for the meeting. This may include a site visit with potential bidding contractors.

SCHEDULE

The anticipated project schedule is as follows.

- | | |
|----------------------------|----------------|
| • Notice of Award (Design) | June 1, 2017 |
| • Kick-Off Meeting | June 14, 2017 |
| • Draft PDR | August 2017 |
| • Final PDR | September 2017 |
| • 60% Design Submittal | November 2017 |
| • 90% Design Submittal | December 2017 |
| • 100% Design Submittal | January 2018 |
| • Plans Approved | February 2018 |

Toni Lynch
April 25, 2017
Page 7 of 7

LEE & RO will provide the above services per the enclosed Fee Breakdown Exhibit for Engineering Design Services not-to-exceed \$213,757.

Enclosed: 1) Fee Breakdown
2) Hourly Billing Rate Schedule
3) Other Direct Costs (ODC) Billing Rate Schedule
4) Flow Science Proposal

Thank you for your consideration,

Sincerely,

A handwritten signature in cursive script that reads "Eric D. Lovering". The signature is written in black ink and is positioned above the typed name and title.

Eric Lovering, P.E.
Principal Engineer
San Diego Area Manager

cc: Joseph McGehee

Exhibit 1: FEE BREAKDOWN
Zone A to B Recycled Water Pump Station Upgrades

TASK NO.	ENGINEERING CLASSIFICATIONS: E8 Managing Eng, E7 Supervising Eng, E6 Principal Eng, E5 Senior Eng, E3 Associate Engineer, T4 Designer, T3 Associate Designer, A2 Word Processor II (See Billing Rate Schedule for Entire Labor Classifications).	LEE & RO Hours per Labor Category									Total Hours	Labor Cost	Other Direct Costs (ODCs)	Subs	TOTAL FEES
		E8	E7	E6	E5	E4	E3	T4	T3	A2					
		Billing Rates (\$/Hour)													
	PROJECT TASK DESCRIPTION	\$238	\$214	\$192	\$174	\$157	\$140	\$125	\$109	\$94	1.00				
1	Project Management														
1.A	Weekly / Monthly Status Reports	8				12					2	22	\$3,976		\$3,976
1.B	Meetings and Workshops														
1.B.1	General Project Management and Design Development Meeting (1 two-hour meeting)	3			3							6	\$1,236	\$150	\$1,386
1.B.2	Site Visits (2 two-hour visits)				6							6	\$1,044	\$50	\$1,094
1.B.3	Preliminary Design Workshop (1 two-hour workshop)	4			3							7	\$1,474	\$50	\$1,524
1.B.4	60% Design Review (1 two-hour workshop)	4			3							7	\$1,474	\$50	\$1,524
1.B.5	90% Design Review (1 two-hour workshop)	4										4	\$952	\$50	\$1,002
1.B.6	100% Design Review (1 two-hour workshop)	4										4	\$952	\$50	\$1,002
1.C	QA/QC	20	12									8	\$8,080		\$8,080
	SUBTOTAL TASK 1 - PROJECT MANAGEMENT	47	12	0	15	12	0	0	0	10	96	\$19,188	\$400	\$0	\$19,588
2	Preliminary Design														
2.A	Background Information	8			40	10		40	80	2		180	\$24,342		\$24,342
2.B	Mechanical and Pump Selection	8				16	6					30	\$5,256	\$14,450	\$19,706
2.C	Electrical and Controls	16			80							96	\$17,728		\$17,728
2.D	Project Schedule	2					4					6	\$1,036		\$1,036
2.E	Opinion of Probable Construction Cost	2			2	2	4					10	\$1,698		\$1,698
2.F	Preliminary Design Report (PDR)	14			30	30		4			16	94	\$15,266	\$250	\$15,516
	SUBTOTAL TASK 2 - PRELIMINARY DESIGN	50	0	0	152	58	14	44	80	18	416	\$65,326	\$250	\$14,450	\$80,026
3	Final Design														
3.A	Project Manual	8			8	24	16			14		70	\$10,620		\$10,620
3.B	Construction Plans	24			24	80	16	40	40			224	\$34,048		\$34,048
3.C	Electrical/Instrumentation	36			160			80	100			376	\$57,308		\$57,308
3.D	SCE Coordination				4							4	\$696		\$696
3.E	Project Schedule	2				4						6	\$1,104		\$1,104
3.F	Liquidated Damages Spreadsheet					3						3	\$471		\$471
3.G	Opinion of Probable Construction Cost	4			4	4						12	\$2,276		\$2,276
3.H	Final Design Deliverables	4				8				8		20	\$2,960	\$900	\$3,860
3.I	Addenda Preparation and Pre-Bid Meeting	2			16			4				22	\$3,760		\$3,760
	SUBTOTAL TASK 3 - FINAL DESIGN	80	0	0	216	123	32	124	140	22	737	\$113,243	\$900	\$0	\$114,143
	TOTAL NOT TO EXCEED	177	12	0	383	193	46	168	220	50	1249	\$ 197,757	\$ 1,550	\$ 14,450	\$ 213,757

LEE & RO, Inc.
FY 2017-2018 HOURLY BILLING RATE SCHEDULE

PERSONNEL CLASSIFICATION			BILLING RATES (\$/HOUR)
ENGINEERS			
Engineer 8	E8	Managing Engineer	\$238
Engineer 7	E7	Supervising Engineer	\$214
Engineer 6	E6	Principal Engineer	\$192
Engineer 5	E5	Senior Engineer	\$174
Engineer 4	E4	Engineer	\$157
Engineer 3	E3	Associate Engineer	\$140
Engineer 2	E2	Assistant Engineer	\$125
Engineer 1	E1	Junior Engineer	\$109
CAD / DESIGNERS			
Designer 6	T6	Principal Designer	\$157
Designer 5	T5	Senior Designer	\$140
Designer 4	T4	Designer	\$125
Designer 3	T3	Associate Designer	\$109
Designer 2	T2	Assistant Designer	\$94
Designer 1	T1	Junior Designer	\$78
FIELD PROFESSIONALS			
Field Professional 6	F6	Construction Manager	\$157
Field Professional 5	F5	Senior Resident Engineer	\$140
Field Professional 4	F4	Resident Engineer	\$125
Field Professional 3	F3	Senior Inspector	\$109
Field Professional 2	F2	Inspector	\$125
Field Professional 1	F1	Assistant Inspector	\$109
ADMINISTRATIVE			
Administrative 4	A4	Administrative Supervisor	\$125
Administrative 3	A3	Senior Word Processor	\$109
Administrative 2	A2	Word Processor	\$94
Administrative 1	A1	Administrative Assistant	\$78

LEE & RO, Inc.

2017 Other Direct Costs (ODC) Billing Rate Schedule

FY 2017 (from November 1, 2016 to October 31, 2017)

Automobile Mileage	IRS Published Rate
In-house Reproduction	\$0.08 / sheet (8.5 x 11 Bond B & W) \$0.20 / sheet (8.5 x 11 Bond Color) \$0.15 / sheet (11 x 17 Bond B & W) \$0.40 / sheet (11 x 17 Color) \$1.15 / sheet (24 x 36 Bond)
Mylar Original Drawing	\$7.00 / sheet (24 x 36 or 22 x 34)
Work Stations and Computers	No Charge
Subconsultant Mark-up	Subconsultant Invoice Amount Plus 5% Unless Client Specifies Otherwise
Reproduction by Outside Printing Firm	Invoice amount plus 5% Handling Charge Unless Client specifies otherwise
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April 18, 2017

LEE & RO, Inc.
10640 Scripps Ranch Blvd., Suite 150
San Diego, CA 92131

Attention: Mr. Eric Lovering, P.E.
Managing Engineer, San Diego Regional Manager

Subject: Irvine IIC East Zone B Pump Station Upgrades
Irvine Ranch Water District
Proposal for Pressure Surge Analysis
FSI 171028

Dear Eric,

This letter responds to your request for a proposal to perform a pressure surge analysis of the upgraded Irvine IIC East Zone B Pump Station (IIC East PS) for the Irvine Ranch Water District (IRWD).

As part of the IRWD's plan to improve its recycled water distribution system, it will be upgrading the existing IIC East PS in conjunction with the addition of the Multi-Zone Pump Station (MZPS). The IIC East PS currently pumps from Zone A into Zone B, feeding the East Irvine and Quail Hill Zone B service areas. Once the MZPS is brought online, the IIC East PS will feed the East Irvine, Quail Hill, PA 51, and Northwood Zone B service areas. In order to accommodate the associated projected increases in demands, one more pump will be added to the IIC East PS by utilizing the existing open pump can. The purpose of this pressure surge analysis is to evaluate whether the existing surge protection is adequate at the higher design capacity of the upgraded IIC East PS.

Pressure surges will be created by the operation of the pumps at the IIC East PS through the sudden loss of power and start up of the pumps. These transients will propagate out into the distribution systems on both the suction and discharge sides of the pump station and, if of large enough magnitude, can potentially damage the system piping and lead to its failure. A pressure surge analysis determines the severity of such pressure transients. If these transients are deemed to be of sufficient magnitude that the maximum allowable surge pressures within the system would be exceeded, or unsafe negative pressures would occur, then recommendations for surge mitigation measures will be provided.

Flow Science previously developed a skeletonized version of the Zone A recycled water distribution system as part of our analysis of the Zone A-C/C+ Booster Pump Station (BPS) for the Irvine Lake Pipeline (ILP) North Conversion Project (FSI Project No. 141072, final report dated August 20, 2015). The existing skeletonized model of the Zone A system will be updated and appended as needed, and a skeletonized model of the Zone B system will be developed and added to



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the model, to reflect the planned improvements after the MZPS is brought online and the IIC East PS has been upgraded, in order to evaluate pump power failure and startup of the IIC East PS.

Note that this proposal does not include the analysis of the surges created by any other pumps/pump stations in the recycled water system. It is assumed that any other pumps/pump stations have adequate surge protection, and evaluation of pressure surges generated by those pump stations is beyond the scope of the analysis. It is further noted that surge protection recommendations, if deemed necessary, will only be developed for the future condition under which the MZPS has been brought online and the IIC East PS has been upgraded (*i.e.*, alternative recommendations will not be provided for different operating conditions and/or for existing or interim project phases).

Based on the above and our previous experience with the IRWD recycled water distribution system, we see the following Scope of Work and Budget as necessary to complete a pressure surge analysis of this system.

SCOPE OF WORK

Task 1 - Gather necessary information to update and append the existing skeletonized Zone A model as needed, and create and add a skeletonized computer model of the Zone B system, to reflect the future conditions with the proposed improvements after the MZPS is brought online and the IIC East PS has been upgraded, under both maximum and no demand (*i.e.*, reservoir fill) scenarios. It is assumed that the Zone B system can be adequately modeled with up to 200 nodes. This will require IRWD's updated hydraulic model of the recycled water distribution system converted to EPANET for the maximum demand scenario, as well as pump curves for the existing and new pump at the IIC East PS. The pressure reducing stations and other pumps/pump stations in Zones A and B will be represented as constant head reservoirs or demands.

It is assumed that distribution system model provided by IRWD will be an updated version of the previous model provided to Flow Science in 2015 for development of the pressure surge model of Zone A for the ILP North Conversion Project (*i.e.*, the IRWD models are directly comparable in terms of node and pipe names, elevations, demands, lengths, and diameters, and reservoir water surface elevations, except where the new model has been updated to reflect proposed improvements). Otherwise, additional effort will be required to update and append the Zone A model.

Task 2 - Establish initial non-transient hydraulic grade line elevations for power failure and startup of the IIC East PS under maximum and no demand flow conditions for the future system.



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Task 3 - Perform simulations for pump power failure and startup of the IIC East PS under both maximum and minimum static head conditions (*i.e.*, high and low suction and discharge reservoir water surface elevations) and both demand and no demand (*i.e.*, reservoir fill) conditions for the future system.

This task does not include the analysis of the surges created by any of the other pumps/pump stations in Zones A or B. If evaluation of a system-wide power loss condition is desired, our scope and budget can be expanded to include examination of simultaneous pump power loss occurring at all Zone A and B pump stations to allow worst-case surge conditions to be evaluated.

Task 4 - Review the results of the analysis and, if deemed necessary, recommend surge protection measures to eliminate possible adverse surges created by the power failure and startup of the IIC East PS under future conditions. Although normal pump shutdown will not be modeled, the recommendations developed for pump power failure will provide adequate surge protection for planned pump shutdown as well. Surge protection measures may include, but are not limited to, discharge and suction side pressurized surge tanks, pressure/surge relief/anticipator valves, vacuum relief valves, or any combination thereof.

Task 5 - Prepare a draft and final technical memorandum in PDF format describing the results of the analysis and recommendations for the safe operation of the IIC East PS. Hard copies will not be provided.

Task 6 - Participate in up to one (1) one-hour meeting or conference call with LEE & RO, Inc., and IRWD to discuss the findings of the analysis. This task does not include preparation of a PowerPoint presentation/workshop.

BUDGET

We propose to complete the above Scope of Work for the Not-to-Exceed fee of \$14,450, which is based on the following estimated level of effort and our previous experience with this system.

Principal Consultant, 2 hours @ \$310/hr	\$ 620
Principal Engineer IV, 18 hours @ \$230/hr	4,140
Project Engineer, 68 hours @ \$142/hr	9,656
Misc. @ direct cost	<u>34</u>
Total Not-To-Exceed fee	\$ 14,450

We estimate that we can complete the above scope of work within 25 business days upon receipt of a signed contract, written notice to proceed, and all the required system information



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(including EPANET model of maximum demand scenario, pump curves, pipe materials, pressure classes, and operating details). Upon completion of the final design, we will review the plans and specifications as they pertain to the surge protection to insure conformity to our recommendations.

If you have any questions or need any other information, please do not hesitate to call me at (215) 235-3569. We look forward to working with you and IRWD again.

Sincerely,

A handwritten signature in black ink that reads "Kristen Bowman Kavanagh". The signature is written in a cursive, flowing style.

Kristen Bowman Kavanagh, P.E.
President and Principal Engineer