

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

**TUESDAY, May 29, 2018**

**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.

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**COMMUNICATIONS TO THE BOARD**

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1.     A. Written:

      B. Oral:

2.     ITEMS RECEIVED TOO LATE TO BE AGENDIZED

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

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**PRESENTATION**

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**Resolution No. 2018-13**

3.     SCIENCE FAIR WINNERS

      Each year, IRWD presents awards to local students for their water-related projects entered in the Irvine Unified School District Science Fair.

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**CONSENT CALENDAR**

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**Items 4 through 8**

4.     MINUTES OF REGULAR BOARD MEETING

      Recommendation: That the minutes of the May 14, 2018 Regular Board meeting be approved as presented.

**CONSENT CALENDAR (Continued)**

**Items 4 through 8**

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

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

6. APRIL 2018 TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate SWAP Summary for April 2018, and Disclosure Report of Reimbursements to Board members and staff; approve the April 2018 Summary of Payroll ACH payments in the total amount of \$1,879,326 and approve the April 2018 Accounts Payable Disbursement Summary of Warrants 386583 through 387442, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$18,381,832.

7. DYER ROAD WELLFIELD SURGE TANKS BUDGET INCREASE AND CONTRACT CHANGE ORDER

Recommendation: That the Board authorize a budget increase in the amount of \$440,000, from \$4,066,200 to \$3,976,200, for project 05473, and in the amount of \$60,000, from \$1,250,500 to \$1,310,500, for project 06165, and authorize the General Manager to execute contract Change Order No. 4 with Pascal & Ludwig Constructors in the amount of \$317,977 for the Dyer Road Wellfield Surge tanks, projects 05473 and 06165.

8. WATER SHORTAGE CONTINGENCY PLAN

Recommendation: That the Board adopt a resolution Rescinding Resolution No. 2014-46 and adopting the amended Water Shortage Contingency Plan.

Reso. No. 2018-

**PUBLIC HEARING**

9. CHANGES TO EXISTING RULES AND REGULATIONS, SECOND READING AND ADOPTION

Recommendation:

- a. Open the hearing.
- b. Inquire of the Secretary how the hearing was noticed.
- c. Receive and file the affidavit of posting and proof of publication.
- d. Inquire of the Secretary if there have been any written notifications.
- e. Request the Executive Director of Finance and Administration to provide a report.
- f. Hear any person who wishes to speak regarding the adoption of revised Rules and Regulations for Water, Sewer, Recycled Water and Natural Treatment System Service.
- g. Inquire of the Board if it has any comments or questions.
- h. That the second reading of the resolution be read by title only, that further reading be waived, adopt resolution, and close the hearing

Reso. 2018 -

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## **ACTION CALENDAR**

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10. VAULT LID REPLACEMENT CONSTRUCTION AWARD

Recommendation: That the Board authorize a budget increase in the amount of \$439,000, from \$397,700 to \$836,700, for project 06121, and in the amount of \$146,000, from \$195,300 to \$341,300, for project 06123; acknowledge the material clerical error made in the computation of T.E. Roberts, Inc.'s bid, accept T.E. Roberts, Inc.'s formal written request to withdraw its bid, and return the bid bond to T.E. Roberts, Inc.; and authorize the General Manager to execute a construction contract with Schuler constructors, Inc. in the amount of \$932,960 for the vault lid replacement, projects 06121 and 06123.

11. EASTWOOD RECYCLED WATER PUMP STATIONS CONSULTANT SELECTION AND CONSTRUCTION AWARD

Recommendation: That the Board authorize the General Manager to execute a professional services agreement with AECOM, in the amount of \$295,000, for engineering support services during construction, and waive bid irregularities and authorize the General Manager to execute a construction contract with Pacific Hydrotech Corporation in the amount of \$12,220,600, for the Eastwood Recycled Water Pump Stations, Projects 04388, 04400 and 04457.

12. MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES CONTRACT CHANGE ORDER NO. 80 AND AMENDMENT NO. 2 TO AGREEMENT WITH ORANGE COUNTY SANITATION DISTRICT FOR INTERIM SOLIDS HANDLING

Recommendation: That the Board approve contract Change Order No. 80 in the amount of \$313,076.14 with Filanc/Balfour Beatty for several electrical and mechanical items for the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities, project 04286, and authorize the General Manager to execute Amendment No. 2 to the agreement for transfer of wastewater solids residuals with Orange County Sanitation District, subject to non-substantive changes.

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## **OTHER BUSINESS**

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Pursuant to Government Code Section 54954.2, members of the Board of Directors or staff may ask questions for clarification, make brief announcements, and 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.

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**OTHER BUSINESS - Continued**

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- 13. A. General Manager's Report
- B. Directors' Comments
- C. 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 29, 2018

Prepared and

Submitted by: L. Bonkowski 

Approved by: P. Cook 

CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes of the May 14, 2018 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE MAY 14, 2018 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – May 14, 2018 Minutes of Regular Board Meeting

EXHIBIT "A"

MINUTES OF REGULAR MEETING – MAY 14, 2018

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 May 14, 2018 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Water Policy Weghorst, Executive Director of Finance and Administration Clary, Executive Director of Engineering and Water Quality Burton, Director of Water Resources Sanchez, Director of Treasury and Risk Management Jacobson, Director of Water Operations Zepeda, Director of Water Operations Roberts, Director of Human Resources Roney, Government Relations Officer Compton, Legal Counsel Collins, Secretary Bonkowski, Assistant Secretary Swan, Principal Engineer Akiyoshi, Public Affairs Manager Fabris, Manager of Strategic Planning and Analysis Smithson, Principle Engineer Cortez, Consultant Bruce Newell, Mr. Joseph Baquerizo. Ms. Deborah Diep, Mr. Paul Matheis, Mr. Jeff Neemann, Mr. Charles Busslinger, and members of the public.

WRITTEN COMMUNICATIONS: None.

ORAL COMMUNICATIONS: None.

PRESENTATION

RESOLUTION RECOGNIZING MARY AILEEN MATHEIS FOR HER 30 YEARS OF SERVICE AS A DIRECTOR OF THE BOARD OF IRWD

General Manager Cook read and presented Director Matheis with a resolution recognizing her service to the District. Following comments from the other Board members highlighting her contribution to the District, on MOTION by Swan, seconded and unanimously carried, THE FOLLOWING RESOLUTION WAS ADOPTED BY TITLE:

RESOLUTION 2018-12

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT,  
ORANGE COUNTY, CALIFORNIA, RECOGNIZING  
MARY AILEEN MATHEIS FOR HER 30 YEARS OF SERVICE  
AS A DIRECTOR OF THE BOARD

PUBLIC HEARING

General Manager Cook reported that staff has compiled proposed changes to the District's Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service. Mr.

Cook said that staff recommends that the resolution be introduced for First Reading and read by title only, that further reading of the resolution be waived, and that the Secretary be directed to place the resolution on the agenda for the May 29, 2018 meeting of the Board of Directors for a second reading, hearing and adoption.

President Reinhart declared this to be the time and place for the hearing on the resolution. He asked the Secretary to report the manner by which the Notice of Hearing was given.

Secretary Bonkowski said that the Notice of this hearing was published in the Orange County Register on April 29, 2018 and posted on the bulletin Board in the District office on April 27, 2018. She then presented an Affidavit of Posting and Proof of Publication for the Board to receive and file.

On MOTION by Swan, seconded and unanimously carried, THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY WAS RECEIVED AND FILED.

President Reinhart inquired of the Secretary whether there have been any written communications. Secretary Bonkowski said there were none.

President Reinhart requested a report from the Executive Director of Finance and Administration. Executive Director of Finance and Administration Clary said that formatting and presentation changes are included and some wording and definitions have been updated to promote consistent and conforming nomenclature throughout the document. She said that the primary focus on this update targeted the prohibition of tampering or diversion of District sources and assets and updating the District's water supply shortage levels and the many sections influenced by these topics. She further said that the clarifications and revisions to the Rules and Regulations are summarized in Exhibit "B" of the write-up.

President Reinhart inquired whether anyone is present who wishes to address the Board concerning the amended resolution. There were none.

President Reinhart inquired whether there are any comments or questions from members of the Board of Directors. There were none.

President Reinhart asked for a motion to close the hearing, that the resolution be read by title only by the Secretary, that further reading of the resolution be waived, and that the Secretary be directed to place the resolution on the agenda for the May 29, 2018 meeting of the Board of Directors for a second reading, hearing and adoption.

On MOTION by Swan, seconded and unanimously carried, THE HEARING WAS CLOSED, THE SECRETARY WAS DIRECTED TO READ THE RESOLUTION BY TITLE ONLY, FURTHER READING OF THE RESOLUTION WAS WAIVED, AND THE SECRETARY WAS DIRECTED TO PLACE THE RESOLUTION ON THE AGENDA FOR THE MAY 29, 2018 MEETING OF THE BOARD OF DIRECTORS FOR A SECOND READING, HEARING AND ADOPTION.

Secretary Bonkowski read the title of the proposed resolution as follows:

RESOLUTION RESCINDING RESOLUTION NO. 2015-23  
AND ESTABLISHING REVISED RULES AND REGULATIONS  
OF THE IRVINE RANCH WATER DISTRICT FOR WATER,  
SEWER, RECYCLED WATER, AND NATURAL  
TREATMENT SYSTEM SERVICE AND EXHIBIT "A" THERETO.

WORKSHOP

POPULATION CHARACTERISTICS OF IRVINE RANCH WATER DISTRICT'S SERVICE AREA

Using a PowerPoint presentation, Ms. Deborah Diep from the Center for Demographic Research, California State University, Fullerton, presented population and characteristics of IRWD's service area so that the Board and public can consider the information prior to Public Hearings on June 4, 2018 and June 18, 2018 to accept comments on the Composition of Divisions and the Sequence of Elections. Ms. Diep used data from the 2010 Federal Decennial census and using a pie chart showed that the population consists of 50.8% non-Hispanic White; 31.1% non-Hispanic Asian, 1.5% non-Hispanic Black or African-American, and 4.7% all other non-Hispanic races/ethnicities. Using boundary maps, she charted the percent share of these block groups. She also charted the 2016 citizen voting age population with the block group with boundary maps. She further gave examples of a 2010 population chart of 337,151 being divided into five divisions equaling 67,430 per each division and described redistricting criteria.

CONSENT CALENDAR

Director Reinhart asked that Item No. 9 be moved to the Action Calendar. There being no objections, Item No. 9 was moved accordingly. On MOTION by Swan, seconded and unanimously carried, CONSENT CALENDAR ITEMS 6, 7 AND 8 WERE APPROVED AS FOLLOWS:

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

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

7. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the April 23, 2018 Regular Board Meeting be approved as presented.

8. CANDIDATE STATEMENTS FOR 2018 GENERAL ELECTION

Recommendation: That the Board approve the District Secretary to authorize 200 words on the Candidate's Statement of Qualifications for the 2018 General Election and elect not to pay for these statements.



## ACTION CALENDAR

### IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES

Following Director Reinhart's inquiry relative to the State Project strategic measure, on MOTION by Reinhart, seconded and unanimously carried, THE IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES WERE RECEIVED AND FILED.

### AB 1668 (FRIEDMAN) SB 606 (HERTZBERG): MAKING WATER CONSERVATION A CALIFORNIA WAY OF LIFE

Government Relations Officer Compton reported that AB 1668, authored by Assemblymember Laura Friedman (D-Glendale) and SB 606, authored by Senator Bob Hertzberg (D-Van Nuys), would implement "Making Water Conservation a California Way of Life." Ms. Compton said that over the past month, the authors, the Administration, and select members of the Legislature, which included Assemblymember Blanca Rubio (D-West Covina), continued to discuss the "Making Water Conservation a California Way of Life" legislation in an attempt to reach agreement on outstanding issues in order to move the legislation forward in May. She said that a deal was recently struck between these parties on final legislation that will be moved forward. The amendments reflected in the final legislation are consistent with many of IRWD's requested amendments.

Ms. Compton said that in light of the amendments, Assemblymember Rubio's office has asked that IRWD consider changing its position from "oppose unless amended" to "support." In recognition of the amendments made to the bills, Assemblymember Rubio's request, and the politics surrounding these bills, she said that staff recommends that IRWD change its position on AB 1668 and SB 606 from "oppose unless amended" to "support."

On MOTION by LaMar, seconded and unanimously carried, THE BOARD ADOPTED A "SUPPORT" POSITION ON AB 1668 (FRIEDMAN, D-GLENDALE) AND SB 606 (HERTZBERG, D- VAN NUYS).

### MICHELSON FORCE MAIN IMPROVEMENTS CONSTRUCTION AWARD

General Manager Cook reported that a corrosion-induced leak was repaired on the Michelson sewer force main between the Michelson Lift Station and Riparian View in summer 2015. To minimize future corrosion-related leaks, this project will rehabilitate the force main with approximately 3,450 feet of cured-in-place pipe (CIPP).

Executive Director of Engineering and Water Quality Burton reported that Kleinfelder completed its design in February 2018 and the project was advertised for construction bidding to a select list of six pipeline and CIPP specialty contractors on March 1, 2018. Mr. Burton said that only one contractor submitted a bid at the bid opening on April 12, 2018. He said that Insituform Technologies' bid was in the amount of \$1,787,045; the engineer's estimate was \$1,696,250.

Mr. Burton said that after the bid opening, staff contacted three of the contractors that had purchased plans during the bid period, but did not submit bids. He said the reasons for not bidding included that their CIPP product is more specialized towards water pipe where the

working pressures are higher and the resins are certified for potable use which makes it harder to compete with low pressure sewage applications, that the project included construction of several vaults that were outside their core expertise, and restricted working hour constraints imposed by the City of Irvine for this very congested traffic area. The bid unit cost of \$208 per foot compares favorably to two other recent IRWD CIPP pressure pipe projects.

On MOTION by Withers, seconded and unanimously carried, THE BOARD AUTHORIZED A BUDGET INCREASE IN THE AMOUNT OF \$850,000, FROM \$1,367,300 TO \$2,217,300, FOR PROJECT 07097 AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH INSITUFORM TECHNOLOGIES, LLC IN THE AMOUNT OF \$1,787,045 FOR THE MICHELSON FORCE MAIN IMPROVEMENTS, PROJECT 07097.

#### GENERAL MANAGER'S REPORT

General Manager Cook reported on the District's staff assistance to the Orange County Fire Authority in Foothill Ranch last week relative to a trench failure while a contractor, Empire Grading, was performing work. He thanked Director of Operations Tom Roberts for his efforts.

#### DIRECTORS' COMMENTS

Director Withers reported on his attendance at an ACWA conference in Sacramento. He said that he will be attending an NWRI strategic planning session on May 22 and his last LAFCO meeting on June 13 after being a Commissioner for over 20 years.

Director Matheis reported that she, along with Director Swan, attended the Irvine Korean Festival and an ACWA conference in Sacramento.

Director Swan reported on his attendance at a California Water Dialogue meeting at MWD, a San Joaquin Wildlife Sanctuary Board meeting with Director Matheis, a MWDOC meeting with Director Reinhart relative to leasing Kern County Water supply, OCWD Board meetings, a WACO monthly meeting, an ACWA conference, and the Irvine Korean Festival.

Director LaMar reported on his attendance at a Natural Communities Coalition meeting, a WACO meeting and an ACWA conference.

Director Reinhart reported on his attendance at an OCSD Board meeting, a resident community tour, a MWDOC Board meeting, a SOCWA Board meeting, a MWDOC meeting with Director Swan, and an ACWA conference.

#### CLOSED SESSION

President Reinhart said that the following Closed Session listed on the agenda is not necessary this evening and will not be held:

CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION – Significant exposure to litigation pursuant to Government Code Section 54956.9(d)(2) (One potential case).

ADJOURNMENT

President Reinhart adjourned the meeting at 6:21 p.m.

APPROVED and SIGNED this 29th day of May, 2018.

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President, IRVINE RANCH WATER DISTRICT

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Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:  
LEWIS BRISBOIS BISGAARD & SMITH, LLP

By: \_\_\_\_\_  
District Counsel

May 29, 2018  
Prepared and  
Submitted by: K. Swan *KS*  
Approved by: Paul A. Cook *PA 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 5 OCBC Election Day Luncheon  
June 14-15 ACWA Region 1 Event, Healdsburg  
June 21-22 ACWA Region 3 Event, Valley Springs

Mary Aileen Matheis

May 12 Irvine Korean Cultural Festival  
June 5 OCBC Election Day Luncheon  
June 6-8 North Meets South Tour, Costa Mesa  
June 20 Greater Irvine Chamber of Commerce Celebrate Irvine

Douglas Reinhart

June 1 O.C. Water Summit, Anaheim  
June 5 OCBC Election Day Luncheon

Peer Swan

March 23 WaterReuse California Annual Conference, Monterey  
May 12 Irvine Korean Cultural Festival  
June 1 O.C. Water Summit, Anaheim  
June 5 OCBC Election Day Luncheon  
June 6-8 North Meets South Tour, Costa Mesa  
June 20 Greater Irvine Chamber of Commerce Celebrate Irvine  
August 7-11 CASA 63<sup>rd</sup> Annual Conference, Monterey

John Withers

May 30 Irvine Unified School District Ground Breaking Loma Ridge Elementary  
June 5 OCBC Election Day Luncheon

RECOMMENDATION:

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

LIST OF EXHIBITS:

None.

May 29, 2018

Prepared by: J. Davis/T. Fournier

Submitted by: R. Jacobson/C. Clary

Approved by: Paul A. Cook

## CONSENT CALENDAR

### APRIL 2018 TREASURY REPORTS

#### SUMMARY:

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

- A. The Investment Summary Report for April 2018. This Investment Summary Report is in conformity with the 2018 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Summary of Fixed and Variable Debt as of April 30, 2018, as outlined in Exhibit "B".
- C. The Monthly Interest Rate Swap Summary as of April 30, 2018, as outlined in Exhibit "C".
- D. The April 30, 2018 Disbursement Summary of warrants 386583 through 387442, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$18,381,832 as outlined in Exhibit "D".
- E. The Summary of Payroll ACH payments in the total amount of \$1,879,326, as outlined in Exhibit "E".
- F. The Disclosure Report of Reimbursements to Board Members and Staff for April 2018, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "F".

#### FISCAL IMPACTS:

As of April 30, 2018, the book value of the investment portfolio was \$377,966,271, with a 1.32% rate of return and a market value of \$374,471,326. Based on the District's March 31, 2018 quarterly real estate investment rate of return of 8.91%, the weighted average return for the fixed income and real estate investments was 3.55%.

As of April 30, 2018, the outstanding principal amount of fixed and variable rate debt was \$681,520,000. The monthly weighted average all-in variable rate was 1.87%. Including the District's weighted average fixed rate bond issues of 3.70% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.68%.

As of April 30, 2018, 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 \$453,164.

Payroll ACH payments totaled \$1,879,326, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for April totaled \$18,381,832.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, THE MONTHLY INTEREST RATE SWAP SUMMARY FOR APRIL 2018, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE APRIL 2018 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$1,879,326 AND APPROVE THE APRIL 2018 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 386583 THROUGH 387442 WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$18,381,832.

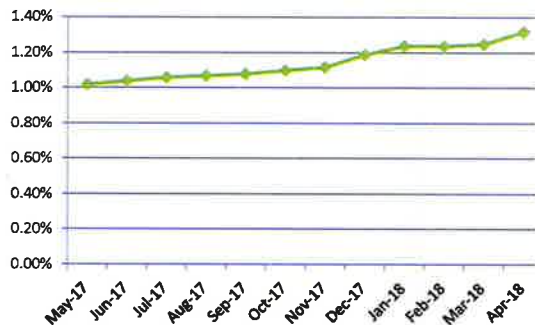
LIST OF EXHIBITS:

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

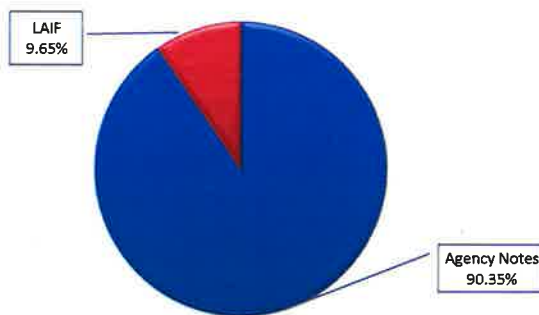
# Exhibit "A"

## Irvine Ranch Water District Investment Portfolio Summary April 2018

Monthly Fixed Income Yield



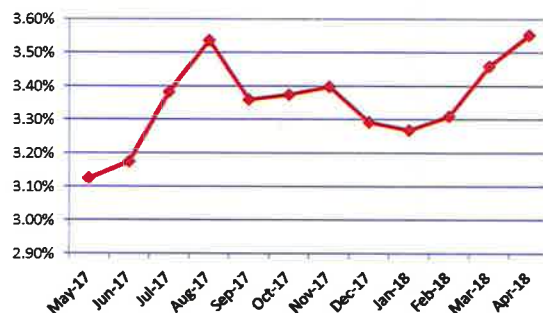
Portfolio Distribution



Investment Summary

Type	PAR	Book Value	Market Value
Agency Notes	341,550,000	341,466,271	338,061,189
LAIF	36,500,000	36,500,000	36,410,137
<b>Grand Total</b>	<b>378,050,000</b>	<b>377,966,271</b>	<b>374,471,326</b>

Weighted Average Return Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
Fed Home Loan Bank	116,000,000	30.68%
Fed Natl Mortgage Assoc	85,550,000	22.63%
Fed Home Loan Mortgage Corp	75,000,000	19.84%
Fed Farm Credit Bank	65,000,000	17.19%
State of California Treasury - LAIF	36,500,000	9.65%
<b>Grand Total</b>	<b>378,050,000</b>	<b>100%</b>



IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

04/30/18

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 4/30/2018	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
08/23/17			05/01/18		LAIF	State of California Tsy.	\$36,500,000		1.430%	\$36,500,000.00	\$36,500,000.00	36,410,137.04	(89,862.96)
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	4,999,897.26	4,998,050.00	(1,847.26)
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	5,000,289.97	4,997,600.00	(2,689.97)
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	11,002,883.92	10,994,390.00	(8,493.92)
06/29/16	N/A	N/A	06/29/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.000%	0.679%	10,016,000.00	10,001,293.15	9,986,200.00	(15,093.15)
09/01/16	N/A	N/A	07/27/18	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.750%	0.928%	4,983,250.00	4,997,900.22	4,986,000.00	(11,900.22)
12/21/16	N/A	N/A	08/15/18	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.000%	1.245%	4,980,000.00	4,996,478.41	4,987,850.00	(8,628.41)
09/01/16	N/A	N/A	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	4,984,550.00	(15,450.00)
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	5,003,843.88	4,984,450.00	(19,393.88)
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	4,998,150.40	4,984,450.00	(13,700.40)
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	9,997,636.36	9,954,400.00	(43,236.36)
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	4,998,575.42	4,977,600.00	(20,975.42)
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	5,002,164.14	4,980,150.00	(22,014.14)
10/12/16	N/A	N/A	10/12/18	Aaa/NR/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.000%	1.041%	9,992,000.00	9,997,983.56	9,955,400.00	(42,583.56)
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	10,041,601.55	9,976,300.00	(65,301.55)
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	5,024,850.24	4,966,550.00	(58,300.24)
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	5,013,150.23	4,987,750.00	(25,400.23)
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	4,993,557.70	4,987,750.00	(5,807.70)
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	4,997,632.93	4,951,350.00	(46,472.93)
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	4,996,779.66	4,951,350.00	(45,429.66)
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	4,996,610.17	4,951,350.00	(45,260.17)
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	9,996,400.94	9,910,700.00	(85,700.94)
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	5,022,528.87	4,967,850.00	(54,678.87)
03/21/18	NA	NA	03/21/19	Aaa/NA/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	2.125%	2.125%	10,000,000.00	10,000,000.00	9,989,800.00	(10,200.00)
10/12/16	N/A	N/A	03/29/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%	4,999,950.00	4,999,980.40	4,945,050.00	(54,930.40)
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	10,013,227.54	9,889,700.00	(123,527.54)
10/31/16	N/A	N/A	04/26/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.060%	4,998,750.00	4,999,502.48	4,939,150.00	(60,352.48)
09/01/16	N/A	N/A	05/28/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.030%	1.048%	4,997,550.00	4,999,038.64	4,935,400.00	(63,638.64)
04/19/18	N/A	N/A	05/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.750%	2.252%	4,972,500.00	4,973,312.81	4,970,650.00	(2,662.81)
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	5,035,183.66	4,958,400.00	(76,783.66)
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	5,030,146.99	4,958,400.00	(71,746.99)
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	4,986,058.36	4,910,550.00	(75,508.36)
09/01/16	NA	NA	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,998,167.01	4,919,250.00	(78,917.01)
09/01/16	N/A	N/A	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.160%	4,998,500.00	4,999,334.56	4,917,600.00	(81,734.56)
09/01/16	NA	NA	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,556.37	4,916,000.00	(83,556.37)
09/28/16	Quarterly	03/09/17	09/09/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.142%	4,997,500.00	4,998,843.84	4,915,500.00	(83,343.84)
04/10/18	NA	NA	09/13/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.288%	5,006,000.00	5,005,758.16	5,001,900.00	(3,858.16)
09/28/16	Continuous after	12/27/16	09/27/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.189%	5,001,500.00	5,000,704.75	4,919,550.00	(81,154.75)
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	9,994,918.23	9,818,900.00	(176,018.23)
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	9,987,477.15	9,804,900.00	(182,577.15)

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

04/30/18

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 4/30/2018	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
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	5,000,380.82	4,909,750.00	(90,630.82)
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	4,995,082.86	4,921,900.00	(73,182.86)
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	4,992,129.12	4,918,400.00	(73,729.12)
12/12/16	NA	NA	12/12/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.450%	1.440%	5,001,450.00	5,000,780.67	4,916,750.00	(84,030.67)
12/21/16	NA	NA	12/19/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.500%	1.621%	4,990,359.52	4,990,359.52	4,919,400.00	(70,959.52)
12/20/17	NA	NA	01/17/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.500%	1.932%	4,956,250.00	4,957,981.53	4,917,950.00	(40,031.53)
10/16/17	NA	NA	02/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.612%	4,987,025.00	4,989,980.00	4,910,500.00	(79,480.00)
12/20/17	NA	NA	03/13/20	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	4.125%	1.940%	5,237,200.00	5,228,457.99	5,142,400.00	(86,057.99)
10/03/17	NA	NA	04/20/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.375%	1.630%	4,982,350.00	4,975,496.77	4,890,300.00	(85,196.77)
11/21/17	Continuous after	02/20/18	05/20/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.830%	1.930%	4,987,500.00	4,973,394.76	4,911,400.00	(61,994.76)
11/10/17	NA	NA	06/22/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.750%	4,968,000.00	4,989,860.04	4,889,250.00	(100,610.04)
04/19/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.535%	4,886,000.00	4,887,642.26	4,879,650.00	(7,992.26)
12/20/17	Quarterly	11/10/16	08/10/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.450%	2.052%	4,923,000.00	4,925,396.27	4,868,850.00	(56,546.27)
12/12/17	One Time	09/28/18	09/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	2.000%	2.000%	5,000,000.00	5,000,000.00	4,924,450.00	(75,550.00)
10/31/17	One Time	10/30/18	10/30/20	Aaa/NR/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,550,000	1.850%	1.850%	5,550,000.00	5,550,000.00	5,434,948.50	(115,051.50)
12/13/17	Continuous after	08/23/17	11/23/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.770%	2.060%	4,958,750.00	4,959,900.09	4,881,300.00	(78,600.09)
12/13/17	Quarterly	05/24/18	11/24/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.900%	2.023%	4,982,500.00	4,982,987.47	4,887,850.00	(95,137.47)
11/30/17	NA	NA	11/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.850%	1.964%	4,983,550.00	4,985,843.94	4,900,150.00	(85,693.94)
12/20/17	NA	NA	12/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.875%	2.023%	4,978,400.00	4,978,986.96	4,903,250.00	(75,736.96)

**TOTAL INVESTMENTS** \$378,050,000      \$378,239,559.98      \$377,966,270.98      \$374,471,325.54

Petty Cash 3,400.00  
 Ck Balance Bank of America 1,849,167.99  
\$380,092,127.97

<p><sup>(1)</sup> 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.  <sup>(2)</sup> Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers  <sup>(3)</sup> Real estate rate of return is based on most recent quarter end return</p>	Outstanding Variable Rate Debt <span style="float: right;">\$282,600,000</span> Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps) <span style="float: right;">\$152,600,000</span> Investment Balance: <span style="float: right;">\$380,092,128</span> Investment to Variable Rate Debt Ratio: <span style="float: right;">249%</span> Portfolio - Average Number of Days To Maturity <sup>(4)</sup> <span style="float: right;">373</span>															
	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>Investment Portfolio</th> <th>Real Estate<sup>(3)</sup> Portfolio</th> <th>Weighted Avg. Return</th> </tr> </thead> <tbody> <tr> <td>April</td> <td>1.32%</td> <td>8.91%</td> <td>3.55%</td> </tr> <tr> <td>March</td> <td>1.25%</td> <td>8.91%</td> <td>3.46%</td> </tr> <tr> <td>Change</td> <td>0.07%</td> <td></td> <td>0.09%</td> </tr> </tbody> </table>		Investment Portfolio	Real Estate <sup>(3)</sup> Portfolio	Weighted Avg. Return	April	1.32%	8.91%	3.55%	March	1.25%	8.91%	3.46%	Change	0.07%	
	Investment Portfolio	Real Estate <sup>(3)</sup> Portfolio	Weighted Avg. Return													
April	1.32%	8.91%	3.55%													
March	1.25%	8.91%	3.46%													
Change	0.07%		0.09%													

This Investment Summary Report is in conformity with the 2018 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.  
 \*S - Step up

IRVINE RANCH WATER DISTRICT  
SUMMARY OF MATURITIES

04/30/18

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
04/18	\$36,500,000	9.65%	\$36,500,000				
05/18	10,000,000	2.65%		10,000,000			
06/18	21,000,000	5.55%		21,000,000			
07/18	5,000,000	1.32%		5,000,000		-	
08/18	10,000,000	2.65%		10,000,000			
09/18	25,000,000	6.61%		25,000,000			
10/18	15,000,000	3.97%		15,000,000			
11/18	10,000,000	2.65%		10,000,000			
12/18	15,000,000	3.97%		15,000,000			
01/19	15,000,000	3.97%		15,000,000			
02/19	10,000,000	2.65%		10,000,000			
03/19	20,000,000	5.29%		20,000,000			
<b>SUB-TOTAL</b>	<b>\$192,500,000</b>	<b>50.92%</b>	<b>\$36,500,000</b>	<b>\$156,000,000</b>			
<b>13 Months - 3 YEARS</b>							
4/01/19 - 5/31/2019	25,000,000	6.61%		25,000,000			
6/01/19 - 8/31/2019	30,000,000	7.94%		30,000,000			
9/01/2019 - 11/30/19	50,000,000	13.23%		50,000,000			
12/01/19 - 2/28/2020	20,000,000	5.29%		20,000,000			
3/01/2020 - 5/31/2020	15,000,000	3.97%		15,000,000			
6/01/2020 - 8/31/2020	15,000,000	3.97%		15,000,000			
9/01/2020 -12/31/2020	30,550,000	8.08%		30,550,000			
1/01/2021 -2/28/2021	-						
	-						
<b>TOTALS</b>	<b>\$378,050,000</b>	<b>100.00%</b>	<b>\$36,500,000</b>	<b>\$341,550,000</b>			

% OF PORTFOLIO

9.65%

90.35%

**IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT**  
**INVESTMENT ACTIVITY**  
**Apr-18**

**MATURITIES/SALES/CALLS**

**PURCHASES**

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
4/9/2018	FHLMC - Note	\$5,000,000	0.79%	4/10/2018	9/13/2019	FHLB - Note	\$5,000,000	2.29%
				4/19/2018	5/30/2019	FHLMC - Note	\$5,000,000	2.25%
				4/19/2018	7/30/2020	FNMA - Note	\$5,000,000	2.53%

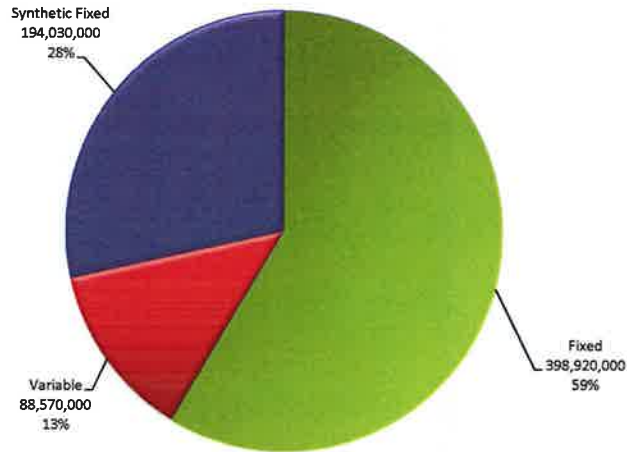
Irvine Ranch Water District  
 Summary of Real Estate - Income Producing Investments  
 3/31/2018

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	ESTIMATED MARKET VALUE 3/31/2018	ANNUALIZED RATE OF RETURN QUARTER ENDED 3/31/2018
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 147,507,750	18.94%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 28,934,076	8.56%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 9,571,680	11.08%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 7,803,000	3.39%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 10,820,160	9.02%
<b>Total - Income Properties</b>				<b>\$ 72,569,826</b>	<b>\$ 204,636,666</b>	<b>14.43%</b>
OTHER REAL ESTATE DESCRIPTION						
Serrano Summit - Promissory Note	Sep-17	NA	NA	\$ 81,600,000	\$ 81,600,000	4.00%
<b>Total - Income Producing Real Estate Investments</b>				<b>\$ 154,169,826</b>	<b>\$ 286,236,666</b>	<b>8.91%</b>

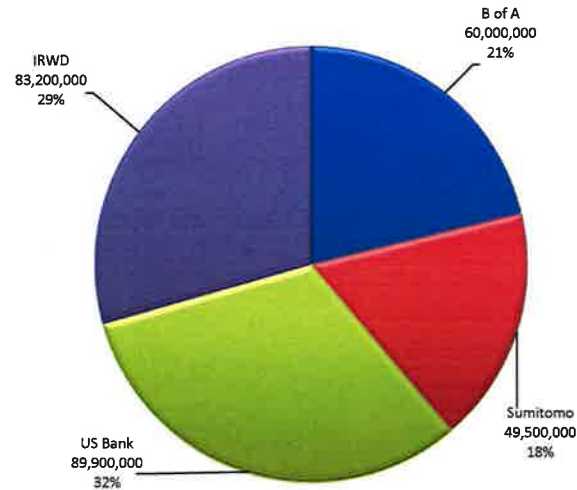
## Exhibit "B"

### Irvine Ranch Water District Summary of Fixed and Variable Rate Debt April 2018

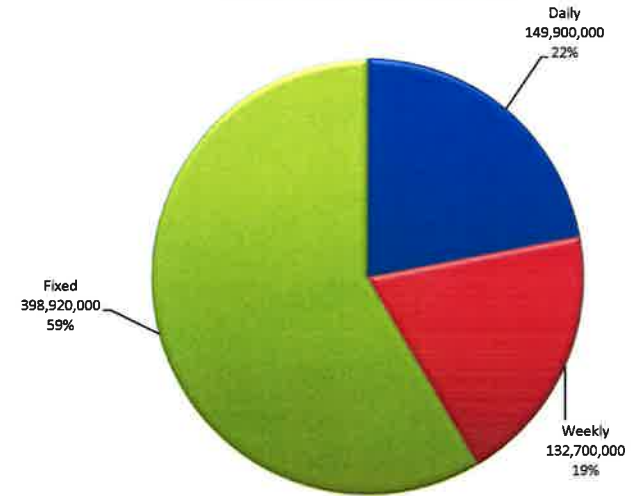
**Current Debt Mix By Type**



**Letters of Credit / Support**



**Current Debt Rate Reset**



**Outstanding Par by Series**

Series	Issue Date	Maturity Date	Remaining		Letter of Credit	Rmkt Agent	Mode	Reset
			Principal	Percent				
Series 1993	05/19/93	04/01/33	\$29,900,000	4.39%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$49,500,000	7.26%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$49,920,000	7.32%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$33,280,000	4.88%	IRWD	Morgan	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$60,000,000	8.80%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$60,000,000	8.80%	B of A	Goldman	Variable	Daily
2010 Refunding Cops	02/23/10	03/01/20	\$3,775,000	0.55%	N/A	N/A	Fixed	Fixed
2016 COPS	09/01/16	03/01/46	\$116,745,000	17.13%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	25.68%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	15.17%	N/A	N/A	Fixed	Fixed
<b>Total</b>			<b>\$681,520,000</b>	<b>100.00%</b>				

IRVINE RANCH WATER DISTRICT  
SUMMARY OF FIXED & VARIABLE RATE DEBT

April-18

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION							TRUSTEE INFORMATION											
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODYS	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee					
SERIES 1993	05/19/93	04/01/33	APR 1 (2014)	5th Bus. Day	\$38,300,000	\$29,900,000	US BANK	05/07/15	11/07/18	Aa3/VMIG1	AA-/A-1+	N/R	\$30,303,036	0.3300%	\$100,000	BAML	DAILY	0.10%	\$29,900	BANK OF NY					
SERIES 2008-A Refunding	04/24/08	07/01/35	JUL 1	5th Bus. Day	\$60,215,000	\$49,500,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/F1	\$50,232,329	0.3150%	\$158,232	BAML	WED	0.07%	\$34,650	BANK OF NY					
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	OCT 1	1st Bus. Day	\$60,545,000	\$49,920,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$62,400	BANK OF NY					
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	OCT 1	1st Bus. Day	\$40,370,000	\$33,280,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Morgan S.	WED	0.13%	\$41,600	BANK OF NY					
SERIES 2009 - A	06/04/09	10/01/41	OCT 1	1st Bus. Day	\$75,000,000	\$60,000,000	US BANK	04/01/11	12/22/20	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$60,670,685	0.4100%	\$248,750	US Bank	DAILY	0.07%	\$42,000	US BANK					
SERIES 2009 - B	06/04/09	10/01/41	OCT 1	1st Bus. Day	\$75,000,000	\$60,000,000	B of A	04/01/11	07/15/19	A1/VMIG 1	A/A-1	A1/F1+	\$60,670,685	0.4000%	\$242,683	Goldman	DAILY	0.10%	\$60,000	US BANK					
<b>\$349,430,000</b>						<b>\$282,600,000</b>	<b>SUB-TOTAL VARIABLE RATE DEBT</b>							<b>\$201,876,734</b>	<b>0.3714%</b>	<b>\$749,664</b>									
																(Wt. Avg)					(Wt. Avg)				

FIXED RATE ISSUES																					
2010 REFUNDING COPS	02/23/10	03/01/20	Mar -1	MAR/SEPT	\$85,145,000	\$3,775,000	N/A	N/A	N/A	Aa1	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	MAY (2025)	MAY/NOV	\$175,000,000	\$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
2016 COPS	09/01/16	03/01/46	Mar -1	MAR/SEPT	\$116,745,000	\$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
SERIES 2016	10/12/16	02/01/46	Feb -1	FEB/AUG	\$103,400,000	\$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
<b>\$480,290,000</b>						<b>\$398,920,000</b>	<b>SUB-TOTAL FIXED RATE DEBT</b>														
<b>\$829,720,000</b>						<b>\$681,520,000</b>	<b>TOTAL - FIXED &amp; VARIABLE RATE DEBT</b>														

Remarketing Agents			GO VS COP'S		
Goldman	109,920,000	39%	GO:	561,000,000	82%
Morgan Stanley	33,280,000	12%	COPS:	120,520,000	18%
BAML	79,400,000	28%	Total	<b>681,520,000</b>	
US Bank	60,000,000	21%			
	<b>282,600,000</b>				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	49,500,000	Daily Issues	149,900,000 22%
BANK OF AMERICA	60,000,000	Weekly Issues	49,500,000 7%
US BANK	89,900,000	ITN Issues	63,200,000 12%
	<b>199,400,000</b>	Sub-Total	<b>282,600,000</b>
		Fixed Rate Issues	\$398,920,000 59%
		Sub-Total - Fixed	<b>398,920,000</b>
		TOTAL DEBT	
		FIXED & VAR.	<b>681,520,000 100%</b>

IRVINE RANCH WATER DISTRICT  
SUMMARY OF DEBT RATES  
Apr-18

Rmkt Agent	GOLDMAN		MORGAN STANLEY		MERRILL LYNCH		US BANK
Mode	DAILY	WEEKLY	WEEKLY		DAILY	WEEKLY	DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2		1993	2008-A	2009-A
Par Amount	60,000,000	49,920,000	33,280,000		29,900,000	49,500,000	60,000,000
Bank	BOFA		(SIFMA -1)		US BANK		US BANK
Reset		Wednesday	Wednesday		Wednesday		
4/1/2018	1.47%	1.57%	1.57%		1.44%	1.47%	1.45%
4/2/2018	1.32%	1.57%	1.57%		1.27%	1.47%	1.37%
4/3/2018	1.22%	1.57%	1.57%		1.27%	1.47%	1.30%
4/4/2018	1.23%	1.57%	1.57%		1.25%	1.47%	1.27%
4/5/2018	1.23%	1.59%	1.59%		1.28%	1.55%	1.27%
4/6/2018	1.30%	1.59%	1.59%		1.25%	1.55%	1.27%
4/7/2018	1.30%	1.59%	1.59%		1.25%	1.55%	1.27%
4/8/2018	1.30%	1.59%	1.59%		1.25%	1.55%	1.27%
4/9/2018	1.27%	1.59%	1.59%		1.29%	1.55%	1.28%
4/10/2018	1.27%	1.59%	1.59%		1.32%	1.55%	1.28%
4/11/2018	1.33%	1.59%	1.59%		1.34%	1.55%	1.28%
4/12/2018	1.35%	1.71%	1.71%		1.42%	1.62%	1.38%
4/13/2018	1.42%	1.71%	1.71%		1.44%	1.62%	1.40%
4/14/2018	1.42%	1.71%	1.71%		1.44%	1.62%	1.40%
4/15/2018	1.42%	1.71%	1.71%		1.44%	1.62%	1.40%
4/16/2018	1.47%	1.71%	1.71%		1.47%	1.62%	1.44%
4/17/2018	1.49%	1.71%	1.71%		1.52%	1.62%	1.50%
4/18/2018	1.55%	1.71%	1.71%		1.51%	1.62%	1.53%
4/19/2018	1.53%	1.80%	1.80%		1.52%	1.70%	1.53%
4/20/2018	1.53%	1.80%	1.80%		1.50%	1.70%	1.53%
4/21/2018	1.53%	1.80%	1.80%		1.50%	1.70%	1.53%
4/22/2018	1.53%	1.80%	1.80%		1.50%	1.70%	1.53%
4/23/2018	1.53%	1.80%	1.80%		1.48%	1.70%	1.53%
4/24/2018	1.45%	1.80%	1.80%		1.47%	1.70%	1.52%
4/25/2018	1.37%	1.80%	1.80%		1.43%	1.70%	1.42%
4/26/2018	1.35%	1.74%	1.74%		1.39%	1.63%	1.36%
4/27/2018	1.31%	1.74%	1.74%		1.39%	1.63%	1.31%
4/28/2018	1.31%	1.74%	1.74%		1.39%	1.63%	1.31%
4/29/2018	1.31%	1.74%	1.74%		1.39%	1.63%	1.31%
4/30/2018	1.22%	1.74%	1.74%		1.32%	1.63%	1.29%
<b>Avg Interest Rates</b>	<b>1.38%</b>	<b>1.69%</b>	<b>1.69%</b>		<b>1.39%</b>	<b>1.60%</b>	<b>1.38%</b>
Rmkt Fee	0.10%	0.13%	0.13%		0.10%	0.07%	0.07%
LOC Fee	0.40%				0.33%	0.32%	0.41%
<b>All-In Rate</b>	<b>1.88%</b>	<b>1.82%</b>	<b>1.82%</b>		<b>1.82%</b>	<b>1.99%</b>	<b>1.87%</b>
Par Amount		109,920,000	33,280,000		79,400,000		60,000,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	53.04%	149,900,000	1.86%	1.38%
Weekly	46.96%	132,700,000	1.88%	1.66%
	100.00%	<b>\$ 282,600,000</b>	1.87%	1.51%
<b>Fixed</b>				
COPS 2010	0.95%	3,775,000	3.82%	
COPS 2016	29.27%	116,745,000	2.90%	
BABS 2010	43.87%	175,000,000	4.46%	(1)
SERIES 2016	25.92%	103,400,000	3.32%	
	100.00%	<b>\$ 398,920,000</b>	3.70%	
<b>All-In Debt Rate Including \$130 Million Notional Amount of Swaps</b>				<b>3.68%</b>

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 6.8%



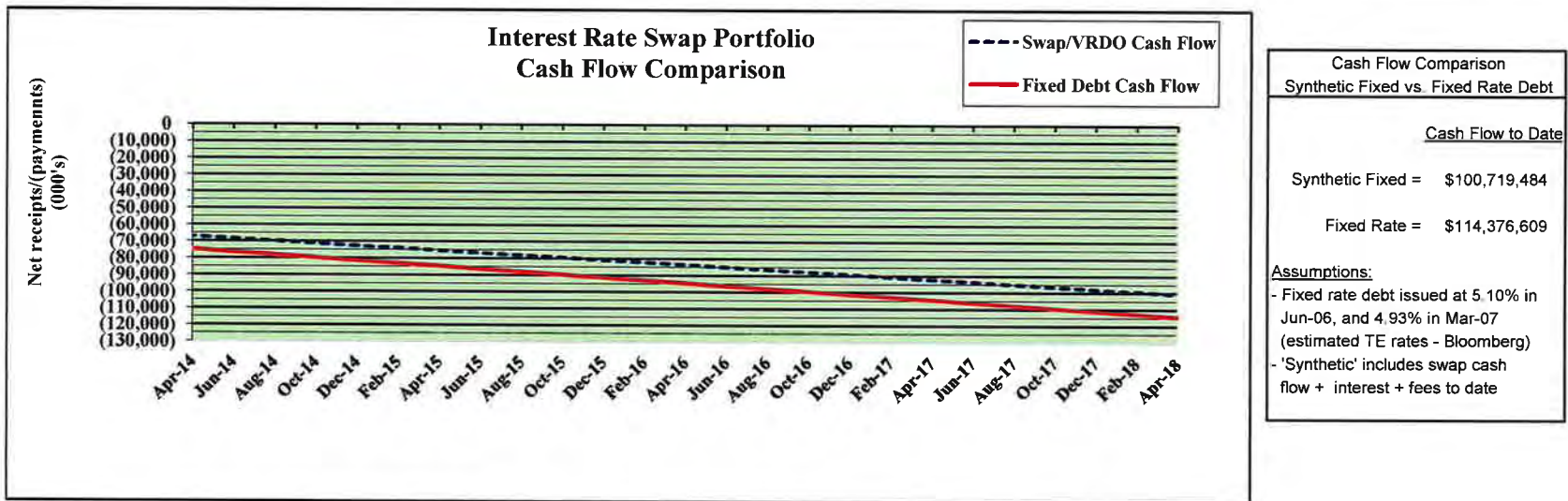
**IRVINE RANCH WATER DISTRICT  
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL  
April 30, 2018**

Exhibit "C"

								Prior Mo.	Current Mo.	12-Mo Avg				
								LIBOR Avg %	1.79%	1.90%	1.39%			
Current Fiscal Year Active Swaps								Cash Flow				(Since 6/06)	Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference	
<b>Fixed Payer Swaps - By Effective Date</b>														
6/4/2006	6/4/2019	1.1	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(79,848)	(73,956)	\$ (794,866)	\$ (11,718,159)	\$ 19,170,377	\$ (829,623)	
6/4/2006	6/4/2019	1.1	CG	20,000,000	FXP	LIBOR	6.200%	(79,848)	(73,956)	(794,866)	(11,718,159)	19,170,960	(829,040)	
6/17/2006	6/17/2019	1.1	CG	30,000,000	FXP	LIBOR	6.140%	(118,010)	(109,452)	(1,176,956)	(17,379,613)	28,739,672	(1,260,328)	
3/10/2007	3/10/2029	10.9	ML	30,000,000	FXP	LIBOR	5.687%	(106,198)	(97,900)	(1,064,520)	(15,670,327)	22,170,512	(7,829,488)	
3/10/2007	3/10/2029	10.9	CG	30,000,000	FXP	LIBOR	5.687%	(106,198)	(97,900)	(1,064,520)	(15,670,327)	22,163,723	(7,836,277)	
Totals/Weighted Avgs		5.6		\$ 130,000,000			5.949%	\$ (490,102)	\$ (453,164)	\$ (4,895,727)	\$ (72,156,583)	\$ 111,415,244	\$ (18,584,756)	
<b>Total Current Year Active Swaps</b>				\$ 130,000,000				\$ (490,102)	\$ (453,164)	\$ (4,895,727)	\$ (72,156,583)	\$ 111,415,244	\$ (18,584,756)	

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

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market	
Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference								
<b>Total Current Year Active &amp; Terminated Swaps</b>	\$ 130,000,000	\$ (490,102)	\$ (453,164)	\$ (4,895,727)	\$ (72,156,583)	\$ 111,415,244	\$ (18,584,756)						



# Exhibit "D"

IRWD Ledger Upgrade

Report Date: 01-MAY-2018 07:16

Include Zero Amount Payments: Yes  
Display Payee Address: No

Void Payment Register

Period From: 01-APR-18

Page: 1  
To: 30-APR-18  
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD ( US Dollar )

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
382576	07-DEC-17	PATEL, KETAN	PAY		769.02	16-APR-18
382666	14-DEC-17	Brown, Andrew R (Robert)	HOME		126.35	13-APR-18
382752	14-DEC-17	GLANVILLE, NICOLE	PAY		44.89	13-APR-18
382780	14-DEC-17	KENNEDY, ANDREW	PAY		12.04	13-APR-18
382783	14-DEC-17	KLOMBIES, SAMANTHA	PAY		67.94	13-APR-18
382808	14-DEC-17	NGHIEU, TAMARA	PAY		27.06	13-APR-18
382837	14-DEC-17	QU, CHENXI	PAY		34.06	13-APR-18
382841	14-DEC-17	RAMAKRISHNAN, DINESH	PAY		38.08	13-APR-18
382892	14-DEC-17	WANG, ZHONGQUAN	PAY		47.03	13-APR-18
382953	20-DEC-17	BERNOR, AMBER	PAY		32.76	13-APR-18
382997	20-DEC-17	ETZEL, PATRICK	PAY		50.70	13-APR-18
383013	20-DEC-17	HALFACRE, LULA	PAY		46.30	13-APR-18
383024	20-DEC-17	HUANG, SHAN	PAY		25.96	13-APR-18
383038	20-DEC-17	KITCHEN, PEGGY	PAY		131.00	16-APR-18
383084	20-DEC-17	PHAN, NATASHA	PAY		36.51	13-APR-18
383098	20-DEC-17	ROXY, MOHAMED	PAY		55.21	13-APR-18
383104	20-DEC-17	SIGNATURE CONTROL SYSTEMS I	PAY		56.21	13-APR-18
383158	20-DEC-17	ZHANG, CHENHAO	PAY		10.72	13-APR-18
383185	21-DEC-17	HERNANDEZ, CHRISTOPHER	PAY		61.42	13-APR-18
383722	18-JAN-18	Compton, Christine A	HOME		93.55	25-APR-18
383777	18-JAN-18	DATA CLEAN CORPORATION	PAY		534.00	19-APR-18
385095	01-MAR-18	BARQAWI, BADER	PAY		37.25	13-APR-18
385969	28-MAR-18	ARRIOLA, NICOLAS	PAY		25.93	13-APR-18
385996	28-MAR-18	BETHARD, JEFF	PAY		49.04	13-APR-18
385997	28-MAR-18	BIBAYAN, FARABORZ	PAY		44.80	19-APR-18
386013	28-MAR-18	BRYANT, VENZIWE	PAY		66.06	13-APR-18
386015	28-MAR-18	BUFFON, LARRY	PAY		30.93	13-APR-18
386027	28-MAR-18	CASEY, REGINA	PAY		40.92	13-APR-18
386028	28-MAR-18	CATALANO, LYNN M	PAY		158.91	13-APR-18
386030	28-MAR-18	CETIN, BELI	PAY		37.80	13-APR-18
386031	28-MAR-18	CHAMBERS, JOYCE	PAY		85.99	19-APR-18
386034	28-MAR-18	CHANG, FRANCES	PAY		26.12	13-APR-18
386035	28-MAR-18	CHANG, WILLIAM	PAY		26.78	24-APR-18
386044	28-MAR-18	CHEN, YUN	PAY		31.11	13-APR-18
386054	28-MAR-18	CHUANG, KEN	PAY		130.17	13-APR-18
386065	28-MAR-18	CONMY, PHIL	PAY		69.97	13-APR-18
386081	28-MAR-18	DEDRICK, JESSICA	PAY		228.34	13-APR-18
386085	28-MAR-18	DEVRIES, TIM	PAY		58.48	13-APR-18

Report Date: 01-MAY-2018 07:16

Include Zero Amount Payments: Yes  
Display Payee Address: No

Void Payment Register

Period From: 01-APR-18

Page: 2  
To: 30-APR-18  
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD ( US Dollar )

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
386088	28-MAR-18	DISANTO, JOHN	PAY		86.74	19-APR-18
386097	28-MAR-18	EID, MIRIAM	PAY		37.64	13-APR-18
386100	28-MAR-18	ELHAREZI, DANIAH	PAY		162.00	13-APR-18
386101	28-MAR-18	ENEIX, BRENT	PAY		33.89	13-APR-18
386125	28-MAR-18	GAHNG, BETTY	PAY		14.44	13-APR-18
386134	28-MAR-18	GILBERT, LUCAS	PAY		37.02	13-APR-18
386137	28-MAR-18	GLASER, BRAD	PAY		164.19	13-APR-18
386139	28-MAR-18	GOLDMAN, ALFREDO	PAY		37.68	13-APR-18
386142	28-MAR-18	GRAHAM, STEVEN	PAY		57.20	13-APR-18
386155	28-MAR-18	HAGEMEIET, NATHAN	PAY		20.85	19-APR-18
386164	28-MAR-18	HARVEY, GREG	PAY		90.09	13-APR-18
386165	28-MAR-18	HASLAUER, JEFFREY	PAY		63.19	13-APR-18
386168	28-MAR-18	HATAGO, PAUL Y	PAY		35.37	19-APR-18
386171	28-MAR-18	HEDGER, PHILIP	PAY		94.15	13-APR-18
386174	28-MAR-18	HENNINGSON, CARL	PAY		52.99	13-APR-18
386176	28-MAR-18	HERNANDEZ, TANYA	PAY		161.98	13-APR-18
386180	28-MAR-18	HIEGER, NATHAN	PAY		35.29	13-APR-18
386183	28-MAR-18	HOFMAN, MARIA	PAY		46.05	24-APR-18
386193	28-MAR-18	HUMPHREYS, MICHELLE	PAY		75.38	13-APR-18
386194	28-MAR-18	HUMPHREYS, TYLER	PAY		37.65	13-APR-18
386196	28-MAR-18	HUNTER, CASSANDRA	PAY		31.23	13-APR-18
386217	28-MAR-18	JUNG, LAURA	PAY		50.71	13-APR-18
386218	28-MAR-18	KADAN, BOB	PAY		20.34	13-APR-18
386219	28-MAR-18	KASHYAP, MANESHA	PAY		29.07	19-APR-18
386223	28-MAR-18	KELLEY, BREANN	PAY		54.44	13-APR-18
386231	28-MAR-18	KIM, HANG	PAY		37.05	13-APR-18
386232	28-MAR-18	KIM, JI HOON	PAY		53.60	19-APR-18

386236	28-MAR-18	KIM, NELSON	PAY	23.12	13-APR-18
386238	28-MAR-18	KIM, SOOMYUNG	PAY	32.15	13-APR-18
386242	28-MAR-18	KIRSCHENMANN, DANIEL	PAY	100.02	13-APR-18
386243	28-MAR-18	KO, RICHARD Y	PAY	43.37	13-APR-18
386257	28-MAR-18	LEE, GRACE	PAY	72.70	13-APR-18
386264	28-MAR-18	LEWIS, JANE	PAY	277.00	19-APR-18
386265	28-MAR-18	LEYS, WILLIAM D	PAY	158.96	13-APR-18
386266	28-MAR-18	LICH, DAVID	PAY	81.02	13-APR-18
386270	28-MAR-18	LITVAK, URI	PAY	66.05	13-APR-18
386289	28-MAR-18	MARTIN, JULIA	PAY	66.40	19-APR-18
386290	28-MAR-18	MASHOUR, PEARL	PAY	39.94	13-APR-18

IRWD Ledger Upgrade

Report Date: 01-MAY-2018 07:16

Void Payment Register

Page: 3

Include Zero Amount Payments: Yes  
Display Payee Address: No

Period From: 01-APR-18

To: 30-APR-18  
Date: Void Date

Bank: Bank of America N.A. Branch: Los Angeles Account: Checking AP and PR

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

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
386300	28-MAR-18	MCKEAGUE, W. DOUGLAS	PAY		51.97	13-APR-18
386314	28-MAR-18	MORGAN, JOLIE	PAY		206.99	13-APR-18
386315	28-MAR-18	MORIARTY, CYNTHIA	PAY		84.52	13-APR-18
386316	28-MAR-18	MORRELL, ANNA	PAY		34.85	13-APR-18
386318	28-MAR-18	MOTTESTI, NOEMI	PAY		47.88	13-APR-18
386319	28-MAR-18	MULLER, JOHN	PAY		40.83	13-APR-18
386328	28-MAR-18	NAKAMURA, DANIEL	PAY		60.90	13-APR-18
386341	28-MAR-18	NORDINE, MOLLY	PAY		190.91	19-APR-18
386355	28-MAR-18	PAGE, KAUSTUBH	PAY		11.39	13-APR-18
386358	28-MAR-18	PARK, HANJIN	PAY		147.30	13-APR-18
386363	28-MAR-18	PEELER, DANIELLE	PAY		30.32	13-APR-18
386364	28-MAR-18	PEREZ, DONNA	PAY		10.28	13-APR-18
386367	28-MAR-18	PHAM, VAN-KHANH	PAY		38.63	19-APR-18
386375	28-MAR-18	PRICE, JESSICA	PAY		35.20	13-APR-18
386383	28-MAR-18	RABLE, BRAD	PAY		27.18	13-APR-18
386391	28-MAR-18	READY, KEVIN	PAY		33.98	13-APR-18
386402	28-MAR-18	RICHARDSON, JOSEPH	PAY		38.86	13-APR-18
386404	28-MAR-18	RIDGEWAY, SUEKO	PAY		30.43	13-APR-18
386408	28-MAR-18	ROBERTS, STEPHEN	PAY		41.83	13-APR-18
386412	28-MAR-18	ROSS, STEVEN	PAY		38.40	13-APR-18
386417	28-MAR-18	RUTH NOLAN AND BRENDAN NOLA	PAY		72.31	13-APR-18
386421	28-MAR-18	SALCIDO, ANTHONY	PAY		37.01	13-APR-18
386422	28-MAR-18	SALVETTI, ERIN	PAY		80.00	13-APR-18
386428	28-MAR-18	SARAVIA, VARTAN	PAY		56.51	13-APR-18
386438	28-MAR-18	SHENODA, MARYANN	PAY		59.57	13-APR-18
386439	28-MAR-18	SHERWIN, RALPH	PAY		91.81	13-APR-18
386448	28-MAR-18	SMALL, RANDI	PAY		57.70	13-APR-18
386449	28-MAR-18	SMITH, HAROLD	PAY		31.18	13-APR-18
386463	28-MAR-18	STEFANELLO, GARY	PAY		347.99	13-APR-18
386465	28-MAR-18	STEPUTIS, NOLAN	PAY		34.11	13-APR-18
386476	28-MAR-18	TALEBI, FARHAD	PAY		31.29	13-APR-18
386479	28-MAR-18	TAVLIN, SHRILEY	PAY		169.65	13-APR-18
386494	28-MAR-18	TOKUHARA, KAZUYUKI	PAY		44.14	13-APR-18
386497	28-MAR-18	TORKZADEH, REZA	PAY		76.57	13-APR-18
386498	28-MAR-18	TOTEN, SUZANNE	PAY		18.07	13-APR-18
386500	28-MAR-18	TRIKAS, IRMA	PAY		49.03	13-APR-18
386504	28-MAR-18	TSUJIOKA, MARY JANE	PAY		35.71	13-APR-18
386513	28-MAR-18	URNER, CANDIDA	PAY		102.96	13-APR-18

IRWD Ledger Upgrade

Report Date: 01-MAY-2018 07:16

Void Payment Register

Page: 4

Include Zero Amount Payments: Yes  
Display Payee Address: No

Period From: 01-APR-18

To: 30-APR-18  
Date: Void Date

Bank: Bank of America N.A. Branch: Los Angeles Account: Checking AP and PR

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

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
386520	28-MAR-18	VILLACORTA, BRIAN	PAY		55.42	13-APR-18
386529	28-MAR-18	WANG, CONNIE	PAY		25.93	13-APR-18
386530	28-MAR-18	WANG, PEI	PAY		34.88	13-APR-18
386543	28-MAR-18	WILDER, JADE	PAY		52.46	13-APR-18
386552	28-MAR-18	WU, ELIZABETH	PAY		103.29	13-APR-18
386553	28-MAR-18	WU, GRACE	PAY		174.97	13-APR-18
386562	28-MAR-18	YOUNG, JENNIFER	PAY		372.22	19-APR-18
386575	28-MAR-18	ZHANG, HONG	PAY		25.90	13-APR-18
386579	28-MAR-18	ZIFF, MARCI	PAY		46.24	13-APR-18
386922	12-APR-18	KB HOMES	PAY		33.96	13-APR-18
387018	12-APR-18	TOLL BROS., INC.	PAY		470.86	13-APR-18
387047	12-APR-18	INTERNAL REVENUE SERVICE	FRESNO		245.29	13-APR-18

Payment Document Subtotal 10,270.05

Report Count: 126

Bank Account Subtotal	10,270.05
Report Total	10,270.05
	Voids

\*\*\* End of Report \*\*\*

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
386583		04-APR-18	Burton, Kevin L (Kevin)		16.00	05-APR-18	16.00	Reconciled
386584		04-APR-18	Chauv, Denise		2,557.25	09-APR-18	2,557.25	Reconciled
386585		04-APR-18	Cook, Paul A (Paul)		28.85	10-APR-18	28.85	Reconciled
386586		04-APR-18	Fabris, John		17.48	24-APR-18	17.48	Reconciled
386587		04-APR-18	Hansen, Casey		150.00	09-APR-18	150.00	Reconciled
386588		04-APR-18	Hjorth, Charles O (Charles)		64.64	09-APR-18	64.64	Reconciled
386589		04-APR-18	Hufana, Eugenio D		51.78	05-APR-18	51.78	Reconciled
386590		04-APR-18	Jacobson, Robert C (Rob)		29.62			Negotiable
386591		04-APR-18	Midstokke, Paige		23.88	05-APR-18	23.88	Reconciled
386592		04-APR-18	Nash, Joel		58.86	10-APR-18	58.86	Reconciled
386593		04-APR-18	Nicholson, Darin		180.00	12-APR-18	180.00	Reconciled
386594		04-APR-18	Oldewage, Lars D (Lars)		412.81	06-APR-18	412.81	Reconciled
386595		04-APR-18	Trigg, Tyler		190.00	06-APR-18	190.00	Reconciled
386596		04-APR-18	ACCUSOURCE, INC.		351.95	16-APR-18	351.95	Reconciled
386597		04-APR-18	AERATION INDUSTRIES INTERNATIONAL INC		3,923.10	09-APR-18	3,923.10	Reconciled
386598		04-APR-18	AFLAC		203.12	13-APR-18	203.12	Reconciled
386599		04-APR-18	AFLAC		7,101.06	13-APR-18	7,101.06	Reconciled
386600		04-APR-18	AIRGAS, INC.		695.10	09-APR-18	695.10	Reconciled
386601		04-APR-18	AIRKINETICS, INC		6,030.00	10-APR-18	6,030.00	Reconciled
386602		04-APR-18	ALEXANDER'S CONTRACT SERVICES, INC.		114,100.97	11-APR-18	114,100.97	Reconciled
386603		04-APR-18	ALLIANCE AG SERVICES, LLC		3,000.00	11-APR-18	3,000.00	Reconciled
386604		04-APR-18	ALLIANCE RESOURCE CONSULTING LLC		14,000.00	11-APR-18	14,000.00	Reconciled
386605		04-APR-18	AMAZON CAPITAL SERVICES, INC.		2,439.40	09-APR-18	2,439.40	Reconciled
386606		04-APR-18	ANDERSONPENNA PARTNERS, INC.		56,603.00	11-APR-18	56,603.00	Reconciled
386607		04-APR-18	ANTHONY N. LARSEN		200.00	09-APR-18	200.00	Reconciled
386608		04-APR-18	ASBAN, NOA		40.23			Negotiable
386609		04-APR-18	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA		34,420.87	13-APR-18	34,420.87	Reconciled
386610		04-APR-18	AT&T		481.12	11-APR-18	481.12	Reconciled
386611		04-APR-18	AT&T		10.22	10-APR-18	10.22	Reconciled
386612		04-APR-18	AUTOZONE PARTS, INC.		258.52	09-APR-18	258.52	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
386613		04-APR-18	AZINIGHALIBAF, DANIYAL		30.03	09-APR-18	30.03	Reconciled
386614		04-APR-18	BATTERIES PLUS AND BATTERIES PLUS BULBS		2,826.89	09-APR-18	2,826.89	Reconciled
386615		04-APR-18	BEST MANAGEMENT CONSTRUCTION, INC.		1,571.99	09-APR-18	1,571.99	Reconciled
386616		04-APR-18	BOLINAS, ANGELBERT		30.11	13-APR-18	30.11	Reconciled
386617		04-APR-18	BROWN AND CALDWELL		23,115.78	12-APR-18	23,115.78	Reconciled
386618		04-APR-18	BURKE, WILLIAMS & SORENSEN, LLP		1,430.00	09-APR-18	1,430.00	Reconciled
386619		04-APR-18	BYL, CANDICE		51.29			Negotiable
386620		04-APR-18	CALIFORNIA BARRICADE RENTAL, INC.		910.00	09-APR-18	910.00	Reconciled
386621		04-APR-18	CAPTIVE AUDIENCE MARKETING INC.		79.00	10-APR-18	79.00	Reconciled
386622		04-APR-18	CHA, MIJUNG		93.76			Negotiable
386623		04-APR-18	CHARLES P CROWLEY COMPANY INC		16,403.90	12-APR-18	16,403.90	Reconciled
386624		04-APR-18	CHEN, ANNIE		35.01			Negotiable
386625		04-APR-18	CHEN, WINSTON		250.07	12-APR-18	250.07	Reconciled
386626		04-APR-18	CITY OF IRVINE		1,766.80	06-APR-18	1,766.80	Reconciled
386627		04-APR-18	CITY OF TUSTIN		217.75	06-APR-18	217.75	Reconciled
386628		04-APR-18	CLARK, RUTH		51.56	12-APR-18	51.56	Reconciled
386629		04-APR-18	COAST PLUMBING HEATING AND AIR,		675.00	06-APR-18	675.00	Reconciled

386630	04-APR-18	INC COLONIAL LIFE & ACCIDENT INSURANCE CO.	1,230.32	11-APR-18	1,230.32	Reconciled
386631	04-APR-18	COLUMBIA COURT APTS	35.72	19-APR-18	35.72	Reconciled
386632	04-APR-18	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	1,480.00	09-APR-18	1,480.00	Reconciled
386633	04-APR-18	CONSUMERS PIPE & SUPPLY CO.	1,129.99	09-APR-18	1,129.99	Reconciled
386634	04-APR-18	COX COMMUNICATIONS, INC.	255.53	10-APR-18	255.53	Reconciled
386635	04-APR-18	CROSS CREEK APTS	33.64	19-APR-18	33.64	Reconciled
386636	04-APR-18	CSU FULLERTON AUXILIARY SERVICES CORPORATION	1,270.00			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 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								
386637		04-APR-18	CULLIGAN OF SANTA ANA		4,000.00	11-APR-18	4,000.00	Reconciled
386638		04-APR-18	DEACON CORP.		934.43	06-APR-18	934.43	Reconciled
386639		04-APR-18	DELL MARKETING LP		4,585.91	09-APR-18	4,585.91	Reconciled
386640		04-APR-18	DILYTICS INC		32,640.00	13-APR-18	32,640.00	Reconciled
386641		04-APR-18	DO, VIET		33.02	10-APR-18	33.02	Reconciled
386642		04-APR-18	DPR CONSTRUCTION		1,406.65	12-APR-18	1,406.65	Reconciled
386643		04-APR-18	EAST ORANGE COUNTY WATER DISTRICT		6,456.86	09-APR-18	6,456.86	Reconciled
386644		04-APR-18	EBS GENERAL ENGINEERING, INC.		1,515.54	10-APR-18	1,515.54	Reconciled
386645		04-APR-18	ENVIRONMENTAL EQUIPMENT SUPPLY		226.67	10-APR-18	226.67	Reconciled
386646		04-APR-18	ENVIRONMENTAL SCIENCE ASSOCIATES		11,308.95	13-APR-18	11,308.95	Reconciled
386647		04-APR-18	EVOQUA WATER TECHNOLOGIES LLC		924.98	09-APR-18	924.98	Reconciled
386648		04-APR-18	EXECUTIVE LIGHTING & ELECTRIC		317.50	10-APR-18	317.50	Reconciled
386649		04-APR-18	FANG, BRIAN		33.46			Negotiable
386650		04-APR-18	FEDEX		266.52	09-APR-18	266.52	Reconciled
386651		04-APR-18	FENG, SHUYI		454.77	11-APR-18	454.77	Reconciled
386652		04-APR-18	FIDELITY SECURITY LIFE INSURANCE COMPANY		6,887.65	11-APR-18	6,887.65	Reconciled
386653		04-APR-18	FIN, TOM		26.53			Negotiable
386654		04-APR-18	FISHER SCIENTIFIC COMPANY LLC		329.34	09-APR-18	329.34	Reconciled
386655		04-APR-18	FORESTRY SUPPLIERS INC		2,252.03	09-APR-18	2,252.03	Reconciled
386656		04-APR-18	FRONTIER CALIFORNIA INC.		275.13	13-APR-18	275.13	Reconciled
386657		04-APR-18	FUSCOE ENGINEERING, INC.		1,550.50	06-APR-18	1,550.50	Reconciled
386658		04-APR-18	GEI CONSULTANTS INC		663.96	12-APR-18	663.96	Reconciled
386659		04-APR-18	GEIGER BROS		597.71	11-APR-18	597.71	Reconciled
386660		04-APR-18	GHD INC.		15,917.50	11-APR-18	15,917.50	Reconciled
386661		04-APR-18	GJ AUTOMOTIVE EQUIPMENT CO INC		682.06	06-APR-18	682.06	Reconciled
386662		04-APR-18	GRAINGER		2,695.99	10-APR-18	2,695.99	Reconciled
386663		04-APR-18	GROBELCH, MIKE		33.60	12-APR-18	33.60	Reconciled
386664		04-APR-18	GUTIERREZ, DAVID		43.34	16-APR-18	43.34	Reconciled
386665		04-APR-18	H2O INNOVATION USA INC		3,292.06	11-APR-18	3,292.06	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 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								
386666		04-APR-18	HAAKER EQUIPMENT COMPANY		519.49	11-APR-18	519.49	Reconciled
386667		04-APR-18	HACH COMPANY		2,270.87	09-APR-18	2,270.87	Reconciled
386668		04-APR-18	HARDY & HARPER, INC.		409.17	10-APR-18	409.17	Reconciled
386669		04-APR-18	HARRINGTON INDUSTRIAL PLASTICS LLC		2,311.23	09-APR-18	2,311.23	Reconciled
386670		04-APR-18	HARTFORD LIFE AND ACCIDENT INSURANCE		72.30	09-APR-18	72.30	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
COMPANY								
386671	04-APR-18	HAZEN AND SAWYER			21,736.77	17-APR-18	21,736.77	Reconciled
386672	04-APR-18	HDR ENGINEERING INC			4,381.40	09-APR-18	4,381.40	Reconciled
386673	04-APR-18	HELIX ELECTRIC			885.80	10-APR-18	885.80	Reconciled
386674	04-APR-18	HELP/SYSTEMS, LLC			26,546.19	12-APR-18	26,546.19	Reconciled
386675	04-APR-18	HELPMATES STAFFING SERVICES			16,187.92	11-APR-18	16,187.92	Reconciled
386676	04-APR-18	HERITAGE FIELDS EL TORO, LLC			339,129.89	13-APR-18	339,129.89	Reconciled
386677	04-APR-18	HILL BROTHERS CHEMICAL COMPANY			17,482.26	12-APR-18	17,482.26	Reconciled
386678	04-APR-18	HOME DEPOT USA INC			1,750.21	09-APR-18	1,750.21	Reconciled
386679	04-APR-18	HOPKINS, LENE			40.66			Negotiable
386680	04-APR-18	HSG INC			1,661.00	09-APR-18	1,661.00	Reconciled
386681	04-APR-18	HUMANA INSURANCE COMPANY			73.80	10-APR-18	73.80	Reconciled
386682	04-APR-18	INDUSTRIAL METAL SUPPLY CO			21.60	09-APR-18	21.60	Reconciled
386683	04-APR-18	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47			1,400.00	11-APR-18	1,400.00	Reconciled
386684	04-APR-18	IRVINE PIPE & SUPPLY INC			227.72	06-APR-18	227.72	Reconciled
386685	04-APR-18	IRVINE PIPELINE COMPANY, INC.			1,062.98	12-APR-18	1,062.98	Reconciled
386686	04-APR-18	JALAI NAEINI, MOHAMMAD H.			49.00	18-APR-18	49.00	Reconciled
386687	04-APR-18	JCI JONES CHEMICALS INC			2,627.63	11-APR-18	2,627.63	Reconciled
386688	04-APR-18	JIN, DAN			222.15	23-APR-18	222.15	Reconciled
386689	04-APR-18	JOHN MICHAEL COVAS			208.70	20-APR-18	208.70	Reconciled
386690	04-APR-18	JOHNSON PLASTICS			1,199.24	09-APR-18	1,199.24	Reconciled
386691	04-APR-18	JORDAN, DORSEY			42.34	18-APR-18	42.34	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 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								
386692	04-APR-18	KAESER COMPRESSORS, INC.			1,614.68	10-APR-18	1,614.68	Reconciled
386693	04-APR-18	KARIMOV, TIMUR			312.41	06-APR-18	312.41	Reconciled
386694	04-APR-18	KAYUGA SOLUTION INC			24,175.00	11-APR-18	24,175.00	Reconciled
386695	04-APR-18	KENNY THE PRINTER			4,455.47	06-APR-18	4,455.47	Reconciled
386696	04-APR-18	KHALESSTI, SEDI			35.92	18-APR-18	35.92	Reconciled
386697	04-APR-18	KIMBALL MIDWEST			854.22	09-APR-18	854.22	Reconciled
386698	04-APR-18	KIRK, BRADLEY			135.62	12-APR-18	135.62	Reconciled
386699	04-APR-18	KLAU, MARC			27.48	11-APR-18	27.48	Reconciled
386700	04-APR-18	KOREAN CULTURAL CENTER			2,500.00	20-APR-18	2,500.00	Reconciled
386701	04-APR-18	KPRS CONSTRUCTION SERVICES, INC			1,273.76	12-APR-18	1,273.76	Reconciled
386702	04-APR-18	KUBIAK, RENEE			29.36	10-APR-18	29.36	Reconciled
386703	04-APR-18	KUO, MULAN			38.61			Negotiable
386704	04-APR-18	LAGUNA BEACH COUNTY WATER DISTRICT			5,687.70	17-APR-18	5,687.70	Reconciled
386705	04-APR-18	LANDCARE HOLDINGS, INC.			3,293.65	10-APR-18	3,293.65	Reconciled
386706	04-APR-18	LENNAR HOMES			312.70	13-APR-18	312.70	Reconciled
386707	04-APR-18	LEWIS BRISBOIS BISGAARD AND SMITH, LLP			5,020.00	13-APR-18	5,020.00	Reconciled
386708	04-APR-18	LI, QING FEN			113.16	11-APR-18	113.16	Reconciled
386709	04-APR-18	LIEN, CHRISTINA			35.00	10-APR-18	35.00	Reconciled
386710	04-APR-18	LINDA CHAIDEZ			3,600.00	10-APR-18	3,600.00	Reconciled
386711	04-APR-18	MAGANA, VICKY			37.96	24-APR-18	37.96	Reconciled
386712	04-APR-18	MAHMOUD, OMAR			266.43	06-APR-18	266.43	Reconciled
386713	04-APR-18	MARIE AND PAUL BENTZ			368.70	06-APR-18	368.70	Reconciled
386714	04-APR-18	MC MASTER CARR SUPPLY CO			58.96	09-APR-18	58.96	Reconciled
386715	04-APR-18	MCR TECHNOLOGIES INC			657.40	11-APR-18	657.40	Reconciled
386716	04-APR-18	MERITAGE HOMES OF CALIFORNIA, INC			161.83			Negotiable
386717	04-APR-18	MESCO, INC			255.52	16-APR-18	255.52	Reconciled
386718	04-APR-18	MO, JOSH			708.46	16-APR-18	708.46	Reconciled
386719	04-APR-18	MOBILE MODULAR MANAGEMENT CORPORATION			1,018.24	09-APR-18	1,018.24	Reconciled
386720	04-APR-18	MORRISROE, EDWARD			238.61	12-APR-18	238.61	Reconciled
386721	04-APR-18	MOUSAVI, MANDANA			73.32	10-APR-18	73.32	Reconciled
386722	04-APR-18	MURPHY, TOD			181.10			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 6  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )

Payment Type: All

Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
386723		04-APR-18	MUTUAL PROPANE		227.48	10-APR-18	227.48	Reconciled
386724		04-APR-18	NATIONAL WATER RESEARCH INSTITUTE		3,378.00	12-APR-18	3,378.00	Reconciled
386725		04-APR-18	NEWRACOM		239.44	11-APR-18	239.44	Reconciled
386726		04-APR-18	NGUYEM, LANANH		36.88			Negotiable
386727		04-APR-18	O.C. SUPERIOR CUSTOM CLEANING SERVICES		4,312.00	06-APR-18	4,312.00	Reconciled
386728		04-APR-18	OAKLEY		82.44			Negotiable
386729		04-APR-18	OC WELDING SERVICES		988.53	13-APR-18	988.53	Reconciled
386730		04-APR-18	OCEAN BLUE ENVIRONMENTAL SERVICES INC		4,550.07	10-APR-18	4,550.07	Reconciled
386731		04-APR-18	OLIN CORPORATION		12,977.98	12-APR-18	12,977.98	Reconciled
386732		04-APR-18	ONESOURCE DISTRIBUTORS LLC		468.45	09-APR-18	468.45	Reconciled
386733		04-APR-18	ORANGE COUNTY AUTO PARTS CO		151.38	09-APR-18	151.38	Reconciled
386734		04-APR-18	ORANGE COUNTY TREASURER		66.95	09-APR-18	66.95	Reconciled
386735		04-APR-18	OUTSOURCE TECHNICAL LLC		13,200.00	11-APR-18	13,200.00	Reconciled
386736		04-APR-18	PACIFIC COAST TOOL & SUPPLY		147.18	09-APR-18	147.18	Reconciled
386737		04-APR-18	PACIFIC HYDROTECH CORPORATION		29,672.13	11-APR-18	29,672.13	Reconciled
386738		04-APR-18	PACIFIC HYDROTECH CORPORATION		563,770.47	12-APR-18	563,770.47	Reconciled
386739		04-APR-18	PACIFIC PARTS & CONTROLS INC		270.70	09-APR-18	270.70	Reconciled
386740		04-APR-18	PACIFIC RESOURCE RECOVERY		4,077.95	09-APR-18	4,077.95	Reconciled
386741		04-APR-18	PATEL, PALAK		43.19	10-APR-18	43.19	Reconciled
386742		04-APR-18	PAULUS ENGINEERING INC		1,836.29	10-APR-18	1,836.29	Reconciled
386743		04-APR-18	PAULUS ENGINEERING, INC.		1,693.10	10-APR-18	1,693.10	Reconciled
386744		04-APR-18	PAYNE & FEARS LLP		8,301.00	06-APR-18	8,301.00	Reconciled
386745		04-APR-18	PERS LONG TERM CARE		675.35	11-APR-18	675.35	Reconciled
386746		04-APR-18	PIERCE, SEAN		76.97	24-APR-18	76.97	Reconciled
386747		04-APR-18	PISHVAIY, REZA		104.03			Negotiable
386748		04-APR-18	PRAXAIR DISTRIBUTION INC		462.12	09-APR-18	462.12	Reconciled

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 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								
386749		04-APR-18	PRE-PAID LEGAL SERVICES INC		1,260.74	16-APR-18	1,260.74	Reconciled
386750		04-APR-18	PREMIER PAVING INC.		1,454.89	09-APR-18	1,454.89	Reconciled
386751		04-APR-18	PTI SAND & GRAVEL INC		1,112.17	10-APR-18	1,112.17	Reconciled
386752		04-APR-18	PULTE HOMES		51.26	19-APR-18	51.26	Reconciled
386753		04-APR-18	RAM AIR ENGINEERING INC		12,403.25	11-APR-18	12,403.25	Reconciled
386754		04-APR-18	RANCHO ALISAL APTS		19.22	19-APR-18	19.22	Reconciled
386755		04-APR-18	RDM GENERAL CONTRACTORS		1,608.09	13-APR-18	1,608.09	Reconciled
386756		04-APR-18	REACH EMPLOYEE ASSISTANCE INC		1,005.20	10-APR-18	1,005.20	Reconciled
386757		04-APR-18	REFRIGERATION SUPPLIES DISTRIBUTOR		478.76	06-APR-18	478.76	Reconciled
386758		04-APR-18	REGENCY CENTERS		658.17	19-APR-18	658.17	Reconciled
386759		04-APR-18	RELIANCE SAFETY CONSULTANTS, INC.		3,478.99	10-APR-18	3,478.99	Reconciled
386760		04-APR-18	RESILIENT COMMUNICATIONS INC.		1,450.00			Negotiable
386761		04-APR-18	RINCON TRUCK CENTER INC.		642.48	06-APR-18	642.48	Reconciled
386762		04-APR-18	ROBERTSON, GAIL		31.20	09-APR-18	31.20	Reconciled
386763		04-APR-18	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT		38,567.21			Negotiable
386764		04-APR-18	ROYAL WHOLESALE ELECTRIC		5,347.01	09-APR-18	5,347.01	Reconciled



386765	04-APR-18	RS HUGHES COMPANY, INC.		1,255.29	10-APR-18	1,255.29	Reconciled
386766	04-APR-18	S & J SUPPLY CO INC		11,619.29	11-APR-18	11,619.29	Reconciled
386767	04-APR-18	S&S SEEDS INC		9,993.00	10-APR-18	9,993.00	Reconciled
386768	04-APR-18	SAN CARLO APARTMENTS		34.02	19-APR-18	34.02	Reconciled
386769	04-APR-18	SAN LEON APTS		12.01	19-APR-18	12.01	Reconciled
386770	04-APR-18	SAN MARCO APARTMENTS		12.01	19-APR-18	12.01	Reconciled
386771	04-APR-18	SANDERS PAVING INC		35,268.75	12-APR-18	35,268.75	Reconciled
386772	04-APR-18	SANTA ANA BLUE PRINT		1,271.47	09-APR-18	1,271.47	Reconciled
386773	04-APR-18	SANTA MARGARITA FORD		149.00	10-APR-18	149.00	Reconciled

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 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								
386774		04-APR-18	SANTA MARGARITA FORD		36.66	09-APR-18	36.66	Reconciled
386775		04-APR-18	SCHNEPPLE, LIZ		36.66			Negotiable
386776		04-APR-18	SEAL ANALYTICAL INC		1,406.62	09-APR-18	1,406.62	Reconciled
386777		04-APR-18	SHAHAB, SHAPARAK		49.69	09-APR-18	49.69	Reconciled
386778		04-APR-18	SHAMROCK SUPPLY CO INC		1,118.02	10-APR-18	1,118.02	Reconciled
386779		04-APR-18	SHEA/BAKER RANCH ASSOCIATES, LLC		764.99			Negotiable
386780		04-APR-18	SINGH, DALWINDER		134.09	19-APR-18	134.09	Reconciled
386781		04-APR-18	SIPP, KAREN		65.29	16-APR-18	65.29	Reconciled
386782		04-APR-18	SLATER BUILDERS INC.		888.13	09-APR-18	888.13	Reconciled
386783		04-APR-18	SMARTFISH CORP		3,160.50	11-APR-18	3,160.50	Reconciled
386784		04-APR-18	SNYDER LANGSTON, L.P.		950.52	20-APR-18	950.52	Reconciled
386785		04-APR-18	SOUTH ORANGE COUNTY WASTEWATER AUTHORITY		54,311.00	19-APR-18	54,311.00	Reconciled
386786		04-APR-18	SOUTHERN CALIFORNIA EDISON COMPANY		514,572.67	09-APR-18	514,572.67	Reconciled
386787		04-APR-18	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.		693.69	19-APR-18	693.69	Reconciled
386788		04-APR-18	SPX CORP		74.03	09-APR-18	74.03	Reconciled
386789		04-APR-18	SYNERGY COMPANIES		4,211.23			Negotiable
386790		04-APR-18	TESTAMERICA LABORATORIES, INC		52.50	11-APR-18	52.50	Reconciled
386791		04-APR-18	TETRA TECH, INC		16,470.00	12-APR-18	16,470.00	Reconciled
386792		04-APR-18	THE NEW HOME COMPANY SOUTHERN CALIFORNIA LLC		328.38			Negotiable
386793		04-APR-18	THOMAS HARDER & CO		1,597.50	09-APR-18	1,597.50	Reconciled
386794		04-APR-18	THYSSENKRUPP ELEVATOR CORPORATION		383.86	09-APR-18	383.86	Reconciled
386795		04-APR-18	TOLL BROS., INC.		25.00	09-APR-18	25.00	Reconciled
386796		04-APR-18	TOTALFUNDS		5,010.00	11-APR-18	5,010.00	Reconciled
386797		04-APR-18	TRI COUNTY PUMP COMPANY		16,550.40	11-APR-18	16,550.40	Reconciled
386798		04-APR-18	TROPICAL PLAZA NURSERY INC		39,035.12	11-APR-18	39,035.12	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 9  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
386799		04-APR-18	TURTLE ROCK CANYON APTS		38.46	19-APR-18	38.46	Reconciled
386800		04-APR-18	U-HAUL INTERNATIONAL		1,214.93	16-APR-18	1,214.93	Reconciled
386801		04-APR-18	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA		1,381.15	13-APR-18	1,381.15	Reconciled
386802		04-APR-18	UNITED HEALTHCARE INSURANCE COMPANY		245.85	12-APR-18	245.85	Reconciled
386803		04-APR-18	UNITED PARCEL SERVICE INC		27.00	09-APR-18	27.00	Reconciled
386804		04-APR-18	UNITED STATES		457.34	10-APR-18	457.34	Reconciled

386805	04-APR-18	PLASTIC CORP. UNITED STATES POST OFFICE	25,000.00	12-APR-18	25,000.00	Reconciled
386806	04-APR-18	UNIVAR USA INC	4,406.98	09-APR-18	4,406.98	Reconciled
386807	04-APR-18	VAUGHAN'S INDUSTRIAL REPAIR CO INC	5,053.81	10-APR-18	5,053.81	Reconciled
386808	04-APR-18	VERIZON WIRELESS SERVICES LLC	3,315.59	09-APR-18	3,315.59	Reconciled
386809	04-APR-18	VIRTUAL GRAFFITI, INC.	765.00	06-APR-18	765.00	Reconciled
386810	04-APR-18	WASTE MANAGEMENT OF ORANGE COUNTY	2,156.47	09-APR-18	2,156.47	Reconciled
386811	04-APR-18	WAXIE'S ENTERPRISES, INC	260.01	09-APR-18	260.01	Reconciled
386812	04-APR-18	WECK LABORATORIES INC	7,230.00	10-APR-18	7,230.00	Reconciled
386813	04-APR-18	WEN, JING	367.38			Negotiable
386814	04-APR-18	WESTERN NATIONAL CONTRACTORS	716.49	16-APR-18	716.49	Reconciled
386815	04-APR-18	WORKFORCE SAFETY LLC	1,492.00	11-APR-18	1,492.00	Reconciled
386816	04-APR-18	XU, QING	41.59			Negotiable
386817	04-APR-18	YALE/CHASE EQUIPMENT AND SERVICES, INC.	48.73	09-APR-18	48.73	Reconciled
386818	04-APR-18	YO, ROCKY	43.80	09-APR-18	43.80	Reconciled
386819	04-APR-18	ZEBRON CONTRACTING INC	4,660.00	10-APR-18	4,660.00	Reconciled
386820	04-APR-18	ZEE MEDICAL SERVICE CO	25.84	06-APR-18	25.84	Reconciled
386821	04-APR-18	ZHANG, LI	149.39			Negotiable
386822	04-APR-18	ZHANG, LIN	74.52			Negotiable

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 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								
386823		04-APR-18	ZHENG, JIANGHONG		51.67	09-APR-18	51.67	Reconciled
386824		04-APR-18	ZULUAGA, LEWIS		45.27	13-APR-18	45.27	Reconciled
386825		09-APR-18	JCI JONES	NEWARK	5,446.00	17-APR-18	5,446.00	Reconciled
386826		09-APR-18	CHEMICALS INC	NEWARK	2,220.19	17-APR-18	2,220.19	Reconciled
386827		10-APR-18	JCI JONES	NEWARK	2,220.19	17-APR-18	2,220.19	Reconciled
386828		10-APR-18	CHEMICALS INC	NEWARK	2,220.19	17-APR-18	2,220.19	Reconciled
386827		10-APR-18	IRWD-PETTY CASH	IRVINE	1,594.57	10-APR-18	1,594.57	Reconciled
386828		10-APR-18	CUSTODIAN	IRVINE	1,594.57	10-APR-18	1,594.57	Reconciled
386828		10-APR-18	FRANCHISE TAX BOARD	SACRAMENTO 1	10.00	19-APR-18	10.00	Reconciled
386829		10-APR-18	FRANCHISE TAX BOARD	SACRAMENTO 1	10.00	23-APR-18	10.00	Reconciled
386830		12-APR-18	Barboza, Armando		180.00			Negotiable
386831		12-APR-18	Bennett, Ray R (Ray)		181.77	17-APR-18	181.77	Reconciled
386832		12-APR-18	Chaney, David (Dave)		24.20	16-APR-18	24.20	Reconciled
386833		12-APR-18	Compton, Christine A		104.08			Negotiable
386834		12-APR-18	Cortez, Malcolm A (Malcolm)		65.95			Negotiable
386835		12-APR-18	Dillman, Tyler		228.00	12-APR-18	228.00	Reconciled
386836		12-APR-18	Joseph, Brandon		85.00	16-APR-18	85.00	Reconciled
386837		12-APR-18	Midstokke, Paige		112.40	13-APR-18	112.40	Reconciled
386838		12-APR-18	Parsons, Sheryl		150.80	18-APR-18	150.80	Reconciled
386839		12-APR-18	ABM INDUSTRY GROUPS, LLC		18,915.01	19-APR-18	18,915.01	Reconciled
386840		12-APR-18	AIRGAS, INC.		614.26	16-APR-18	614.26	Reconciled
386841		12-APR-18	ALOT, RICH		44.69	16-APR-18	44.69	Reconciled
386842		12-APR-18	ALPHA TRAFFIC SERVICES, INC.		595.00	17-APR-18	595.00	Reconciled
386843		12-APR-18	AMAZON CAPITAL SERVICES, INC.		82.96	16-APR-18	82.96	Reconciled
386844		12-APR-18	APEX LIFE SCIENCES, LLC		3,721.81	16-APR-18	3,721.81	Reconciled
386845		12-APR-18	AT&T		4,627.99	17-APR-18	4,627.99	Reconciled
386846		12-APR-18	AT&T		1,670.57	17-APR-18	1,670.57	Reconciled
386847		12-APR-18	AT&T		49.05	18-APR-18	49.05	Reconciled
386848		12-APR-18	AUTOZONE PARTS, INC.		30.85	16-APR-18	30.85	Reconciled
386849		12-APR-18	BATTERIES PLUS AND BATTERIES PLUS BULBS		3,683.82	16-APR-18	3,683.82	Reconciled
386850		12-APR-18	BHARTI, VIJ & ANU DEEP VIJ		1,471.36			Negotiable
386851		12-APR-18	BIOMAGIC INC		9,713.50	20-APR-18	9,713.50	Reconciled

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
386852		12-APR-18	BORCHARD SURVEYING & MAPPING, INC.		2,295.00	23-APR-18	2,295.00	Reconciled
386853		12-APR-18	BOYD & ASSOCIATES		651.00	16-APR-18	651.00	Reconciled
386854		12-APR-18	BRITHINEE ELECTRIC		8,124.08	16-APR-18	8,124.08	Reconciled
386855		12-APR-18	BURG, RANDY		216.83	16-APR-18	216.83	Reconciled
386856		12-APR-18	C WELLS PIPELINE MATERIALS INC		2,527.83	23-APR-18	2,527.83	Reconciled
386857		12-APR-18	CALATLANTIC GROUP, INC.		1,407.89			Negotiable
386858		12-APR-18	CALIFORNIA BARRICADE RENTAL, INC.		7,182.32	16-APR-18	7,182.32	Reconciled
386859		12-APR-18	CALIFORNIA DEPARIMENT OF TAX AND FEE ADMINISTRATION		4,782.00	17-APR-18	4,782.00	Reconciled
386860		12-APR-18	CALIFORNIA NEWSPAPER PARTNERSHIP		756.00	20-APR-18	756.00	Reconciled
386861		12-APR-18	CANON FINANCIAL SERVICES, INC		1,312.40	16-APR-18	1,312.40	Reconciled
386862		12-APR-18	CANON SOLUTIONS AMERICA, INC.		16,243.13	18-APR-18	16,243.13	Reconciled
386863		12-APR-18	CCL CONTRACTING INC.		1,195,159.28	20-APR-18	1,195,159.28	Reconciled
386864		12-APR-18	CENTRAL COAST POWER SERVICES, LLC		3,715.00	16-APR-18	3,715.00	Reconciled
386865		12-APR-18	CHEMTREC		1,000.00	17-APR-18	1,000.00	Reconciled
386866		12-APR-18	CHI, ERIC		16.51	16-APR-18	16.51	Reconciled
386867		12-APR-18	CITY CIRCUIT BREAKERS		145.46	16-APR-18	145.46	Reconciled
386868		12-APR-18	CIVIL SOURCE, INC.		5,360.00	16-APR-18	5,360.00	Reconciled
386869		12-APR-18	CLEAN ENERGY		4,510.55	19-APR-18	4,510.55	Reconciled
386870		12-APR-18	COVI CONCRETE CONSTRUCTION		1,172.34	18-APR-18	1,172.34	Reconciled
386871		12-APR-18	CR & R INCORPORATED		229.40	17-APR-18	229.40	Reconciled
386872		12-APR-18	CULLIGAN OF SANTA ANA		3,000.00	17-APR-18	3,000.00	Reconciled
386873		12-APR-18	DANIEL LOCKSHAW		7,932.39	23-APR-18	7,932.39	Reconciled
386874		12-APR-18	DB INDUSTRIAL SUPPLY CO		1,393.19	16-APR-18	1,393.19	Reconciled
386875		12-APR-18	DDB ENGINEERING, INC.		3,700.00	16-APR-18	3,700.00	Reconciled

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
386876		12-APR-18	DENISE ALAMEDDINE AND ATHAR KHAN		42.59			Negotiable
386877		12-APR-18	DIAZ, JENNY		37.26	23-APR-18	37.26	Reconciled
386878		12-APR-18	DISCOUNT COURIER SERVICE		91.32	16-APR-18	91.32	Reconciled
386879		12-APR-18	DUDEK		630.00	19-APR-18	630.00	Reconciled
386880		12-APR-18	DYQUIANGCO, ERNESTO		29.89			Negotiable
386881		12-APR-18	EAGLE PRINT DYNAMICS		550.95	17-APR-18	550.95	Reconciled
386882		12-APR-18	EI&C ENGINEERING INC		57,376.00	19-APR-18	57,376.00	Reconciled
386883		12-APR-18	ENTERPRISE SECURITY, INC		515.00	16-APR-18	515.00	Reconciled
386884		12-APR-18	ENVIRONMENTAL EXPRESS INC		5,357.81	17-APR-18	5,357.81	Reconciled
386885		12-APR-18	ENVIRONMENTAL SCIENCE ASSOCIATES		7,311.50	16-APR-18	7,311.50	Reconciled
386886		12-APR-18	ESPINOSA, MANUEL		49.28	23-APR-18	49.28	Reconciled
386887		12-APR-18	FARRELL & ASSOCIATES		419.15	16-APR-18	419.15	Reconciled
386888		12-APR-18	FEDEX		1,082.27	16-APR-18	1,082.27	Reconciled
386889		12-APR-18	FIRST TEAM REAL ESTATE		34.12	20-APR-18	34.12	Reconciled
386890		12-APR-18	FISHER SCIENTIFIC COMPANY LLC		2,613.34	16-APR-18	2,613.34	Reconciled
386891		12-APR-18	FLW SERVICE CORPORATION		887.50	19-APR-18	887.50	Reconciled
386892		12-APR-18	FRONTIER CALIFORNIA INC.		51.81	18-APR-18	51.81	Reconciled
386893		12-APR-18	GALLADE CHEMICAL INC		387.90	23-APR-18	387.90	Reconciled
386894		12-APR-18	GARCIA, LEONEL B		44.51	17-APR-18	44.51	Reconciled

386895	12-APR-18	GE GRID SOLUTIONS, LLC	12,122.59	19-APR-18	12,122.59	Reconciled
386896	12-APR-18	GLAZER, NICOLAI	53.55			Negotiable
386897	12-APR-18	GRAINGER	4,417.76	17-APR-18	4,417.76	Reconciled
386898	12-APR-18	GRAYBAR ELECTRIC COMPANY	176.94	16-APR-18	176.94	Reconciled
386899	12-APR-18	HACH COMPANY	580.24	16-APR-18	580.24	Reconciled
386900	12-APR-18	HARMSWORTH ASSOCIATES	2,817.00	16-APR-18	2,817.00	Reconciled
386901	12-APR-18	HDR ENGINEERING INC	40,988.53	18-APR-18	40,988.53	Reconciled
386902	12-APR-18	HELPMATES STAFFING SERVICES	24,172.34	17-APR-18	24,172.34	Reconciled

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 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 13  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
386903		12-APR-18	HERITAGE FIELDS EL TORO, LLC		58.68	20-APR-18	58.68	Reconciled
386904		12-APR-18	HILL BROTHERS CHEMICAL COMPANY		9,934.57	17-APR-18	9,934.57	Reconciled
386905		12-APR-18	HOME DEPOT USA INC		606.65	17-APR-18	606.65	Reconciled
386906		12-APR-18	HORNING, DAVID		28.48	18-APR-18	28.48	Reconciled
386907		12-APR-18	HSIEH, MATTHEW		42.21	17-APR-18	42.21	Reconciled
386908		12-APR-18	HUR, INKYONG		39.59			Negotiable
386909		12-APR-18	HUSE, THEONI		268.35	18-APR-18	268.35	Reconciled
386910		12-APR-18	IBM CORPORATION		925.00	17-APR-18	925.00	Reconciled
386911		12-APR-18	IBRAHIM, SARA		33.14	23-APR-18	33.14	Reconciled
386912		12-APR-18	INGERSOLL RAND CO		170.12	16-APR-18	170.12	Reconciled
386913		12-APR-18	INSITUFORM TECHNOLOGIES INC		12,602.85	24-APR-18	12,602.85	Reconciled
386914		12-APR-18	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47		1,430.00			Negotiable
386915		12-APR-18	IRVINE PACIFIC		251.46	20-APR-18	251.46	Reconciled
386916		12-APR-18	IRVINE PIPE & SUPPLY INC		1,254.76	16-APR-18	1,254.76	Reconciled
386917		12-APR-18	IRVINE PROPERTY MANAGMENT		68.72	17-APR-18	68.72	Reconciled
386918		12-APR-18	JIG CONSULTANTS		26,379.32	23-APR-18	26,379.32	Reconciled
386919		12-APR-18	JOSEPH HAMLIN, JUDY		23.84	19-APR-18	23.84	Reconciled
386920		12-APR-18	KAESER COMPRESSORS, INC.		2,602.37	16-APR-18	2,602.37	Reconciled
386921		12-APR-18	KAUR, SATINDER		61.41			Negotiable
386922		12-APR-18	KB HOMES		33.96			Voided
386923		12-APR-18	KENNY THE PRINTER		636.05	16-APR-18	636.05	Reconciled
386924		12-APR-18	KIMBALL MIDWEST		3,370.03	16-APR-18	3,370.03	Reconciled
386925		12-APR-18	KWON, DONGWOO		113.88			Negotiable
386926		12-APR-18	LA PLACE, ALBA		30.00			Negotiable
386927		12-APR-18	LANDCARE HOLDINGS, INC.		53,934.82	19-APR-18	53,934.82	Reconciled
386928		12-APR-18	LAUBERT, RICHARD		54.11	23-APR-18	54.11	Reconciled
386929		12-APR-18	LEE, PAUL		64.07	16-APR-18	64.07	Reconciled
386930		12-APR-18	LEWIS, MARSHA L		58.66			Negotiable
386931		12-APR-18	LI, YING		95.24			Negotiable
386932		12-APR-18	LIAKO, INGRID E		32.16	16-APR-18	32.16	Reconciled
386933		12-APR-18	LIGHTING RESOURCES, LLC		412.45	16-APR-18	412.45	Reconciled
386934		12-APR-18	LINKEDIN CORPORATION		6,131.25	16-APR-18	6,131.25	Reconciled
386935		12-APR-18	LU, YANPING		18.56			Negotiable

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 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								
386936		12-APR-18	M. CUBED		5,308.75	19-APR-18	5,308.75	Reconciled
386937		12-APR-18	MAO, JOY		90.10			Negotiable
386938		12-APR-18	MC FADDEN-DALE INDUSTRIAL		0.48	16-APR-18	0.48	Reconciled
386939		12-APR-18	MC MASTER CARR SUPPLY CO		909.43	16-APR-18	909.43	Reconciled
386940		12-APR-18	MCR TECHNOLOGIES INC		862.80	17-APR-18	862.80	Reconciled
386941		12-APR-18	MICHAEL BAKER INTERNATIONAL, INC.		2,000.00	16-APR-18	2,000.00	Reconciled
386942		12-APR-18	MINOW, ADAM		46.90	23-APR-18	46.90	Reconciled
386943		12-APR-18	MISSION COMMUNICATIONS,		1,126.80	20-APR-18	1,126.80	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
			LLC					
386944		12-APR-18	MOLINA, CARMEN		122.84	23-APR-18	122.84	Reconciled
386945		12-APR-18	MORRELL, EDWARD		34.31			Negotiable
386946		12-APR-18	MR CRANE INC		1,053.00	16-APR-18	1,053.00	Reconciled
386947		12-APR-18	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		2,526.96	16-APR-18	2,526.96	Reconciled
386948		12-APR-18	NALCO CAL WATER, LLC		240.00	16-APR-18	240.00	Reconciled
386949		12-APR-18	NATIONAL READY MIXED CONCRETE CO.		3,735.65	16-APR-18	3,735.65	Reconciled
386950		12-APR-18	NATURALWELL, LLC		990.00	16-APR-18	990.00	Reconciled
386951		12-APR-18	NECRASON, WESLEY		73.97			Negotiable
386952		12-APR-18	NORMAN A. OLSSON CONSTRUCTION, INC.		239,504.50	19-APR-18	239,504.50	Reconciled
386953		12-APR-18	NORTHWOOD PLACE APTS		38.57			Negotiable
386954		12-APR-18	NRC ENVIRONMENTAL SERVICES, INC.		13,006.00	19-APR-18	13,006.00	Reconciled
386955		12-APR-18	OLIN CORPORATION		9,644.29	16-APR-18	9,644.29	Reconciled
386956		12-APR-18	ONESOURCE DISTRIBUTORS LLC		442.21	16-APR-18	442.21	Reconciled
386957		12-APR-18	ORANGE COUNTY AUTO PARTS CO		1,370.07	16-APR-18	1,370.07	Reconciled
386958		12-APR-18	ORANGE COUNTY SHERIFF'S OFFICE		224.50	18-APR-18	224.50	Reconciled
386959		12-APR-18	P ASSETS INC.		313.94			Negotiable
386960		12-APR-18	PACE ADVANCED WATER ENGINEERING, INC.		19,845.00	20-APR-18	19,845.00	Reconciled
386961		12-APR-18	PACIFIC CITY PROPERTIES		46.96	17-APR-18	46.96	Reconciled

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 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								
386962		12-APR-18	PACIFIC COAST BOLT CORP		6,645.19	18-APR-18	6,645.19	Reconciled
386963		12-APR-18	PAPER DEPOT DOCUMENT DESTRUCTION LLC		360.00			Negotiable
386964		12-APR-18	PARKHOUSE TIRE INC		1,743.69	17-APR-18	1,743.69	Reconciled
386965		12-APR-18	PASCAL & LUDWIG CONSTRUCTORS		354,610.64	19-APR-18	354,610.64	Reconciled
386966		12-APR-18	PASCAL & LUDWIG CONSTRUCTORS		3,196.48	16-APR-18	3,196.48	Reconciled
386967		12-APR-18	PASCAL & LUDWIG CONSTRUCTORS		15,120.52	18-APR-18	15,120.52	Reconciled
386968		12-APR-18	PERS LONG TERM CARE		675.35	17-APR-18	675.35	Reconciled
386969		12-APR-18	PFISCHNER, ALLANA L		1,100.00	19-APR-18	1,100.00	Reconciled
386970		12-APR-18	PILLSBURY WINTHROP SHAW PITTMAN LLP		2,892.25	16-APR-18	2,892.25	Reconciled
386971		12-APR-18	POLLARDWATER.COM		1,801.58	16-APR-18	1,801.58	Reconciled
386972		12-APR-18	PRAXAIR DISTRIBUTION INC		2,321.00	17-APR-18	2,321.00	Reconciled
386973		12-APR-18	PREMIERE ENGINEERING & GRADING		1,031.79			Negotiable
386974		12-APR-18	PROCARE WORK INJURY CENTER		905.00	17-APR-18	905.00	Reconciled
386975		12-APR-18	PTI SAND & GRAVEL INC		1,105.26	17-APR-18	1,105.26	Reconciled
386976		12-APR-18	QURAIISHI, ESSAM		42.99			Negotiable
386977		12-APR-18	RAINBOW DISPOSAL CO INC		357.36	23-APR-18	357.36	Reconciled
386978		12-APR-18	RAM AIR ENGINEERING INC		7,703.44	16-APR-18	7,703.44	Reconciled
386979		12-APR-18	RANCHO MADERAS APTS		156.98			Negotiable
386980		12-APR-18	RANCHO TIERRA APTS		74.76			Negotiable
386981		12-APR-18	REGALADO, CHRISTOPHER		39.00			Negotiable
386982		12-APR-18	RELIANCE SAFETY CONSULTANTS, INC.		9,463.46			Negotiable
386983		12-APR-18	RINCON TRUCK CENTER INC.		2,587.76	17-APR-18	2,587.76	Reconciled
386984		12-APR-18	RINGCLEAR LLC		116.52	17-APR-18	116.52	Reconciled
386985		12-APR-18	ROETHKE, SWARUPA		67.36			Negotiable
386986		12-APR-18	ROTORK CONTROLS INC.		1,677.67	18-APR-18	1,677.67	Reconciled

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 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								
386987		12-APR-18	S & J SUPPLY CO INC		36,526.18	18-APR-18	36,526.18	Reconciled
386988		12-APR-18	SAFETY CENTER INCORPORATED		9,520.00	20-APR-18	9,520.00	Reconciled
386989		12-APR-18	SAN CARLO APARTMENTS		12.01			Negotiable
386990		12-APR-18	SAN MARCO APARTMENTS		21.79			Negotiable
386991		12-APR-18	SAN MARINO APTS		18.19			Negotiable
386992		12-APR-18	SANTA ANA BLUE PRINT		1,478.05	17-APR-18	1,478.05	Reconciled
386993		12-APR-18	SANTA MARGARITA FORD		99.95	18-APR-18	99.95	Reconciled
386994		12-APR-18	SANTA MARGARITA FORD		360.51	18-APR-18	360.51	Reconciled
386995		12-APR-18	SCHWARZ, ROBERTA		73.48			Negotiable
386996		12-APR-18	SEPARATION PROCESSES INC		1,512.00	16-APR-18	1,512.00	Reconciled
386997		12-APR-18	SHERWIN WILLIAMS COMPANY		2,127.20	16-APR-18	2,127.20	Reconciled
386998		12-APR-18	SHOETERIA		392.16	17-APR-18	392.16	Reconciled
386999		12-APR-18	SIGMA-ALDRICH INC		317.09	18-APR-18	317.09	Reconciled
387000		12-APR-18	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		3,034.44	20-APR-18	3,034.44	Reconciled
387001		12-APR-18	SOUTH COAST ANSWERING SERVICE		1,120.93	16-APR-18	1,120.93	Reconciled
387002		12-APR-18	SOUTH COAST WATER DISTRICT		2,496.00	19-APR-18	2,496.00	Reconciled
387003		12-APR-18	SOUTHERN CALIFORNIA EDISON COMPANY		12,096.45	16-APR-18	12,096.45	Reconciled
387004		12-APR-18	SOUTHERN CALIFORNIA GAS COMPANY		225.03	18-APR-18	225.03	Reconciled
387005		12-APR-18	SOUTHERN COUNTIES LUBRICANTS LLC		131.99	17-APR-18	131.99	Reconciled
387006		12-APR-18	SPARKLETTTS		596.85	19-APR-18	596.85	Reconciled
387007		12-APR-18	SPINNAKER		968.76	16-APR-18	968.76	Reconciled
387008		12-APR-18	INVESTORS, LLC					
387008		12-APR-18	STANDARD REGISTER, INC.		2,112.78	16-APR-18	2,112.78	Reconciled
387009		12-APR-18	STANTEC CONSULTING SERVICES INC.		8,000.00	16-APR-18	8,000.00	Reconciled
387010		12-APR-18	SUEZ TREATMENT SOLUTIONS INC.		6,864.63	17-APR-18	6,864.63	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								
387011		12-APR-18	SUKLE ADVERTISING INC.		5,758.45			Negotiable
387012		12-APR-18	SUPERIOR WATER TECHNOLOGIES		4,310.00			Negotiable
387013		12-APR-18	SUPPORT PRODUCT SERVICES, INC		2,032.10	16-APR-18	2,032.10	Reconciled
387014		12-APR-18	SUSAN A. SIROTA		4,295.00	17-APR-18	4,295.00	Reconciled
387015		12-APR-18	SWAINS ELECTRIC MOTOR SERVICE		7,108.12	17-APR-18	7,108.12	Reconciled
387016		12-APR-18	TAYLOR MORRISON		194.41			Negotiable
387017		12-APR-18	THE PARKLANDS		1,048.80			Negotiable
387018		12-APR-18	TOLL BROS., INC.		470.86			Voided
387019		12-APR-18	TRI COUNTY PUMP COMPANY		19,089.43	18-APR-18	19,089.43	Reconciled
387020		12-APR-18	TROPICAL PLAZA NURSERY INC		1,238.86	16-APR-18	1,238.86	Reconciled
387021		12-APR-18	TRUCPARCO		2,791.19	24-APR-18	2,791.19	Reconciled
387022		12-APR-18	TULLERNES, ROBIN		40.40			Negotiable
387023		12-APR-18	TYCO INTEGRATED SECURITY, LLC		2,977.78	17-APR-18	2,977.78	Reconciled
387024		12-APR-18	ULINE INC		154.24	19-APR-18	154.24	Reconciled
387025		12-APR-18	ULTRA SCIENTIFIC		663.67	20-APR-18	663.67	Reconciled
387026		12-APR-18	UNITED PARCEL SERVICE INC		62.42	16-APR-18	62.42	Reconciled
387027		12-APR-18	VEFFER, SHALOM		35.24	23-APR-18	35.24	Reconciled
387028		12-APR-18	VERTECH INDUSTRIAL SYSTEMS, LLC		6,708.06	16-APR-18	6,708.06	Reconciled
387029		12-APR-18	VULCAN MATERIALS COMPANY		1,361.03	16-APR-18	1,361.03	Reconciled
387030		12-APR-18	VWR INTERNATIONAL, LLC		153.28	17-APR-18	153.28	Reconciled
387031		12-APR-18	WANG, GEORGE		48.66	18-APR-18	48.66	Reconciled
387032		12-APR-18	WANG, LEI		32.21			Negotiable

387033	12-APR-18	WANG, REBECCA		960.97	16-APR-18	960.97	Reconciled
387034	12-APR-18	WANG, WENJUAN		50.99	17-APR-18	50.99	Reconciled
387035	12-APR-18	WASTE MANAGEMENT OF ORANGE COUNTY		3,766.91	18-APR-18	3,766.91	Reconciled
387036	12-APR-18	WATERSMART SOFTWARE, INC		13,597.50	18-APR-18	13,597.50	Reconciled
387037	12-APR-18	WATSON, EMROY		65.72	19-APR-18	65.72	Reconciled
387038	12-APR-18	WECK LABORATORIES INC		1,235.00	23-APR-18	1,235.00	Reconciled
387039	12-APR-18	WEST COAST SAFETY SUPPLY INC		1,253.83	24-APR-18	1,253.83	Reconciled
387040	12-APR-18	WIRELESS WATCHDOGS, LLC		912.00	17-APR-18	912.00	Reconciled

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 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387041		12-APR-18	WU, DORIS		118.87	17-APR-18	118.87	Reconciled
387042		12-APR-18	YOU, TRAVIS		43.38	23-APR-18	43.38	Reconciled
387043		12-APR-18	YOUN, ESTHER		328.33			Negotiable
387044		12-APR-18	YP LLC		91.00	19-APR-18	91.00	Reconciled
387045		12-APR-18	ZEE MEDICAL SERVICE CO		405.45	16-APR-18	405.45	Reconciled
387046		12-APR-18	ZHU, QIYAO		25.40			Negotiable
387047		12-APR-18	INTERNAL REVENUE SERVICE	FRESNO	245.29			Voided
387048		13-APR-18	IBG IRVINE, LLC	PAY	2,558.92	13-APR-18	2,558.92	Reconciled
387049		13-APR-18	Brown, Andrew R (Robert)	HOME	126.35	16-APR-18	126.35	Reconciled
387050		16-APR-18	JCI JONES CHEMICALS INC	NEWARK	5,255.25	23-APR-18	5,255.25	Reconciled
387051		17-APR-18	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	P.O. BOX 942879	9,266.11			Negotiable
387052		19-APR-18	Legault, Dan (Dan)		225.00	23-APR-18	225.00	Reconciled
387053		19-APR-18	Lynch, Toni Marie		30.74	23-APR-18	30.74	Reconciled
387054		19-APR-18	McNulty, Amy K (Amy)		8.30			Negotiable
387055		19-APR-18	Perez, Rodolfo (Rudy)		70.42			Negotiable
387056		19-APR-18	Soto, Franklin E (Frank)		73.47			Negotiable
387057		19-APR-18	ADS LLC		8,070.00	23-APR-18	8,070.00	Reconciled
387058		19-APR-18	ALEXANDER'S CONTRACT SERVICES, INC.		2,332.44	24-APR-18	2,332.44	Reconciled
387059		19-APR-18	ALL AMERICAN SEWER TOOLS		990.12	24-APR-18	990.12	Reconciled
387060		19-APR-18	ALPHA TRAFFIC SERVICES, INC.		990.00	23-APR-18	990.00	Reconciled
387061		19-APR-18	AMANE ADVISORS NORTH AMERICA CORP.		25,000.00			Negotiable
387062		19-APR-18	AMAZON CAPITAL SERVICES, INC.		551.09	23-APR-18	551.09	Reconciled
387063		19-APR-18	ANTHEM BLUE CROSS		546.33			Negotiable
387064		19-APR-18	ANTHEM BLUE CROSS		546.33			Negotiable
387065		19-APR-18	ANTHEM BLUE CROSS		214.68			Negotiable
387066		19-APR-18	ANTHEM BLUE CROSS		290.43			Negotiable
387067		19-APR-18	APEX LIFE SCIENCES, LLC		1,190.00	23-APR-18	1,190.00	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								
387068		19-APR-18	AQUA BEN CORPORATION		2,800.42	23-APR-18	2,800.42	Reconciled
387069		19-APR-18	ARCADIS U.S., INC.		75,837.67			Negotiable
387070		19-APR-18	ARMORCAST PRODUCTS COMPANY		14,026.47			Negotiable
387071		19-APR-18	AT&T		174.02	24-APR-18	174.02	Reconciled
387072		19-APR-18	AT&T		5,153.95	24-APR-18	5,153.95	Reconciled
387073		19-APR-18	ATHENS SERVICES		8,621.78	24-APR-18	8,621.78	Reconciled
387074		19-APR-18	AUTOZONE PARTS, INC.		523.32			Negotiable
387075		19-APR-18	AYNECHI, TIBA		46.02			Negotiable
387076		19-APR-18	BANK OF NEW YORK MELLON TRUST COMPANY NA		1,525.00			Negotiable
387077		19-APR-18	BARKER, HOYT		34.48			Negotiable

387078	19-APR-18	BARTEL ASSOCIATES, LLC	1,740.00	23-APR-18	1,740.00	Reconciled
387079	19-APR-18	BAVCO BACKFLOW APPARATUS & VALVE COMPANY	4,658.91	24-APR-18	4,658.91	Reconciled
387080	19-APR-18	BDC SPECIAL WASTE	372.00	24-APR-18	372.00	Reconciled
387081	19-APR-18	BELSHIRE ENVIRONMENTAL SERVICES, INC.	2,272.13	24-APR-18	2,272.13	Reconciled
387082	19-APR-18	BERK, SUSAN	10,000.00			Negotiable
387083	19-APR-18	BEST DRILLING AND PUMP, INC.	51,680.00			Negotiable
387084	19-APR-18	BIGWIG MONSTER, LLC	5,700.00	23-APR-18	5,700.00	Reconciled
387085	19-APR-18	BIOMAGIC INC	2,521.35	24-APR-18	2,521.35	Reconciled
387086	19-APR-18	BLAIRS TOWING INC	155.00	24-APR-18	155.00	Reconciled
387087	19-APR-18	BORCHARD SURVEYING & MAPPING, INC.	3,520.00	23-APR-18	3,520.00	Reconciled
387088	19-APR-18	BRIDEWELL, JENNIFER	146.97			Negotiable
387089	19-APR-18	BRINCKLOE, WILLIAM B	674.29	23-APR-18	674.29	Reconciled
387090	19-APR-18	BROWN AND CALDWELL	20,774.17			Negotiable
387091	19-APR-18	BTF PRECISE MICROBIOLOGY INC.	545.65	24-APR-18	545.65	Reconciled
387092	19-APR-18	CALIFORNIA BARRICADE RENTAL, INC.	5,532.74	23-APR-18	5,532.74	Reconciled
387093	19-APR-18	CANON FINANCIAL SERVICES, INC	8,996.59	23-APR-18	8,996.59	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 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								
387094		19-APR-18	CAPTIVE AUDIENCE MARKETING INC.		79.00	24-APR-18	79.00	Reconciled
387095		19-APR-18	CAROLLO ENGINEERS, INC		8,291.85	24-APR-18	8,291.85	Reconciled
387096		19-APR-18	CASILLAS, MICHAEL		34.36			Negotiable
387097		19-APR-18	CHEN, SHUFANG		41.78			Negotiable
387098		19-APR-18	CHO DESIGN ASSOCIATES, INC		8,025.00	23-APR-18	8,025.00	Reconciled
387099		19-APR-18	CITY OF SANTA ANA		171.44	23-APR-18	171.44	Reconciled
387100		19-APR-18	CITY OF TUSTIN		517.07	23-APR-18	517.07	Reconciled
387101		19-APR-18	CIVIL SOURCE, INC.		2,285.00	23-APR-18	2,285.00	Reconciled
387102		19-APR-18	CLARIS STRATEGY INC.		7,262.50	24-APR-18	7,262.50	Reconciled
387103		19-APR-18	CLARKE MOSQUITO CONTROL PRODUCTS, INC.		9,690.60	23-APR-18	9,690.60	Reconciled
387104		19-APR-18	CNH LLC		308.05			Negotiable
387105		19-APR-18	COAST PLUMBING HEATING AND AIR, INC		730.00	23-APR-18	730.00	Reconciled
387106		19-APR-18	COLAYCO, JOSE		35.10	23-APR-18	35.10	Reconciled
387107		19-APR-18	CONSOLIDATED CONTRACTING SERVICES, INC.		1,061.87	24-APR-18	1,061.87	Reconciled
387108		19-APR-18	COUNTY OF RIVERSIDE		10,761.94			Negotiable
387109		19-APR-18	CULLIGAN OF SANTA ANA		6,000.00	23-APR-18	6,000.00	Reconciled
387110		19-APR-18	D.R. HORTON		1,069.16			Negotiable
387111		19-APR-18	DATA CLEAN CORPORATION		534.00			Negotiable
387112		19-APR-18	DATASITE INC		936.00			Negotiable
387113		19-APR-18	DAVIS FARR LLP		9,500.00	24-APR-18	9,500.00	Reconciled
387114		19-APR-18	DB INDUSTRIAL SUPPLY CO		136.69	23-APR-18	136.69	Reconciled
387115		19-APR-18	DELL MARKETING LP		2,951.44	23-APR-18	2,951.44	Reconciled
387116		19-APR-18	DEMARIA ELECTRIC MOTOR SERVICES, INC.		5,582.46			Negotiable
387117		19-APR-18	DUDEK		1,330.00			Negotiable
387118		19-APR-18	ECO SERVICES LLC		21,412.15			Negotiable
387119		19-APR-18	ENTERPRISE RIDESHARE		16,855.00			Negotiable
387120		19-APR-18	ENVIRONMENTAL RESOURCE ASSOCIATES		1,911.18			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 21  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

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

Payment Number	Date	Supplier Name	Payment Amount	Cleared Date	Cleared Amount	Status
387121	19-APR-18	EVANTEC CORPORATION	2,979.92	23-APR-18	2,979.92	Reconciled
387122	19-APR-18	EXCEL PAVING CO.	1,585.46			Negotiable
387123	19-APR-18	EXECUTIVE LIGHTING & ELECTRIC	6,081.18	24-APR-18	6,081.18	Reconciled
387124	19-APR-18	FAALZADEH, HAMID	11.34			Negotiable
387125	19-APR-18	FAIRFIELD VON KARMAN LLC	844.02			Negotiable
387126	19-APR-18	FAR EAST NATIONAL BANK	280.04			Negotiable
387127	19-APR-18	FARIBORZ BIBAYAN TRUST	978.62			Negotiable
387128	19-APR-18	FEDEX	645.94	23-APR-18	645.94	Reconciled
387129	19-APR-18	FISHER SCIENTIFIC COMPANY LLC	1,850.94	23-APR-18	1,850.94	Reconciled
387130	19-APR-18	FIVE POINT OFFICE VENTURE 1, LLC	874.39			Negotiable
387131	19-APR-18	FLEET SOLUTIONS LLC	4,871.00	24-APR-18	4,871.00	Reconciled
387132	19-APR-18	FLW, INC.	1,806.17	24-APR-18	1,806.17	Reconciled
387133	19-APR-18	FORINGER, RICHARD	136.19			Negotiable
387134	19-APR-18	FRAME, TJ	12.40			Negotiable
387135	19-APR-18	FRONTIER CALIFORNIA INC.	266.99	24-APR-18	266.99	Reconciled
387136	19-APR-18	FULTON, JENNIFER	39.85			Negotiable
387137	19-APR-18	GEI CONSULTANTS INC	563.34	23-APR-18	563.34	Reconciled
387138	19-APR-18	GEEKON INC	879.87			Negotiable
387139	19-APR-18	GHD INC.	1,653.00	24-APR-18	1,653.00	Reconciled
387140	19-APR-18	GOLDMAN, SACHS & CO. LLC	14,794.52			Negotiable
387141	19-APR-18	GRAINGER	2,714.40	24-APR-18	2,714.40	Reconciled
387142	19-APR-18	GRAVITEC SYSTEMS, INC	9,599.74	24-APR-18	9,599.74	Reconciled
387143	19-APR-18	GRAYBAR ELECTRIC COMPANY	104.95	23-APR-18	104.95	Reconciled
387144	19-APR-18	HACH COMPANY	15,927.38			Negotiable
387145	19-APR-18	HDR ENGINEERING INC	5,580.78	23-APR-18	5,580.78	Reconciled
387146	19-APR-18	HELPMATES STAFFING SERVICES	22,262.86	24-APR-18	22,262.86	Reconciled
387147	19-APR-18	HENDRICK, KEVIN	160.50			Negotiable
387148	19-APR-18	HERITAGE FIELDS EL TORO, LLC	2,823.67			Negotiable
387149	19-APR-18	HILL BROTHERS CHEMICAL COMPANY	7,897.51	24-APR-18	7,897.51	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 22  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387150		19-APR-18	HOME DEPOT USA INC		849.91	24-APR-18	849.91	Reconciled
387151		19-APR-18	HUDDLESTONE, JONATHAN		21.00			Negotiable
387152		19-APR-18	IRON MOUNTAIN INFORMATION MANAGEMENT INC		1,815.99	23-APR-18	1,815.99	Reconciled
387153		19-APR-18	IRVINE COMMUNITY DEVELOPMENT COMPANY LLC		72,659.83			Negotiable
387154		19-APR-18	IRVINE PIPE & SUPPLY INC		6,648.83	23-APR-18	6,648.83	Reconciled
387155		19-APR-18	JOHNSON, GUY K		43.80			Negotiable
387156		19-APR-18	KENNARD, CHERYL		26.63			Negotiable
387157		19-APR-18	KRONICK MOSKOVITZ TIEDEMANN & GIRARD		12,888.89			Negotiable
387158		19-APR-18	LANDCARE HOLDINGS, INC.		5,092.00	24-APR-18	5,092.00	Reconciled
387159		19-APR-18	LCS TECHNOLOGIES, INC.		3,712.50			Negotiable
387160		19-APR-18	LEE, SOO		64.48			Negotiable
387161		19-APR-18	LU'S LIGHTHOUSE, INC.		1,519.61			Negotiable
387162		19-APR-18	LUBRICATION ENGINEERS, INC.		2,153.05	23-APR-18	2,153.05	Reconciled
387163		19-APR-18	MAG SYSTEMS, INC.		1,344.02	24-APR-18	1,344.02	Reconciled
387164		19-APR-18	MC FADDEN-DALE INDUSTRIAL		192.23			Negotiable
387165		19-APR-18	MC MASTER CARR SUPPLY CO		463.62	23-APR-18	463.62	Reconciled
387166		19-APR-18	MCCROMETER, INC.		5,427.03	23-APR-18	5,427.03	Reconciled
387167		19-APR-18	MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED		16,310.96			Negotiable
387168		19-APR-18	MICHAEL BAKER INTERNATIONAL,		820.00	23-APR-18	820.00	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
387169	19-APR-18	19-APR-18	INC. MICHAELS, ROSS & COLE, LTD.		6,660.00	23-APR-18	6,660.00	Reconciled
387170	19-APR-18	19-APR-18	MRO ELECTRIC & SUPPLY CO.		1,295.00	24-APR-18	1,295.00	Reconciled
387171	19-APR-18	19-APR-18	MUNICIPAL MAINTENANCE EQUIPMENT INC		5,570.81			Negotiable
387172	19-APR-18	19-APR-18	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		15,194.13	24-APR-18	15,194.13	Reconciled

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 23  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387173	19-APR-18	19-APR-18	NEW PIG CORPORATION		7,819.49	24-APR-18	7,819.49	Reconciled
387174	19-APR-18	19-APR-18	NORRIS, HOWARD		31.52			Negotiable
387175	19-APR-18	19-APR-18	NOSSAMAN LLP		7,305.62			Negotiable
387176	19-APR-18	19-APR-18	NOVACOAST INC		700.00	23-APR-18	700.00	Reconciled
387177	19-APR-18	19-APR-18	OLIN CORPORATION		22,033.81			Negotiable
387178	19-APR-18	19-APR-18	OMAR DANDASHI		2,000.87			Negotiable
387179	19-APR-18	19-APR-18	ORANGE COUNTY AUTO PARTS CO		148.44	23-APR-18	148.44	Reconciled
387180	19-APR-18	19-APR-18	ORANGE COUNTY FIRE AUTHORITY		317.00	24-APR-18	317.00	Reconciled
387181	19-APR-18	19-APR-18	OUTSOURCE TECHNICAL LLC		12,813.75	24-APR-18	12,813.75	Reconciled
387182	19-APR-18	19-APR-18	PACIFIC GAS AND ELECTRIC COMPANY		38.16	24-APR-18	38.16	Reconciled
387183	19-APR-18	19-APR-18	PACIFIC PARTS & CONTROLS INC		473.50	23-APR-18	473.50	Reconciled
387184	19-APR-18	19-APR-18	PARKHOUSE TIRE INC		913.94	24-APR-18	913.94	Reconciled
387185	19-APR-18	19-APR-18	PARKWAY LAWNMOWER SHOP		977.20	24-APR-18	977.20	Reconciled
387186	19-APR-18	19-APR-18	PELLETIER & ASSOCIATES, INC.		1,350.00	23-APR-18	1,350.00	Reconciled
387187	19-APR-18	19-APR-18	PILLAI, RATISH		78.13			Negotiable
387188	19-APR-18	19-APR-18	PINNACLE TOWERS LLC		720.39			Negotiable
387189	19-APR-18	19-APR-18	POLLARDWATER.COM		1,001.58	24-APR-18	1,001.58	Reconciled
387190	19-APR-18	19-APR-18	POOLE, MATTHEW		46.80			Negotiable
387191	19-APR-18	19-APR-18	POWERS BROS. MACHINE, INC.		4,675.52	24-APR-18	4,675.52	Reconciled
387192	19-APR-18	19-APR-18	PRAXAIR DISTRIBUTION INC		229.98	24-APR-18	229.98	Reconciled
387193	19-APR-18	19-APR-18	PRESTIGE AUTO BODY EXPRESS		5,198.69			Negotiable
387194	19-APR-18	19-APR-18	PRO MOBILE AUTO DETAILING		500.00	24-APR-18	500.00	Reconciled
387195	19-APR-18	19-APR-18	PRUDENTIAL OVERALL SUPPLY		434.47	24-APR-18	434.47	Reconciled
387196	19-APR-18	19-APR-18	PRUDENTIAL OVERALL SUPPLY		1,800.00			Negotiable
387197	19-APR-18	19-APR-18	PSOMAS		18,624.22			Negotiable
387198	19-APR-18	19-APR-18	R.D. OLSON CONSTRUCTION		1,573.20			Negotiable
387199	19-APR-18	19-APR-18	RAM AIR ENGINEERING INC		2,505.00	24-APR-18	2,505.00	Reconciled
387200	19-APR-18	19-APR-18	RAO, RAGHU		68.23			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 24  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387201	19-APR-18	19-APR-18	RCE CONSULTANTS, INC.		30,251.15			Negotiable
387202	19-APR-18	19-APR-18	REECE, JOY		142.25			Negotiable
387203	19-APR-18	19-APR-18	RELIANCE STANDARD LIFE INSURANCE COMPANY		30,069.33			Negotiable
387204	19-APR-18	19-APR-18	RITCHIE, STEVEN		105.08			Negotiable
387205	19-APR-18	19-APR-18	RMC WATER AND ENVIRONMENT		3,974.10	23-APR-18	3,974.10	Reconciled
387206	19-APR-18	19-APR-18	RUAN LU & MARVIN PAYNE		40.84			Negotiable
387207	19-APR-18	19-APR-18	S & J SUPPLY CO INC		1,129.67	23-APR-18	1,129.67	Reconciled
387208	19-APR-18	19-APR-18	SANTA ANA BLUE PRINT		919.78	24-APR-18	919.78	Reconciled
387209	19-APR-18	19-APR-18	SEAL ANALYTICAL INC		1,123.25	23-APR-18	1,123.25	Reconciled

387210	19-APR-18	SECURITAS SECURITY SERVICES USA, INC.		49,124.48				Negotiable
387211	19-APR-18	SEELEY, NORENE		29.82				Negotiable
387212	19-APR-18	SHAMROCK SUPPLY CO INC		1,198.61	24-APR-18	1,198.61		Reconciled
387213	19-APR-18	SKORUZ TECHNOLOGIES INC		18,252.00				Negotiable
387214	19-APR-18	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		505.74				Negotiable
387215	19-APR-18	SOUTHERN CALIFORNIA EDISON COMPANY		443,619.31	23-APR-18	443,619.31		Reconciled
387216	19-APR-18	SOUTHERN CALIFORNIA GAS COMPANY		5,630.28				Negotiable
387217	19-APR-18	SPATIAL WAVE, INC.		16,349.20	24-APR-18	16,349.20		Reconciled
387218	19-APR-18	STANTEC CONSULTING SERVICES INC.		1,052.50	23-APR-18	1,052.50		Reconciled
387219	19-APR-18	STETSON ENGINEERS INC.		6,432.10	23-APR-18	6,432.10		Reconciled
387220	19-APR-18	SULLY-MILLER CONTRACTING CO.		210,135.39				Negotiable
387221	19-APR-18	SUMMIT CHEMICAL SPECIALTY PRODUCTS		11,779.68				Negotiable
387222	19-APR-18	TAM, BELINDA C		47.45	23-APR-18	47.45		Reconciled
387223	19-APR-18	THE FURMAN GROUP, INC.		12,645.00				Negotiable
387224	19-APR-18	THOMPSON, RYAN		28.38				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-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 Account: Checking AP and PR Page: 25  
 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								
387225		19-APR-18	TRUCPARCO		111.23	24-APR-18	111.23	Reconciled
387226		19-APR-18	ULTRA SCIENTIFIC		344.20			Negotiable
387227		19-APR-18	UNITED PARCEL SERVICE INC		147.51	23-APR-18	147.51	Reconciled
387228		19-APR-18	UNITED SITE SERVICES OF CALIFORNIA INC		630.35	24-APR-18	630.35	Reconciled
387229		19-APR-18	UNITED WATER WORKS, INC.		471.41	24-APR-18	471.41	Reconciled
387230		19-APR-18	V&A CONSULTING ENGINEERS		26,871.09			Negotiable
387231		19-APR-18	VWR INTERNATIONAL, LLC		4,901.99	23-APR-18	4,901.99	Reconciled
387232		19-APR-18	WANG, DEJUN		23.90			Negotiable
387233		19-APR-18	WARD, WILLIAM P JR.		615.64	24-APR-18	615.64	Reconciled
387234		19-APR-18	WARMINGTON RESIDENTIAL		44.56			Negotiable
387235		19-APR-18	WAXIE'S ENTERPRISES, INC		1,915.54	23-APR-18	1,915.54	Reconciled
387236		19-APR-18	WECK LABORATORIES INC		1,715.00			Negotiable
387237		19-APR-18	WEST COAST SAND & GRAVEL INC.		8,775.00	24-APR-18	8,775.00	Reconciled
387238		19-APR-18	WEST YOST ASSOCIATES, INC		976.50	23-APR-18	976.50	Reconciled
387239		19-APR-18	WESTAMERICA COMMUNICATIONS, INC.		3,369.50	23-APR-18	3,369.50	Reconciled
387240		19-APR-18	WESTERN NATIONAL CONTRACTORS		10.81			Negotiable
387241		19-APR-18	WIN-911 SOFTWARE		1,585.00			Negotiable
387242		19-APR-18	XUE, JINGXIAN		51.35			Negotiable
387243		19-APR-18	YIN, YU		36.26			Negotiable
387244		19-APR-18	YSA LLC		1,486.27	24-APR-18	1,486.27	Reconciled
387245		19-APR-18	ZEMARIAM, ALGANESH		152.60			Negotiable
387246		19-APR-18	ZHA, JIE		18.28			Negotiable
387247		19-APR-18	ZHAO, JINGNAN		19.13			Negotiable
387248		19-APR-18	ORANGE COUNTY BUSINESS COUNCIL	PURCHASE_P AY	5,000.00			Negotiable
387249		19-APR-18	RMC WATER AND ENVIRONMENT	PURCHASE	7,339.00			Negotiable
387250		24-APR-18	MERRIMAC PETROLEUM, INC.	PURCHASE	20,871.73			Negotiable
387251		26-APR-18	Shih, Han-Tsuei (Josephine)	HOME	80.00			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-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 Account: Checking AP and PR Page: 26  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

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

387252	26-APR-18	Bonkowski, Thomas J (Thomas)	54.72	Negotiable
387253	26-APR-18	Compton, Christine A	93.55	Negotiable
387254	26-APR-18	Donnelly, Stephen P (Stephen)	60.00	Negotiable
387255	26-APR-18	King, Casey (Casey)	105.00	Negotiable
387256	26-APR-18	Oldewage, Lars D (Lars)	1,628.43	Negotiable
387257	26-APR-18	Pham, Amie	139.94	Negotiable
387258	26-APR-18	Rattan, Somkit (Kit)	110.32	Negotiable
387259	26-APR-18	Reynoso, Pio (Pio)	180.00	Negotiable
387260	26-APR-18	Silva, Jose A (Jose)	141.96	Negotiable
387261	26-APR-18	Smyth, Jeffrey S (Jeff)	45.00	Negotiable
387262	26-APR-18	Tettemer, John M (Mark)	411.13	Negotiable
387263	26-APR-18	A&A WIPING CLOTH CO	1,249.90	Negotiable
387264	26-APR-18	ACCESS TECHNOLOGIES, INC.	7,471.07	Negotiable
387265	26-APR-18	AEGIS ENGINEERING MANAGEMENT, INC.	17,498.50	Negotiable
387266	26-APR-18	AFLAC	6,666.77	Negotiable
387267	26-APR-18	AFLAC	203.12	Negotiable
387268	26-APR-18	AGILENT TECHNOLOGIES, INC.	2,966.90	Negotiable
387269	26-APR-18	AIRGAS, INC.	4,634.40	Negotiable
387270	26-APR-18	ALEXANDER BOWIE A LAW CORP	2,069.44	Negotiable
387271	26-APR-18	ALHASHIMI, BASHIR	81.09	Negotiable
387272	26-APR-18	ALLIANCE AG SERVICES, LLC	3,000.00	Negotiable
387273	26-APR-18	ALLIANCE RESOURCE CONSULTING LLC	7,000.00	Negotiable
387274	26-APR-18	ALMASI, VANESSA	108.44	Negotiable
387275	26-APR-18	ALPHA TRAFFIC SERVICES, INC.	520.00	Negotiable
387276	26-APR-18	AMANDA LEIBOWITZ AND NATHAN LITINASKI	22.17	Negotiable
387277	26-APR-18	AMAZON CAPITAL SERVICES, INC.	301.69	Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 27  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387278		26-APR-18	AMERICAN WATER WORKS ASSOC		25,000.00			Negotiable
387279		26-APR-18	ANDERSONPENNA PARTNERS, INC.		67,280.50			Negotiable
387280		26-APR-18	ANTHONY N. LARSEN		400.00			Negotiable
387281		26-APR-18	APEX LIFE SCIENCES, LLC		4,846.20			Negotiable
387282		26-APR-18	AQUA BEN CORPORATION		33,902.46			Negotiable
387283		26-APR-18	ARIZONA INSTRUMENT LLC		1,396.41			Negotiable
387284		26-APR-18	AT&T		5,785.30			Negotiable
387285		26-APR-18	ATKINSON, ANDELSON, LOYA, RUUD AND ROMO		902.00			Negotiable
387286		26-APR-18	B & B METALS, INC.		859.85			Negotiable
387287		26-APR-18	BATTERIES PLUS AND BATTERIES PLUS BULBS		1,087.52			Negotiable
387288		26-APR-18	BELSHIRE ENVIRONMENTAL SERVICES, INC.		3,090.00			Negotiable
387289		26-APR-18	BILL'S SWEEPING SERVICE INC		460.00			Negotiable
387290		26-APR-18	BONNIE BELTRAN		57.20			Negotiable
387291		26-APR-18	BRENNTAG PACIFIC INC		18,938.56			Negotiable
387292		26-APR-18	BRITHINEE ELECTRIC		285.54			Negotiable
387293		26-APR-18	BSI SERVICES AND SOLUTIONS (WEST), INC.		930.00			Negotiable
387294		26-APR-18	C WELLS PIPELINE MATERIALS INC		16,343.52			Negotiable
387295		26-APR-18	CALIFORNIA BARRICADE RENTAL, INC.		3,048.28			Negotiable

387296	26-APR-18	CANON SOLUTIONS AMERICA, INC.	1,073.89	Negotiable
387297	26-APR-18	CAROLLO ENGINEERS, INC	11,440.25	Negotiable
387298	26-APR-18	CDW GOVERNMENT LLC	1,381.56	Negotiable
387299	26-APR-18	CHAIREL CUSTOM HAY, INC.	8,372.00	Negotiable
387300	26-APR-18	CHON, KYUNG	36.05	Negotiable
387301	26-APR-18	CITY OF NEWPORT BEACH	1,108.24	Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 28  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387302		26-APR-18	CLA-VAL COMPANY		4,885.61			Negotiable
387303		26-APR-18	COLONIAL LIFE & ACCIDENT INSURANCE CO.		1,230.32			Negotiable
387304		26-APR-18	COTTONS POINT DESIGN, INC.		5,968.00			Negotiable
387305		26-APR-18	COUNTY OF ORANGE		118,397.42			Negotiable
387306		26-APR-18	COUNTY OF ORANGE		618.00			Negotiable
387307		26-APR-18	COX COMMUNICATIONS, INC.		3,400.88			Negotiable
387308		26-APR-18	CREW, INC		1,376.60			Negotiable
387309		26-APR-18	CULLIGAN OF SANTA ANA		5,000.00			Negotiable
387310		26-APR-18	DATA CLEAN CORPORATION		534.00			Negotiable
387311		26-APR-18	DEE JASPAR & ASSOCIATES, INC.		1,923.57			Negotiable
387312		26-APR-18	DELL MARKETING LP		5,444.41			Negotiable
387313		26-APR-18	DENALI WATER SOLUTIONS LLC		6,257.07			Negotiable
387314		26-APR-18	DIRECTV INC		255.51			Negotiable
387315		26-APR-18	DISCOUNT COURIER SERVICE		67.47			Negotiable
387316		26-APR-18	DURHAM GEO SLOPE INDICATOR		398.05			Negotiable
387317		26-APR-18	EAGLE PRINT DYNAMICS		68.67			Negotiable
387318		26-APR-18	ENVIRONMENTAL RESOURCE ASSOCIATES		2,117.73			Negotiable
387319		26-APR-18	ENVIRONMENTAL SCIENCE ASSOCIATES		1,959.08			Negotiable
387320		26-APR-18	EXECUTIVE LIGHTING & ELECTRIC		9,824.74			Negotiable
387321		26-APR-18	FARWEST CORROSION CONTROL COMPANY		779.57			Negotiable
387322		26-APR-18	FEDEX		134.31			Negotiable
387323		26-APR-18	FIERRO, SERGIO D		3,324.99			Negotiable
387324		26-APR-18	FIONA HUTTON & ASSOCIATES, INC.		12,000.21			Negotiable
387325		26-APR-18	FIRST CHOICE SERVICES		1,062.14			Negotiable
387326		26-APR-18	FISERV		39,231.22			Negotiable
387327		26-APR-18	FISHER SCIENTIFIC COMPANY LLC		2,337.13			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 29  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387328		26-APR-18	FLW, INC.		183.75			Negotiable
387329		26-APR-18	FRONTIER CALIFORNIA INC.		312.16			Negotiable
387330		26-APR-18	FUSCOE ENGINEERING, INC.		1,564.00			Negotiable
387331		26-APR-18	GENERAL MONITORS INC.		1,554.25			Negotiable
387332		26-APR-18	GENTERRA CONSULTANTS INC		12,286.00			Negotiable
387333		26-APR-18	GEORGE HILLS COMPANY, INC.		93.50			Negotiable
387334		26-APR-18	GJ AUTOMOTIVE EQUIPMENT CO INC		536.60			Negotiable
387335		26-APR-18	GM SAGER CONSTRUCTION CO, INC.		26,500.00			Negotiable
387336		26-APR-18	GRAINGER		3,881.49			Negotiable

387337	26-APR-18	GRAYBAR ELECTRIC COMPANY		1,941.62		Negotiable
387338	26-APR-18	HACH COMPANY		2,152.96		Negotiable
387339	26-APR-18	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY		72.30		Negotiable
387340	26-APR-18	HELPMATES STAFFING SERVICES		28,448.27		Negotiable
387341	26-APR-18	HERC RENTALS INC.		3,043.94		Negotiable
387342	26-APR-18	HILL BROTHERS CHEMICAL COMPANY		7,492.69		Negotiable
387343	26-APR-18	HOME DEPOT USA INC		299.28		Negotiable
387344	26-APR-18	HUANG, WEIJIANG		267.84		Negotiable
387345	26-APR-18	HYDRO INTERNATIONAL		5,624.94		Negotiable
387346	26-APR-18	IDEA HALL		30,800.00		Negotiable
387347	26-APR-18	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47		1,445.00		Negotiable
387348	26-APR-18	IRVINE PIPE & SUPPLY INC		1,809.30		Negotiable
387349	26-APR-18	IRWD-PETTY CASH CUSTODIAN		1,273.69		Negotiable
387350	26-APR-18	JUST ENERGY SOLUTIONS INC.		195.56		Negotiable
387351	26-APR-18	KAZARIANS & ASSOCIATES, INC.		8,766.09		Negotiable
387352	26-APR-18	KIMBALL MIDWEST		1,239.26		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-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 Account: Checking AP and PR Page: 30  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387353		26-APR-18	KLEINFELDER, INC.		1,525.00			Negotiable
387354		26-APR-18	KOTTYRA, KRISTINE		53.51			Negotiable
387355		26-APR-18	KUBE ENGINEERING		142.75			Negotiable
387356		26-APR-18	LAKE FOREST CHAMBER OF COMMERCE INC		175.00			Negotiable
387357		26-APR-18	LANCER SALES USA, INC.		278.52			Negotiable
387358		26-APR-18	LANDCARE HOLDINGS, INC.		76,813.14			Negotiable
387359		26-APR-18	LOTUS		21.34			Negotiable
387360		26-APR-18	MARVIN GARDENS LLC		1,341.14			Negotiable
387361		26-APR-18	MASOUEM, SHAHRYAR		124.20			Negotiable
387362		26-APR-18	MC FADDEN-DALE INDUSTRIAL		155.40			Negotiable
387363		26-APR-18	MYERS & SONS HI-WAY SAFETY, INC.		2,605.40			Negotiable
387364		26-APR-18	NATIONAL READY MIXED CONCRETE CO.		5,400.76			Negotiable
387365		26-APR-18	NEWPORT BEACH CHAMBER OF COMMERCE		2,500.00			Negotiable
387366		26-APR-18	O'HAREN GOVERNMENT RELATIONS		6,500.00			Negotiable
387367		26-APR-18	O.C. SUPERIOR CUSTOM CLEANING SERVICES		390.00			Negotiable
387368		26-APR-18	OC WELDING SERVICES		450.00			Negotiable
387369		26-APR-18	OLIN CORPORATION		22,196.89			Negotiable
387370		26-APR-18	OLSON, HAGEL & FISHBURN, LLP		425.00			Negotiable
387371		26-APR-18	ONESOURCE DISTRIBUTORS LLC		71.43			Negotiable
387372		26-APR-18	ORANGE COUNTY AUTO PARTS CO		27.50			Negotiable
387373		26-APR-18	ORANGE COUNTY SHERIFF'S OFFICE		224.50			Negotiable
387374		26-APR-18	PACIFIC COAST BOLT CORP		2,248.22			Negotiable
387375		26-APR-18	PACIFIC SURVEYS, LLC		2,390.00			Negotiable
387376		26-APR-18	PALOMAR MOUNTAIN PREMIUM SPRING WATER		3,562.50			Negotiable
387377		26-APR-18	PARKHOUSE TIRE INC		2,531.57			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-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 Account: Checking AP and PR Page: 31  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

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

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
387378		26-APR-18	PARKWAY LAWNMOWER SHOP		416.56			Negotiable
387379		26-APR-18	PASCAL & LUDWIG CONSTRUCTORS		12,706.65			Negotiable
387380		26-APR-18	PASCAL & LUDWIG CONSTRUCTORS		241,426.34			Negotiable
387381		26-APR-18	PATTOCK, SHAWN		33.90			Negotiable
387382		26-APR-18	PERS LONG TERM CARE		675.35			Negotiable
387383		26-APR-18	PHILLIPS, PATRICK		236.31			Negotiable
387384		26-APR-18	PLUMBERS DEPOT INC.		53.40			Negotiable
387385		26-APR-18	POLLARDWATER.COM		296.31			Negotiable
387386		26-APR-18	PRAXAIR DISTRIBUTION INC		908.38			Negotiable
387387		26-APR-18	PRE-PAID LEGAL SERVICES INC		1,235.90			Negotiable
387388		26-APR-18	PRES-TECH MANUFACTURER'S REPRESENTATIVES, INC.		201.71			Negotiable
387389		26-APR-18	PRUDENTIAL OVERALL SUPPLY		7,834.32			Negotiable
387390		26-APR-18	PTI SAND & GRAVEL INC		493.30			Negotiable
387391		26-APR-18	PYRO-COMM SYSTEMS INC		185.00			Negotiable
387392		26-APR-18	RAM AIR ENGINEERING INC		1,702.79			Negotiable
387393		26-APR-18	REAL WATER CONSULTANTS INC.		20,145.00			Negotiable
387394		26-APR-18	RELIANCE SAFETY CONSULTANTS, INC.		3,713.99			Negotiable
387395		26-APR-18	RESPONSE ENVELOPE, INC		2,841.92			Negotiable
387396		26-APR-18	RINCON TRUCK CENTER INC.		26.36			Negotiable
387397		26-APR-18	ROGERS, HARRIETT		47.69			Negotiable
387398		26-APR-18	ROKNI ELECTRIC COMPANY INC.		11,700.00			Negotiable
387399		26-APR-18	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT		155,273.81			Negotiable
387400		26-APR-18	S & J SUPPLY CO INC		28,187.40			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch: Los Angeles Account: Checking AP and PR Page: 32  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
387401		26-APR-18	SAN CARLO APARTMENTS		43.87			Negotiable
387402		26-APR-18	SAN LEON APTS		436.17			Negotiable
387403		26-APR-18	SANTA ANA BLUE PRINT		534.80			Negotiable
387404		26-APR-18	SCAP		10,120.00			Negotiable
387405		26-APR-18	SEALS WEST PACKING CO.		4,293.84			Negotiable
387406		26-APR-18	SEWER PIPE SOLUTIONS LLC		1,629.90			Negotiable
387407		26-APR-18	SHAMROCK SUPPLY CO INC		1,814.95			Negotiable
387408		26-APR-18	SHIN, SUNG WON		12.82			Negotiable
387409		26-APR-18	SIGMA-ALDRICH INC		231.69			Negotiable
387410		26-APR-18	SILVERWOOD LANDSCAPE		402.10			Negotiable
387411		26-APR-18	SOLARWINDS, INC		438.00			Negotiable
387412		26-APR-18	SOUTH COAST WATER CO.		90.00			Negotiable
387413		26-APR-18	SOUTHERN CALIFORNIA EDISON COMPANY		100,881.39			Negotiable
387414		26-APR-18	SOUTHERN CALIFORNIA GAS COMPANY		50.75			Negotiable
387415		26-APR-18	SOUTHERN CALIFORNIA WATER COMMITTEE INC		10,000.00			Negotiable
387416		26-APR-18	SOUTHERN COUNTIES LUBRICANTS LLC		2,357.03			Negotiable
387417		26-APR-18	STERIS CORPORATION		4,581.94			Negotiable
387418		26-APR-18	STRADLING YOCCA CARLSON & RAUTH		112.00			Negotiable
387419		26-APR-18	SURF CITY OPTOMETRY		225.00			Negotiable
387420		26-APR-18	TESTAMERICA LABORATORIES, INC		369.60			Negotiable

387421	26-APR-18	THE IRVINE COMPANY	2,952.58	Negotiable
387422	26-APR-18	TIC-OFFICE PROPERTIES	102.86	Negotiable
387423	26-APR-18	TIC-RESORT PROPERTIES	69.87	Negotiable
387424	26-APR-18	TODAY REALESTATE	33.15	Negotiable
387425	26-APR-18	TORRES, MONICA	40.00	Negotiable
387426	26-APR-18	TROPICAL PLAZA NURSERY INC	1,552.26	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-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 Account: Checking AP and PR Page: 33  
 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								
387427		26-APR-18	TRUCPARCO		10.26			Negotiable
387428		26-APR-18	ULTRA SCIENTIFIC		407.90			Negotiable
387429		26-APR-18	UNITED PARCEL SERVICE INC		56.51			Negotiable
387430		26-APR-18	US BANK NAT'L ASSOCIATION NORTH DAKOTA		94,305.46			Negotiable
387431		26-APR-18	VAUGHAN'S INDUSTRIAL REPAIR CO INC		600.00			Negotiable
387432		26-APR-18	VWR INTERNATIONAL, LLC		655.34			Negotiable
387433		26-APR-18	W DESIGN ASSOCIATES INC		6,050.00			Negotiable
387434		26-APR-18	WATERWISE CONSULTING, INC.		1,160.00			Negotiable
387435		26-APR-18	WAXIE'S ENTERPRISES, INC		1,554.36			Negotiable
387436		26-APR-18	WECK LABORATORIES INC		277.00			Negotiable
387437		26-APR-18	WORKFORCE SAFETY LLC		4,476.00			Negotiable
387438		26-APR-18	XYLEM WATER SOLUTIONS USA, INC.		1,268.06			Negotiable
387439		26-APR-18	YANG, LISA		111.76			Negotiable
387440		26-APR-18	YORK INSURANCE SERVICES GROUP INC - CA		7,786.25			Negotiable
387441		26-APR-18	YSI, INC		2,928.21			Negotiable
387442		26-APR-18	ZHONG, XIAOPING		37.98			Negotiable
Payment Document Subtotal:					8,133,567.81		5,616,890.62	

Payment Document : IRWD Wire

12537		10-APR-18	CALPERS	SACRAMENTO 1	487,715.57			Negotiable
12538		10-APR-18	CALPERS	SACRAMENTO 1	2,805.07			Negotiable
12539		10-APR-18	FRANCHISE TAX BOARD	SACRAMENTO	3.73			Negotiable
12540		13-APR-18	INTERNAL REVENUE SERVICE	FRESNO	245.29			Negotiable
12541		16-APR-18	STERN, GABRIEL	PAY	7.17			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-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 Account: Checking AP and PR Page: 34  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12542		16-APR-18	ZHAO, WEI	PAY	13.13			Negotiable
12543		16-APR-18	WET SEAL, LLC	IRVINE	24.43			Negotiable
12544		16-APR-18	FILANC-BALFOUR ACT	4427724347	872,665.90			Negotiable
12545		16-APR-18	BEATTY JV	ESR	21,783.07			Negotiable
12546		16-APR-18	FILANC-BALFOUR	211084000				Negotiable
12546		18-APR-18	EMPLOYEE BENEFIT SPECIALISTS, INC. 11657	PO BOX	33,941.89			Negotiable
12547		18-APR-18	EMPLOYEE BENEFIT SPECIALISTS, INC. 11657	PO BOX	1,280.00			Negotiable
12548		19-APR-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY	9,831.25			Negotiable
12549		19-APR-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY	4,866.51			Negotiable
12550		19-APR-18	EMPLOYEE BENEFIT SPECIALISTS, INC. 11657	PO BOX	13,948.78			Negotiable



12551	19-APR-18	CALPERS	SACRAMENTO	182,970.48	Negotiable
12552	19-APR-18	INTERNAL REVENUE SERVICE	FRESNO	187,375.62	Negotiable
12553	19-APR-18	FRANCHISE TAX BOARD	SACRAMENTO	58,248.03	Negotiable
12554	19-APR-18	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	14,158.12	Negotiable
12555	19-APR-18	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	1,993.83	Negotiable
12556	19-APR-18	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	130,469.10	Negotiable
12557	24-APR-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	8,258.70	Negotiable
12558	24-APR-18	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	8,906.25	Negotiable
12559	24-APR-18	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	33,784.72	Negotiable
12560	24-APR-18	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	16,458.33	Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 35  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12561		24-APR-18	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	90,266.30			Negotiable
12562		24-APR-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	50,613.71			Negotiable
12563		24-APR-18	BANK OF AMERICA	SAN FRANCISCO	50,449.34			Negotiable
12564		24-APR-18	BANK OF AMERICA	SAN FRANCISCO	61,555.69			Negotiable
12565		24-APR-18	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	45,851.92			Negotiable
12566		24-APR-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	25,451.87			Negotiable
12567		26-APR-18	PCL CONSTRUCTION, INC.	ACCT 6971821722	3,474.06			Negotiable
12568		26-APR-18	BANK OF AMERICA MERRILL LYNCH	CHICAGO	87,050.19			Negotiable
12569		26-APR-18	BANK OF AMERICA MERRILL LYNCH	CHICAGO	5,616.53			Negotiable
12570		27-APR-18	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	13,336.96			Negotiable
12571		27-APR-18	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	40,307.96			Negotiable
12572		27-APR-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	90,025.25			Negotiable
12573		27-APR-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	1,601,361.97			Negotiable
12574		27-APR-18	CALPERS	SACRAMENTO	181,671.40			Negotiable
12575		27-APR-18	CALPERS	SACRAMENTO	1,241.13			Negotiable
12576		27-APR-18	CALPERS	SACRAMENTO	1,241.13			Negotiable
12577		27-APR-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY	11,589.02			Negotiable
12578		30-APR-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY	5,407.86			Negotiable
12579		30-APR-18	U.S. BANK NATIONALST. ASSOCIATION	LOUIS	5,794,250.00			Negotiable
12580		30-APR-18	YORK INSURANCE SERVICES GROUP INC - CA	PAY	6,016.78			Negotiable

IRWD Ledger Upgrade Payment Register For 01-APR-18 To 30-APR-18 Report Date: 01-MAY-2018 07:15  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 36  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
Payment Document Subtotal:					10,258,534.04			

	Bank Account Subtotal :	18,392,101.85	5,616,890.62
Report Count : 904	Report Total:	18,392,101.85	5,616,890.62
		Disbursements	

\*\*\* End of Report \*\*\*

\$ 18,392,101.85	Disbursements
<u>&lt;10,270.05&gt;</u>	Voids
\$ 18,381,831.80	Total Disbursements and Voids

Exhibit "E"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

April  
2018

	AMOUNT	VENDOR	PURPOSE
4/13/2018	952,924.96	BANK OF AMERICA	ACH Payments for Payroll
4/27/2018	926,400.57	BANK OF AMERICA	ACH Payments for Payroll
	<u>\$1,879,325.53</u>		

Exhibit "F"

**IRWD Gov Code 53065.5 Disclosure Report**

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

01-APR-18 to 30-APR-18

NAME	CHECK NO.	CHECK	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Barboza, Armando	386830	12-Apr-18	180.00	Membership Renewal	CWEA membership
Bennett, Ray	386831	12-Apr-18	166.77	Mileage	Monthly Rio Bravo DRP Project Tour/Inspection
Chauv, Denise	386584	4-Apr-18	499.01	Airfare	Attending PITTCON Conf., Orlando, FL - Feb. 26-Mar.1,
Chauv, Denise	386584	4-Apr-18	184.50	Lodging	Attending PITTCON Conf., Orlando, FL - Feb. 25, 2018
Chauv, Denise	386584	4-Apr-18	184.50	Lodging	Attending PITTCON Conf., Orlando, FL - Feb. 26, 2018
Chauv, Denise	386584	4-Apr-18	325.00	Registration Fees	Attending PITTCON Conf., Orlando, FL - Feb. 26-Mar.1,
Chauv, Denise	386584	4-Apr-18	184.50	Lodging	Attending PITTCON Conf., Orlando, FL - Feb. 27, 2018
Chauv, Denise	386584	4-Apr-18	184.50	Lodging	Attending PITTCON Conf., Orlando, FL - Feb. 28, 2018
Chauv, Denise	386584	4-Apr-18	184.50	Lodging	Attending PITTCON Conf., Orlando, FL - Mar. 1, 2018
Chauv, Denise	386584	4-Apr-18	320.65	Auto Rental	Attending PITTCON Conf., Orlando, FL - Feb. 26-Mar.1,
Dillman, Tyler	386835	12-Apr-18	168.00	Certification Renewal	SWRCB Water Distribution Operator Grade IV
Hansen, Casey	386587	4-Apr-18	150.00	Certification Renewal	SWRCB Wastewater Treatment Plant Operator Grade III
King, Casey	387255	26-Apr-18	105.00	Certification Renewal	SWRCB Water Distribution Operator Grade IV
Legault, Dan	387052	19-Apr-18	225.00	Other(Misc)	Safety shoe allowance
Nicholson, Darin	386593	4-Apr-18	180.00	Membership Renewal	CWEA membership
Oldewage, Lars	386594	4-Apr-18	269.00	Membership Renewal	AWWA membership
Oldewage, Lars	387256	26-Apr-18	342.97	Airfare	Attending CWEA Annual Conf., Sacramento - Apr. 17-
Oldewage, Lars	387256	26-Apr-18	217.96	Airfare	Attending CWEA Annual Conf., Sacramento - Apr. 17-
Oldewage, Lars	387256	26-Apr-18	530.00	Registration Fees	Attending CWEA Annual Conf., Sacramento - Apr. 17-
Oldewage, Lars	387256	26-Apr-18	165.60	Lodging	Attending CWEA Annual Conf., Sacramento - Apr. 17,2018
Parsons, Sheryl	386838	12-Apr-18	150.80	Other(Misc)	Safety shoe allowance
Pham, Amie	387257	26-Apr-18	139.94	Other(Misc)	Safety shoe allowance
Rattan, Somkit	387258	26-Apr-18	110.32	Other(Misc)	Safety shoe allowance
Reynoso, Pio	387259	26-Apr-18	180.00	Membership Renewal	CWEA membership
Silva, Jose A	387260	26-Apr-18	141.96	Other(Misc)	Safety shoe allowance
Tettermer, Mark	387262	26-Apr-18	196.20	Mileage	WaterReuse Annual Conf., Monterey, CA - Mar. 24-27,
Tettermer, Mark	387262	26-Apr-18	196.20	Mileage	WaterReuse Annual Conf., Monterey, CA - Mar. 24-27,
Trigg, Tyler	386595	4-Apr-18	100.00	Certification Renewal	SWRCB Water Distribution Operator Grade III
<b>Total Amount:</b>			<b>\$5,982.88</b>		

May 29, 2018

Prepared by: H. Cho/M. Cortez

Submitted by: K. Burton (KLB)

Approved by: Paul A. Cook [Signature]

## CONSENT CALENDAR

### DYER ROAD WELLFIELD SURGE TANKS BUDGET INCREASE AND CONTRACT CHANGE ORDER

#### SUMMARY:

The Dyer Road Wellfield (DRWF) Surge Tanks project will construct new surge tanks at Wells 5 and 7 and replace the corroded existing surge tanks at Wells 11 and 15. The project encountered significant challenges during shoring construction at Well 15. Staff recommends that the Board:

- Authorize a budget increase in the amount of \$440,000, from \$3,626,200 to \$4,066,200, for Project 05473, and in the amount of \$60,000, from \$1,250,500 to \$1,310,500, for Project 06165, and
- Authorize the General Manager to execute Contract Change Order (CCO) No. 4 with Pascal & Ludwig Constructors in the amount of \$317,977 for the Dyer Road Wellfield Surge Tanks.

#### BACKGROUND:

The DRWF was constructed in the 1990s as a domestic water source for IRWD and consists of 18 wells located in the city of Santa Ana. The wells were constructed with underground surge tanks at Wells 11 and 15; these tanks have thinning walls due to corrosion and are near the end of their useful lives. As part of the investigation into their replacement, a comprehensive surge analysis of the entire DRWF Zone 1 system including the Wells 21/22 Treatment Plant recommended the construction of five new surge tanks at Wells 5, 7, 11, 15 and 16. The surge tank at Well 16 was recently constructed as part of the Initial Disinfection Facility (IDF) Sodium Hypochlorite Storage and Feed System project, since Well 16 and IDF are located on the same site. This project will install new surge tanks at Wells 5 and 7 and replace the existing surge tanks at Wells 11 and 15. The four well sites are shown in Exhibit "A".

Since the tanks' corrosion resulted from being directly buried in soil with high groundwater, the new tanks are being installed aboveground at Wells 5 and 7, in a partially recessed and canopied concrete vault at Well 11, and in an underground concrete vault at Well 15. Pascal & Ludwig was awarded the construction contract in April 2017 and the project is currently under construction.

#### Contract Change Order No. 4:

At Well 15, the existing surge tank is located below ground adjacent to the well building and a block wall as shown in Exhibit "B". The surge tank is buried with one end of the tank exposed in an underground vault for access; the bottom of the vault and the surge tank foundation are approximately 18.5 feet below ground surface. The new surge tank will be constructed in an

underground vault with the vault floor located 21 feet below ground surface as shown in Exhibit "C".

Pascal & Ludwig had planned to install a shoring system of steel I-section columns, 40 feet in length, with wood lagging between the shoring columns, and a concrete foundation at each column poured at the bottom 15 feet of the column. The shoring system would allow for the excavation to remove the existing surge tank, demolish the existing vault and install the new surge tank and its foundation. During shoring column construction, Pascal & Ludwig encountered an unknown field condition of bird's eye pea gravel approximately four feet below ground surface in every column location. The gravel was used as backfill around the existing tank. As the contractor attempted to auger a hole for the shoring columns, the pea gravel shifted and filled the hole due to its loose and unstable nature. Staff held a field meeting with Pascal & Ludwig and the design engineer, Tetra Tech, to review possible solutions. The team concurred on the process of installing the shoring system: 1) drive a steel casing through the pea gravel, 2) remove the pea gravel from within the casing with an auger, 3) lower the shoring column into the casing, 4) pour concrete into the casing, surrounding the bottom 15 feet of the column, and 5) remove the steel casing. This process was repeated for each shoring column. The shoring system is shown in Exhibit "D".

Pascal & Ludwig installed a total of 24 columns. The process was slow and required six weeks to complete. The contractor included two weeks in its construction bid for shoring column installation. The additional cost for installing the columns was \$191,085 and an additional four weeks of time were required to complete the installation. Pascal & Ludwig's cost to install its originally intended shoring system of I-section columns and wood lagging is included in CCO No. 4 as a credit amount of <\$30,916> to the District.

The pea gravel also precluded the use of wood lagging between the shoring columns. Instead, the team concurred that steel plates with a sharpened edge could be driven between the columns into the pea gravel and used as lagging. The cost for steel plates is much more expensive than wood lagging. Pascal & Ludwig submitted a cost of \$157,808 for the steel plate materials alone, due to the size and depth of the shoring system. The installation of the steel plate lagging has not yet started, thus any increased installation cost will be included in a future contract change order. CCO No. 4, in the total amount of \$317,977 for the additional shoring column installation costs and the steel plate procurement, is shown in Exhibit "E".

Construction is continuing on the project, and staff anticipates that construction of the entire project will be completed by December 31, 2018.

#### FISCAL IMPACTS:

The cost for the DRWF Surge Tanks is divided between Projects 05473 and 06165. The replacement of the surge tanks at Well 11 and Well 15 is funded by Project 05473, and the construction of the new surge tanks at Well 5 and Well 7 is funded by Project 06165. Projects 05473 and 06165 are included in the FY 2018-19 Capital Budget. A budget increase is required to fund the construction and engineering support services for the project as shown in the following table.

Project No.	Current Budget	Addition <Reduction>	Total Budget
05473	\$3,626,200	\$440,000	\$4,066,200
06165	\$1,250,500	\$60,000	\$1,310,500
Total	\$4,876,700	\$500,000	\$5,376,700

ENVIRONMENTAL COMPLIANCE:

This activity is categorically exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 (b) which provides exclusion for minor alteration of public facilities; Section 15302 which provides for replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose; and Section 15303 which consists of exclusion for minor alteration of public facilities such as water and other utility extensions. A Notice of Exemption was filed with the Orange County Clerk-Recorder on May 25, 2016.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 15, 2018.

RECOMMENDATION:

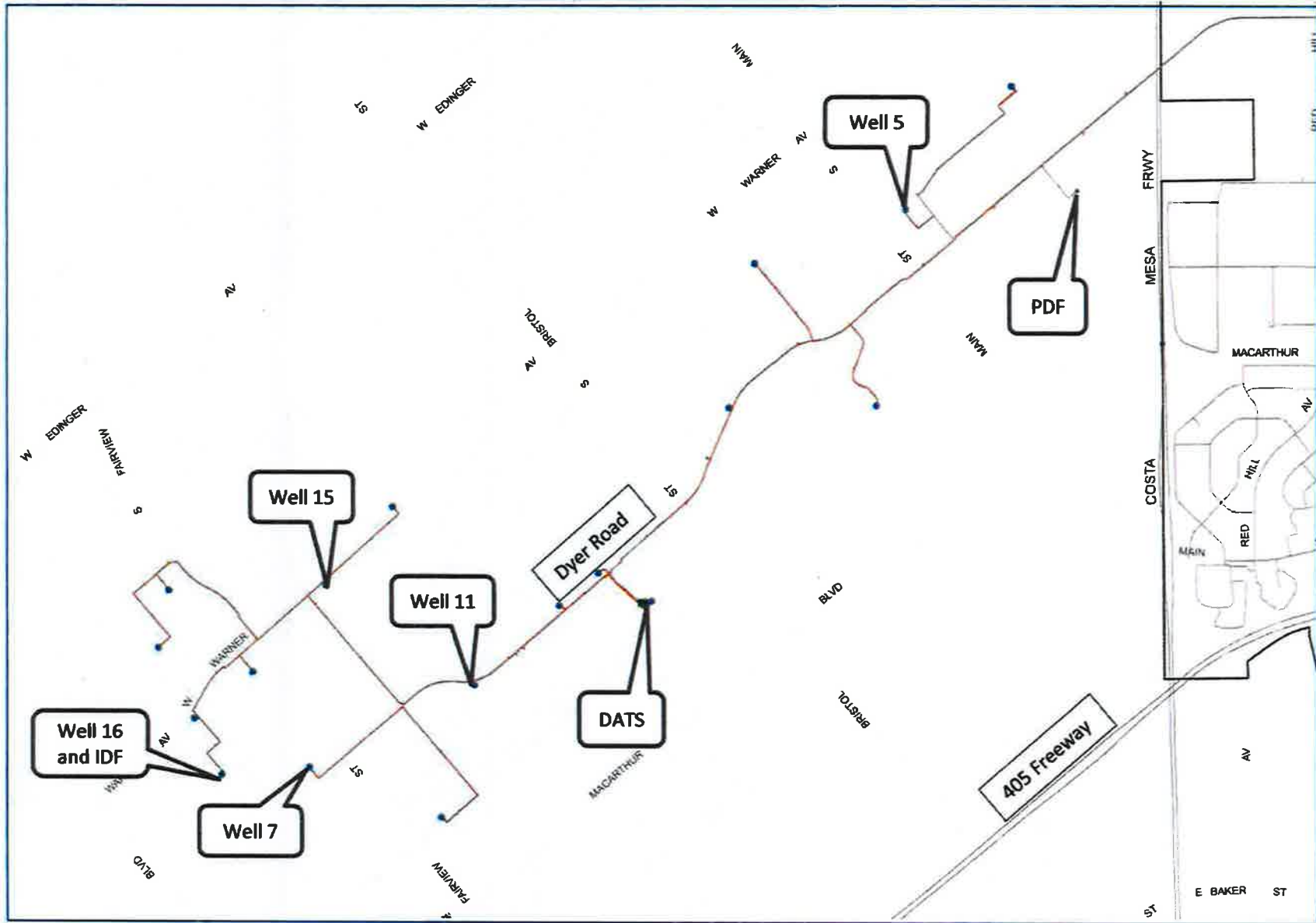
THAT THE BOARD AUTHORIZE A BUDGET INCREASE IN THE AMOUNT OF \$440,000, FROM \$4,066,200 TO \$3,976,200, FOR PROJECT 05473, AND IN THE AMOUNT OF \$60,000, FROM \$1,250,500 TO \$1,310,500, FOR PROJECT 06165, AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE CONTRACT CHANGE ORDER NO. 4 WITH PASCAL & LUDWIG CONSTRUCTORS IN THE AMOUNT OF \$317,977 FOR THE DYER ROAD WELLFIELD SURGE TANKS, PROJECTS 05473 AND 06165.

LIST OF EXHIBITS:

- Exhibit "A" – Location Map
- Exhibit "B" – Well 15 Figure
- Exhibit "C" – Well 15 Surge Tank Design
- Exhibit "D" – Well 15 Shoring System
- Exhibit "E" – Contract Change Order No. 4

# EXHIBIT "A"

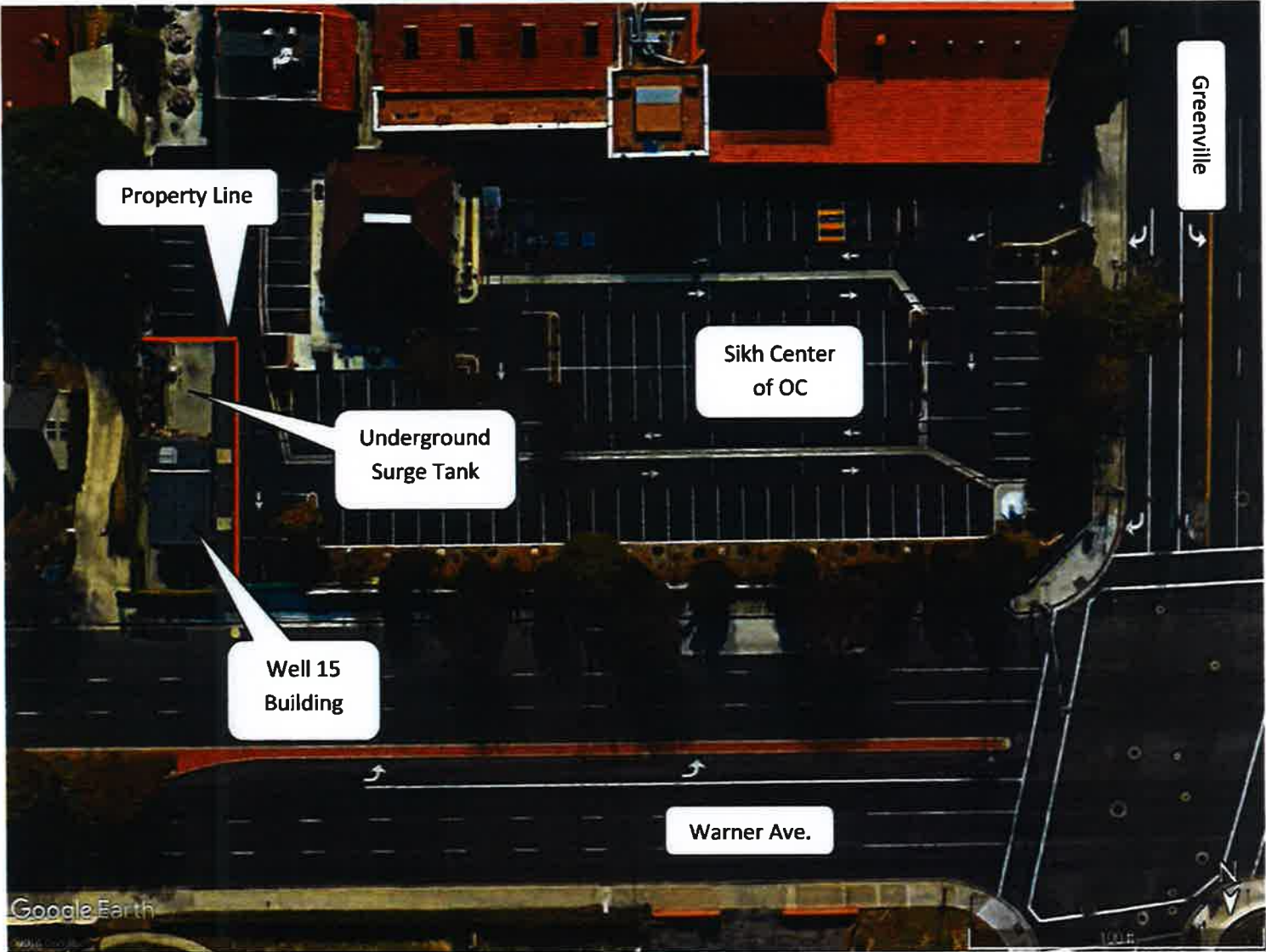
## DRWF Surge Tank Project





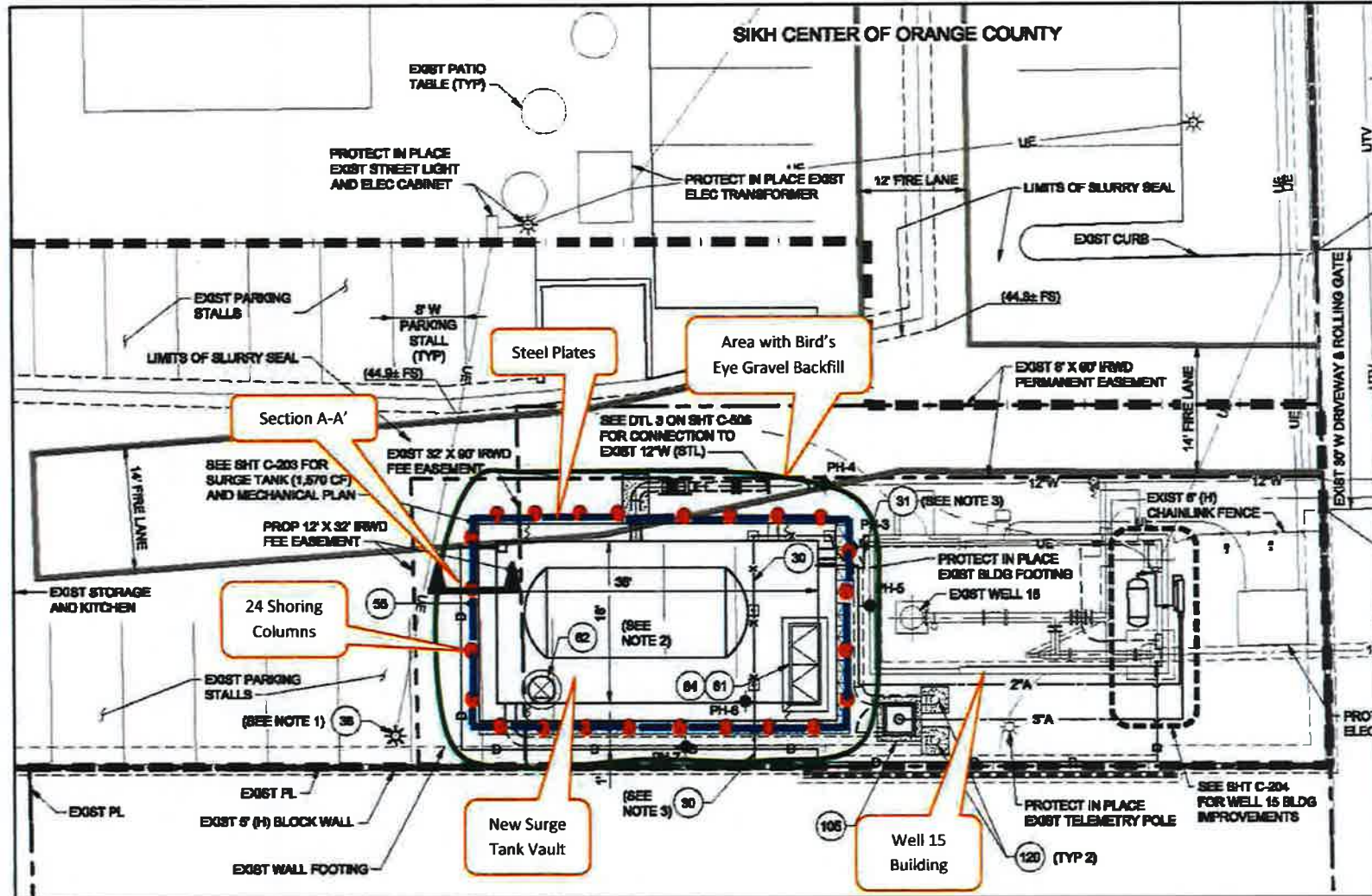
**EXHIBIT "B"**

WELL 15



# EXHIBIT "C"

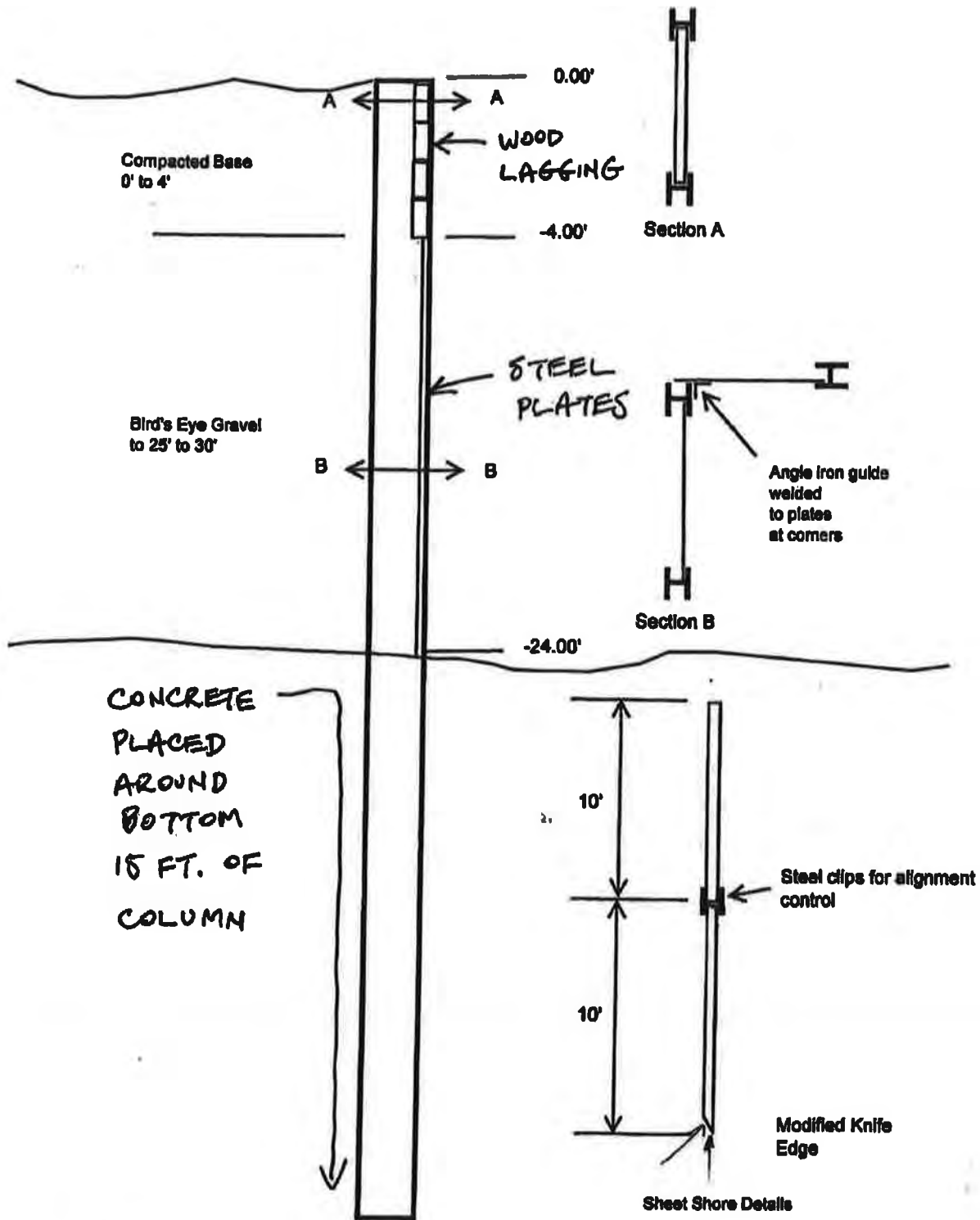
## WELL 15 SURGE TANK DESIGN AND SHORING



## EXHIBIT "D"



TYPICAL SHORING COLUMN



Well 15 Proposed Sheet Shoring Plan  
March 12, 2018

SECTION A - A'

**EXHIBIT "E"**  
**CONTRACT CHANGE ORDER**



**Irvine Ranch Water District**  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine, CA 92619-7000  
(949) 453-5300

C.O. No. 4  
 Final  
Project No. 05473/06165

Dyer Road Well Field Surge Tanks  
Project Title

Date: May 4, 2018

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Additional Shoring Column Installation Costs at Well 15	\$191,085.00	\$-0-	28
2. Credit for original bid amount for pile installation.	\$-0-	\$30,916.00	0
3. Material costs for steel plates for Well 15 shoring rather than using wood lagging due to loose bird's eye gravel and other materials in backfill around existing surge tank. Excludes credit for wood lagging.	\$157,808.00	\$-0-	14
The project completion date is revised from August 28, 2018 to October 9, 2018.			
<b>TOTAL</b>	<b>\$348,893.00</b>	<b>\$30,916.00</b>	<b>42</b>

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=	\$317,977.00	42
2. ORIGINAL CONTRACT AMOUNT	=	\$3,693,000.00	420
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	\$157,797.11	68
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	\$3,850,797.11	488
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$4,168,774.11	530

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

Three Hundred Seventeen Thousand Nine Hundred Seventy Seven and 00/100 ----- Dollars

Date	Contractor	By
_____	_____	_____
<b>SIGNATURE</b>	<b>DATE</b>	<b>APPROVAL LEVEL REQUIRED</b>
_____	_____	Department Director Approval Required <input type="checkbox"/> Executive Director Approval Required <input type="checkbox"/> General Manager Approval Required <input type="checkbox"/> Board Approval Required <input type="checkbox"/>
IRWD Engineer or Consulting Engineer	Date	
_____	_____	
Principal Engineer	Date	
_____	_____	
Executive Director of Engineering & Water Quality	Date	
_____	_____	
General Manager	Date	Purchase Order No. _____

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

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

CSG-02

**PASCAL & LUDWIG CONSTRUCTORS**

2049 EAST FRANCIS STREET  
ONTARIO, CALIFORNIA 91761



TELEPHONE:  
(909) 947-4831  
FAX: (909) 947-4722

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April 18, 2018

Irvine Ranch Water District  
3512 Michelson Drive  
Irvine, CA 92612

Attention: Harry Cho

Reference: Dyer Road Wellfield Surge Tanks

Subject: Dyer Road Shoring Costs

Dear Harry:

Please find attached a summary of the field cost expended at Well 15 to install the soldier pile shoring system. From this total of \$191,085 the original field cost for the pile installation would need to be deducted amounting to \$30,916 (\$26,095 plus applicable markups).

Please contact Eric Christensen for review and any clarifications that you may have.

Respectfully,

PASCAL & LUDWIG CONSTRUCTORS

A handwritten signature in cursive script that reads "Alan Ludwig".

Alan G. Ludwig

AGL:sz

Enclosures: as indicated

**DYER ROAD WELLFIELD SURGE TANKS**

**SHORING REVISIONS**

	<u>LABOR</u>	<u>EQUIPMENT</u>	<u>MATERIAL</u>	<u>SUBTOTAL</u>	<u>BOND</u>	<u>TOTAL</u>
2/19/18 - 2/23/18	11,071.90	23,872.38	284.14	35,228.42	352.28	35,581
2/26/18 - 3/2/18	11,740.74	31,451.24	187.68	43,379.66	433.80	43,813
3/5/18 - 3/9/18	10,749.72	20,212.85	457.94	31,420.51	314.21	31,735
3/12/18 - 3/19/18	16,511.46	5,884.07	34,665.25	57,060.78	570.61	57,631
3/19/18 - 3/20/18	4,542.98	1,545.97	16,014.75	22,103.70	221.04	<u>22,325</u>
						<u>191,085</u>

Item Summary - Analysis		Sheet No.		Estimator		KR		Date		
Project	Well 15	Item No. 27		Bid Quantity		Est. Quantity				
Description	Shoring & Sheeting									
DESCRIPTION	QUANTITY	EQUIP. RENTALS		ST&S	LAB.	MD	FIELD COST	SUB	PERM MATL	TOTAL
		CO.	OTHER							
Drill Piles			13,500							
Set Piles										
FM	1	1,000			2,875	5			56,538	
Carp	2				5,750	10				
Crane		2,850		120			26,095			82,633
Remove/Disposal of Spoils										
Oper					2,875	5				
Ship/Bobcat		500								
Trucking/Disposal			4,700				8,075			8,075
Install Walkers & Struts										
FM	1	800			2,875	5			16,172	
Carp	2				5,750	10				
Crane		2,850		200	2,875	5	15,350			31,522
Remove Temp Shoring										
FM	1	400			1,150	2				
Carp	2				2,300	4				
Crane		1,140		80	1,150	2				
Install Lagging							6,220			6,220
FM	1	600			1,725	3			10,616	
Carp	2				3,450	6				
Crane	1	1,710		120	1,725	3	9,330			19,946
		11,850	18,200	520	34,500	60	65,070	0	83,326	148,396



**PASCAL & LUDWIG CONSTRUCTORS**

2049 EAST FRANCIS STREET  
ONTARIO, CALIFORNIA 91761



TELEPHONE:  
(909) 947-4831  
FAX: (909) 947-4722

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April 12, 2018

Irvine Ranch Water District  
3512 Michelson Drive  
Irvine, CA 92612

Attention: Harry Cho

Reference: Dyer Road Wellfield Surge Tanks

Subject: Changed Site Conditions at Well 15

Dear Harry:

With referenced to the changed site conditions encountered at Well 15, Pascal & Ludwig Constructors proposes as the best solution to the free running bird's eye gravel (and other debris) encountered during the permanent shoring system installations, that steel plate be installed rather than 4 x 12 wood lagging. We have attached two quotes for this material, of which the quote from City Tool Works is the most economical. The cost of this materials is \$135,866.07 and with overhead and markup (15%) and bond fee (1%) totals \$157,808. The market for steel is at the moment unstable and this quote is only good for 24 hours and/or availability.

We will process a purchase order immediately upon the District's authorization. As discussed, there will be a credit for the lagging not utilized. Additionally, the actual installation of the shoring system as well as the demolition of the surge tank/foundations and excavation process will be impacted. Time and material costs will be tracked for this scope of work and an adjustment will need to be made for savings or cost overruns.

Your attention to this matter is greatly appreciated. Please call if there are any questions to the pricing and or the mythology of the steel plate shoring. Engineered stamped drawings for the use of steel plate are forthcoming.

Respectfully,

PASCAL & LUDWIG CONSTRUCTOR

Handwritten signature of Eric Christensen in blue ink.

Eric Christensen  
Project Manager

EC:sz

Enclosures: as indicated

# CITY TOOL WORKS INC.

1250 E.ONTARIO BLVD.  
 ONTARIO, CA 91761  
 Phone # (909) 923-8080  
 Fax # (909) 923-4330  
 CTWI1893@AOL.COM  
 www.CityToolWorksInc.com

# Quote

Date 4/10/2018  
 Estimate # 1013UCP  
 Project Paul

## Customer Name & Address

Pascal & Ludwig  
 2049 E. Francis St.  
 Ontario, CA 91761

Qty	Description	Price Each	Total
2	1.25" Thick Plate Cut to Size 10' x 7.5'	3,862.85	7,725.70T
2	1.25" Thick Plate Cut to Size 10' x 7.5' Knife Cut	4,038.85	8,077.70T
2	1.25" Thick Plate Cut to Size 10' x 7.563'	3,862.85	7,725.70T
2	1.25" Thick Plate Cut to Size 10' x 7.563' Knife Cut	4,038.85	8,077.70T
1	1" Thick Plate Cut to Size 10' x 5.938'	2,317.25	2,317.25T
1	1" Thick Plate Cut to Size 10' x 5.938' Knife Cut	2,493.25	2,493.25T
4	1.25" Thick Plate Cut to Size 10' x 8'	3,862.85	15,451.40T
4	1.25" Thick Plate Cut to Size 10' x 8' Knife Cut	4,038.85	16,155.40T
1	1.25" Thick Plate Cut to Size 10' x 7.7'	3,862.85	3,862.85T
1	1.25" Thick Plate Cut to Size 10' x 7.7' Knife Cut	4,038.85	4,038.85T
1	1" Thick Plate Cut to Size 10' x 5.333'	2,317.25	2,317.25T
1	1" Thick Plate Cut to Size 10' x 5.333' Knife Cut	2,493.25	2,493.25T
1	1.25" Thick Plate Cut to Size 10' x 7.5625'	3,862.85	3,862.85T
1	1.25" Thick Plate Cut to Size 10' x 7.5625' Knife Cut	4,038.85	4,038.85T
1	1" Thick Plate Cut to Size 10' x 6.791'	3,090.10	3,090.10T

Sales Tax (7.75%)

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**Total**

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 CTWI1893@AOL.COM  
 www.CityToolWorksInc.com

# Quote

Date 4/10/2018  
 Estimate # 1013UCP  
 Project Paul

## Customer Name & Address

Pascal & Ludwig  
 2049 E. Francis St.  
 Ontario, CA 91761

Qty	Description	Price Each	Total
1	1" Thick Plate Cut to Size 10' x 6.791' Knife Cut	3,266.10	3,266.10T
1	1" Thick Plate Cut to Size 10' x 4.646'	1,932.00	1,932.00T
1	1" Thick Plate Cut to Size 10' x 4.646' Knife Cut	2,108.00	2,108.00T
1	1.25" Thick Plate Cut to Size 10' x 7.583'	3,862.85	3,862.85T
1	1.25" Thick Plate Cut to Size 10' x 7.583' Knife Cut	4,038.85	4,038.85T
1	1" Thick Plate Cut to size 10' x 6.3125'	3,090.10	3,090.10T
1	1" Thick Plate Cut to size 10' x 6.3125' Knife Cut	3,266.10	3,266.10T
1	1.25" Thick Plate Cut to Size 10' x 7.75'	3,862.85	3,862.85T
1	1.25" Thick Plate Cut to Size 10' x 7.75' Knife Cut	4,038.85	4,038.85T
1	Set Up Die Charges, Cutting and Handling	4,900.00	4,900.00T
Tolerances On Cuts Are +/- .125 Lead Time 2-3 Weeks 24hr Hold On Prices, After Subject to Change Per Supplier			
Sales Tax (7.75%)			\$9,772.27
<b>Thank you for the Opportunity to Bid your Job</b>		<b>Total</b>	<b>\$135,866.07</b>

May 29, 2018

Prepared by: F. Sanchez

Submitted by: P. Weghorst *PW*

Approved by: Paul A. Cook *Paul A. Cook*

CONSENT CALENDAR

WATER SHORTAGE CONTINGENCY PLAN

SUMMARY:

IRWD's Water Shortage Contingency Plan (WSCP) was first written and adopted in 1987. Since then, the WSCP has been revised several times. The last significant revision to the WSCP occurred in 2009 and the document was further revised in 2014. Staff has amended the WSCP to address changes in IRWD's projected water supplies and changes in legislated requirements. The amended WSCP was presented to the Board at a workshop on March 26, 2018. Staff recommends that the Board approve the resolution that is provided as Exhibit "A" to rescind the WSCP that was adopted in October 2014 and to adopt the amended WSCP, which is provided as Exhibit "B".

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

The proposed actions qualify under Class 7, and Class 8 Categorical Exemptions (Sections 15307 and 15308 of the State California Environmental Quality Act (CEQA) guidelines). In addition, to the extent this plan serves as the basis for the urban water shortage contingency analysis required under Water Code Section 10631 and is incorporated into the IRWD Urban Water Management Plan, its preparation, adoption and implementation are statutorily exempt from CEQA, as set forth in Water Code Section 10652.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on February 20, 2018.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2018-

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT RESCINDING RESOLUTION 2014-46  
AND ADOPTING AN AMENDED WATER SHORTAGE CONTINGENCY PLAN

LIST OF EXHIBITS:

Exhibit "A" – Resolution to Adopt the Amended Water Shortage Contingency Plan  
Exhibit "B" – Water Shortage Contingency Plan, May 2018

EXHIBIT "A"

RESOLUTION NO. 2018- \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT  
RESCINDING RESOLUTION 2014-46 AND  
ADOPTING AN AMENDED WATER SHORTAGE  
CONTINGENCY PLAN

Government Code § 10632 requires each urban water supplier's urban water management plan ("UWMP") to provide a water shortage contingency analysis.

Irvine Ranch Water District ("IRWD") initially adopted its Water Shortage Contingency Plan (the "**Plan**") in 1987, through the adoption of Resolution No. 1987-52 amending IRWD's Rules and Regulations, Section 15, then entitled "Prohibition of Water Wastage."

The Plan is an appendix to IRWD's UWMP, and along with certain information in the UWMP, provides the water shortage contingency analysis required by Government Code § 10632.

The Plan also serves as the resource and supporting document for the implementation of Rules and Regulations, Section 15, now entitled "Water Conservation and Water Supply Shortage Program and Regulations."

The Plan has been updated periodically, including most recently a version adopted on October 13, 2014 by Resolution No. 2014-46.

Woodard & Curran in consultation with staff prepared the Water Shortage Contingency Plan 2018 Update ("**2018 Plan Update**") to amend and restate the Plan. The 2018 Plan Update was presented at IRWD's March 26, 2018 meeting of the Board of Directors. The 2018 Plan Update addresses changes to IRWD's projected water supplies based on a 2016 Water Supply Reliability Evaluation, and addresses recently-enacted long-term water efficiency legislation (SB 606 and AB 1668) that substantially modifies requirements for water shortage contingency planning. The 2018 Plan Update defines a list of voluntary measures, non-rate response measures, and potential rate response measures for each level of shortage.

The Board of Directors desires to update and amend the Plan in accordance with the 2018 Plan Update.

THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT  
THEREFORE RESOLVES AS FOLLOWS:

1. That Resolution No. 2014-46 dated October 13, 2014 is hereby rescinded.
2. That the Irvine Ranch Water District Water Shortage Contingency Plan (2018 Update) presented to the Board of Directors on March 26, 2018 is hereby adopted.

3. That the Irvine Ranch Water District Water Shortage Contingency Plan (2018 Update) will serve as a supporting document to Section 15 of the Rules and Regulations and to the UWMP.

4. That pursuant to Water Code § 10632(a)(8), in declaring any levels of shortage, the Board of Directors may adopt a water shortage contingency resolution in a form substantially similar to the draft resolution contained in the appendix to the Water Shortage Contingency Plan (2018 Update).

This Resolution is adopted and is being signed on May 29, 2018.

By: \_\_\_\_\_  
President, IRVINE RANCH WATER DISTRICT and its Board of Directors

By: \_\_\_\_\_  
Secretary, IRVINE RANCH WATER DISTRICT and its Board of Directors

APPROVED AS TO FORM:  
LEWIS BRISBOIS BISGAARD & SMITH, LLP

By: \_\_\_\_\_  
District Counsel

Exhibit "B"



**Water  
Shortage  
Contingency  
Plan Update**

10509 Vista Sorrento Pkwy | Suite 205  
San Diego, California 92121  
[www.woodardcurran.com](http://www.woodardcurran.com)

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COMMITMENT & INTEGRITY DRIVE RESULTS

**Irvine Ranch Water  
District**  
May 2018

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## 1 Introduction

The Irvine Ranch Water District (IRWD) has developed this Water Shortage Contingency Plan (WSCP), in accordance with California regulations, to provide procedures for responding to various levels of supply shortages. Use of local supplies, storage and other supply augmentation measures can mitigate shortages, and will be in use to the maximum extent possible during declared shortage levels. The remaining shortage levels, after use of local emergency supplies, can be addressed by employing a range of demand reduction measures that will vary in severity depending on the level and duration of the shortage condition. While these measures will be applied incrementally, IRWD's WSCP builds in a level of flexibility to adopt additional measures to ensure the appropriate level of demand reduction.

This WSCP has been prepared to incorporate the lessons learned during the recent California drought, as well as new elements from the state's long-term framework document, *Making Water Conservation a California Way of Life, Implementing Executive Order B-37-16*, which was released in April 2017. It is important to emphasize that every drought or other water supply emergency involves a unique set of challenges. The plan should be thought of as a general framework that will need to be adjusted and refined based on actual conditions.

### 1.1 WSCP Requirements

The California Code Section 10632 requires IRWD to develop an urban water shortage contingency analysis which includes each of the following elements that are within the authority of the urban water supplier:

- a) Anticipated stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that would trigger each stage;
- b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply;
- c) Anticipated actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster;
- d) Additional anticipated mandatory prohibitions against specific water use practices during water shortages;
- e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply;
- f) Penalties or charges for excessive use, where applicable;
- g) An analysis of the impacts of each of the actions and conditions describe in bullets a) to f), inclusive, on the revenues and expenditures of the urban water supplies, and proposed measures to overcome those impacts, such as the development of serves and rate adjustments;
- h) A draft water shortage contingency resolution or ordinance; and
- i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

### 1.2 Recent Implementation of WSCP

On January 17, 2014, Governor Brown proclaimed a Drought State of Emergency, which called on Californians to voluntarily reduce water consumption by 20%. In September 2014, IRWD's Board responded to the drought and the Governor's Emergency Proclamation by declaring a Level 1 Shortage Warning. In response to worsening statewide

drought conditions, on April 1, 2015, the Governor issued an Executive Order that mandated a 25% statewide reduction in urban potable water use compared to 2013 water use levels. For IRWD, the State Water Resources Control Board (State Board) mandated a water use reduction target of 16% compared to 2013 levels. In July 2015, IRWD's Board of Directors (Board) declared a Level 2 Shortage Condition aimed at reducing demands by 10-25% in response to the State Board's mandate. Response measures and other lessons learned from this recent enactment of the WSCP have been incorporated into this WSCP update.

### 1.3 Legal Authority

Under California law, including California Water Code Chapters 3.3 and 3.5 of Division 1, Parts 2.55 and 2.6 of Division 6, Division 13, and Article X, Section 2 of the California Constitution, the Board is authorized to implement the water shortage actions outlined in this WSCP. In all water shortage cases, shortage measures to be implemented, including adjustments to the water budgets, tiers and rates, will be at the discretion of the Board and will be based on an assessment of the supply shortage, customer response, and need for demand reductions.

### 1.4 Shortage Response Levels

The WSCP provides guidelines for responses to varying levels of supply shortages in six standard shortage levels. The WSCP includes actions that can be implemented to reduce demands down to specific levels in accordance with reduced supply availability. The levels of action identified in the WSCP are shown in Table 1-1.

**Table 1-1: Shortage Levels in Water Shortage Contingency Plan**

IRWD Shortage Level	Percent Supply Reduction	Water Supply Condition
Level 1	0% - 10%	Shortage Warning
Level 2	11% to 20%	Significant Shortage
Level 3	21% to 30%	Severe Shortage
Level 4	31% to 40%	Severe Shortage
Level 5	41% to 50%	Crisis Shortage
Level 6	50% +	Crisis Shortage

Levels or stages of the WSCP are declared at the discretion of IRWD's Board of Directors depending on the level and duration of the water shortage. The Board evaluates water supply conditions and, if it determines that a shortage exists, declares the corresponding level of the WSCP. As part of the declaration, it is at the discretion of the Board to implement specific water shortage restrictions, prohibitions, and demand management measures.

## 2 Characterization of Shortage Conditions

In 2008, IRWD's Water Reliability Study forecasted potential water supply gaps due to climate change and environmental restrictions on the State Water Project (SWP). Since that time, IRWD has offset potential water supply gaps by continuing investments in conservation, a diverse mix of drought resilient supplies, and by securing groundwater banking resources. IRWD's 2016 Water Supply Reliability Evaluation is a recent, comprehensive, reliability analysis that provides an updated understanding of how current and future vulnerabilities - such as imported water supply shortages, climate change impacts, and facility outages - impact water supply. The effort was completed in coordination with the 2016 Orange County Water Reliability Study initiated by the Municipal Water District of Orange County (MWDOC).

## 2.1 Supply Reliability Scenario Planning

IRWD's 2016 Water Reliability Evaluation considered potential scenarios affecting the reliability of IRWD's water supplies. A brief summary of these scenarios are described below:

- a) **Planned Conditions:** Planned conditions are based on existing conditions including water supply projects currently planned by IRWD and imported water supplies currently planned by the Metropolitan Water District of Southern California (MWD), the regional provider of imported water to Southern California. This scenario assumes no new water supply investments.
- b) **Major California Drought:** Increased duration and frequency of major California droughts would impact the availability of Santa Ana River recharge to the Orange County Groundwater Basin and the availability of imported water to MWD from the SWP.
- c) **Colorado River Shortage:** The Colorado River is consistently over-allocated and MWD's imported supply from the Colorado River Aqueduct (CRA) has a lower priority within California's allocation. Ongoing discussions between basin states are addressing to what extent, if any, California would participate in a cutback and under what conditions the cutback would be implemented.
- d) **Climate Change:** Reduction in the total snowpack due to warmer storms could mean reduced imports of Colorado River and SWP water. Salt water intrusion of the San Francisco Bay Delta (Bay Delta) due to sea level rise could pose as the greatest long-term risk to the SWP water supplies. Climate change was also estimated to affect the availability of recharge to the Orange County Groundwater Basin.
- e) **Delta Levee Failure:** A seismic event in the Bay Delta causing a levee failure can flood the Bay Delta islands with salt water and interrupt SWP exports due to impaired water quality. The level of impact will depend the extent of damage (i.e. number of levee failures, specific Bay Delta islands, and season).
- f) **Bay Delta Environmental Restrictions:** Restrictions from the Bay Delta to protect local wildlife have reduced SWP allocations. There is potential for future restrictions to protect the environment. The "California WaterFix" currently being planned will help increase the reliability of SWP deliveries by bypassing the Bay Delta, and thus reducing environmental impacts on the Bay Delta.
- g) **Facility Outages and Seismic Events:** Local plant outages or seismic events that damage treatment or conveyance facilities may create disruptions to imported and local water supply deliveries. Local seismic events could potentially disrupt services from either the Baker Water Treatment Plant or local groundwater well fields. Potential effects on MWD deliveries could result in outages as long as six months, depending on severity.

To evaluate the overall reliability of IRWD's potable water supply system, these scenarios were run using IRWD's Integrated Resources Planning Distribution System Model (IRPDSM) model, a comprehensive distribution system model which simulates deliveries and storages of imported water through IRWD's distribution system.

Table 2-1 indicates the shortage levels in the WSCP as they correlate with the reliability scenarios described above. The scenarios in Table 2-1 are each single scenarios and not combinations of scenarios unless specifically stated. For example, scenarios that could produce a Level 1 shortage of up to 10 percent are either planned conditions, or a Colorado River shortage or climate change or a Delta levee failure. These identified shortage levels are prior to utilizing emergency supplies from IRWD's Water Banking Program. With use of the Water Banking Program, no supply shortage gaps were identified. A water supply held in reserve by IRWD would be to overdraft the local Orange County Groundwater Basin. Overdrafting the aquifer by pumping above the Basin Production Percentage (BPP) set by the Orange County Water District (OCWD) would be a feasible and available source of water of last resort should IRWD's Water Banking Program not have supplies available in the amounts listed in Table 2-1. As discussed in more detail below, the Water Banking Program would be used in combination with other response actions in this WSCP.

**Table 2-1: IRWD Reliability Scenarios, Shortage Levels and Projected Use of Water Banking Supplies**

Reliability Scenario	IRWD WSCP Shortage Level	Max Annual Anticipated Water Bank Usage (AFY)
<ul style="list-style-type: none"> <li>Facility Outages and Seismic Events</li> </ul>	No Shortage Identified	Access may be limited
<ul style="list-style-type: none"> <li>Planned Conditions</li> <li>Colorado River Shortage</li> <li>Climate Change</li> <li>Delta Levee Failure</li> </ul>	<b>Level One</b> Shortage Warning (up to 10%)	300 to 3,000
<ul style="list-style-type: none"> <li>Major California Drought</li> </ul>	<b>Level Two</b> Significant Shortage (up to 20%)	7,300 to 11,500
<ul style="list-style-type: none"> <li>Major California Drought and Bay Delta Environmental Restrictions</li> </ul>	<b>Level Three</b> Significant Shortage (up to 30%)	14,800 to 18,100
<ul style="list-style-type: none"> <li>Beyond Currently Forecasted Events</li> </ul>	<b>Level Four</b> Severe Shortage (up to 40%)	18,100+ AFY
	<b>Level Five</b> Crisis Shortage (up to 50%)	
	<b>Level Six</b> Crisis Shortage (exceeding 50%)	

## 2.2 Catastrophic Interruption

Catastrophic interruptions could be the result of regional power outages, earthquakes, floods, water supply interruptions, structural damage from an explosive device, and threat of or possible contamination to the water system. IRWD's response to a catastrophic interruption of water supply would depend on the cause, severity and anticipated duration of the emergency. A potential shortage resulting in a reduction of available supplies can be addressed through a combination of alternative supplies and storage, combined with low level implementation of the WSCP. Since IRWD's major potable water sources include both imported water (including IRWD's groundwater banking) and local groundwater, it is unlikely that outage of both sources would occur simultaneously.

A 2008 USGS Study entitled "The Uniform California Earthquake Rupture Forecast" indicated that there is a 97% probability of an earthquake of magnitude 6.7 or greater in Southern California and a 37% probability of an earthquake greater than 7.5 in magnitude within the next 30 years. Local seismic events have the potential to temporarily disrupt service from either the regional facilities or local well fields. A seismic event could also cause damage to the well field that would permanently limit the production capability of one or more wells. Potential effects of earthquakes on MWD deliveries could result in outages as long as six months, as shown in Table 2-2.

**Table 2-2: Estimated Outage Durations from Seismic Events**

Regional Facilities	Moderate Earthquake (M 6.7)	Extreme Earthquake (>M 7.0)
MWD – Colorado River Aqueduct	1 month	6 months
DWR – State Water Project	Up to 6 months	6+ months
MWD – Conveyance and Distribution	1 week to 2 months	1 week to 3 months
MWD – Treatment Plants	Up to 1 month	Up to 6 months

Local plant outages or seismic events that damage treatment or conveyance facilities may create short term disruptions to imported and local water supply deliveries. Unlike drought conditions, which manifest over a number of years, the response measures available to respond to a catastrophic interruption are limited. During such an event, the IRWD Board, at its discretion, may choose to implement mandatory measures at earlier levels of shortages.

### 2.3 Multiple Dry Year Analysis

IRWD's 2015 Urban Water Management Plan (UWMP) includes an assessment of IRWD's reliability during normal, dry and multiple dry water years. Table 2-3 provides total projected supply capacities expected to be available to IRWD through 2035. These future available water supply projections are based on historical groundwater production, planned future supply projects, as well as information from MWD and MWDOC's 2015 UWMPs. Based on its diversified water supply portfolio, the UWMP finds that IRWD's supplies have remained essentially constant between normal, single-dry and multiple dry years. Based on this assessment, IRWD finds that it will be reliable under single-dry and multiple dry years.

**Table 2-3: Multiple Dry Years Supply and Demand Comparison**

		2020	2025	2030	2035
First Year	Supply totals	142,197	154,549	154,549	154,549
	Demand totals	103,195	113,378	117,091	119,066
	Difference	39,002	41,171	37,458	35,483
Second Year	Supply totals	142,197	154,549	154,549	154,549
	Demand totals	103,195	113,378	113,378	113,378
	Difference	39,002	41,171	37,458	35,483
Third Year	Supply totals	142,197	154,549	154,549	154,549
	Demand totals	103,195	113,378	117,091	119,066
	Difference	39,002	41,171	37,458	35,483

From IRWD 2015 Urban Water Management Plan, Table 7.4.

## 3 Implementation

### 3.1 Supply and Demand Assessment

The IRWD Board, in accordance with the provisions of the California Water Code, will determine and declare the shortage level based on an assessment of the available supplies and demands. The evaluation process is conducted to determine if a shortage declaration is needed, and at what level. The regional shortage level is calculated by projecting total short-term water demands within IRWD's service area and comparing these demands to the available water supplies. The supply analysis includes hydrologic and regulatory conditions that impact supplies such as

imported water, groundwater, and surface water. Drought resilient, hydrologically independent supplies, such as recycled water, are considered fully reliable and can be excluded from the required estimated shortage reduction.

The supply and demand assessment will be initiated in response to triggering events, such as a potential water shortage plan allocation of imported water supplies from MWD, or more frequently as required by the California Water Code. IRWD recognizes that it is best to ask customers to respond to a water shortage as early as possible, at a minimal level, to encourage voluntary conservation, gain public support and participation and reduce the likelihood of more severe shortage levels later.

### 3.1.1 Projected Water Demand

To project water demands for a reliability analysis, IRWD uses land use data obtained through the multiple jurisdictions (cities and County) within IRWD's service area, in conjunction with updated water use factors, to estimate water requirements using a demand forecasting tool. The water use factors are based on average water use and incorporate the effect of IRWD's budget-based rate conservation pricing and its other water conservation programs. For short-term water demand forecasts, applicable to temporary management measures under a potential shortage designation, IRWD will use a recent representative period and assume an equal level of unmitigated use into the upcoming year, and up to 2 years.

It should be noted that recycled water currently meets a large portion of the landscape irrigation demands within IRWD's service area. Furthermore, IRWD has implemented successful water use efficiency and outreach programs since the early 1990's. These efforts, combined with the long-term use of budget-based rates, have resulted in somewhat hardened levels of demand and less discretionary water use.

### 3.1.2 Imported Water Shortage

An imported water supply shortage represents one of the main causes of a potential supply shortage for IRWD. MWD is responsible for importing water into the region through its contract with the State of California for State Water Project supplies and its operation of the Colorado River Aqueduct. Both sources are blended at MWD's Diemer and Weymouth Water Treatment Plants and then distributed to member agencies.

MWD uses its Water Surplus and Drought Management (WSDM) Plan to guide its planning, operations, and water management during both shortage and surplus conditions. In times of shortage, MWD's Board may activate its Water Supply Allocation Plan (WSAP) based on its estimate and forecast of supplies, demands, and reserve levels. If forecasted supplies and demands are determined to put pressure on MWD's storage reserves, its Board may decide to limit the availability of water by implementing its WSAP. The MWD WSAP has 10 levels of water supply allocations, each corresponding to an additional 5 percent reduction of supply.

Under MWD's Regional Shortage Levels shown in **Table 3-1**, IRWD's retail level reliability is high due to IRWD's lower dependency on imported MWD supplies and additional credits and adjustments (primarily from the retail impact adjustment and demand hardening credit). As a comparison, IRWD's retail level reliability (excluding recycled water) remains substantially reliable at a Regional Shortage Level 10, and MWD WSAP allocations can be met with water supplies from IRWD's Water Banking Program or from pumping above OCWD's BPP as a supply of last resort. If MWD implements its WSAP, then supplies stored in IRWD's Water Banking Program qualify as an "extraordinary supply" and IRWD is allowed to take delivery of that supply through MWD's system, which increases IRWD's WSAP allocation from MWD. As previously illustrated in **Table 2-1**, IRWD would not experience shortage gaps in any IRWD stages with the use of its water banking supplies. The table below assumes normal levels of local hydrology. Refer to Section 2 for a discussion of how combinations of local hydrologic scenarios and imported supply reliability can impact IRWD's reliability.

**Table 3-1: MWD WSAP and IRWD Shortage Levels**

MWD Regional Shortage Level	Regional Shortage Percentage	IRWD Reliability	IRWD Shortage Level
Level 1	5%	100%	Level 1
Level 2	10%	99%	Level 1
Level 3	15%	98%	Level 1
Level 4	20%	97%	Level 1
Level 5	25%	96%	Level 1
Level 6	30%	95%	Level 1
Level 7	35%	94%	Level 1
Level 8	40%	93%	Level 1
Level 9	45%	92%	Level 1
Level 10	50%	90%	Level 1

### 3.2 Monitoring and Reporting

IRWD is fully metered, allowing for detailed accounting of water use in the service area. Monthly meter reads provide IRWD with a significant quantity of data for tracking and reporting actual reductions in water use in response to a water shortage. IRWD's budget-based rates are designed to achieve the necessary reductions in water use. Each month during a shortage, IRWD determines how much water each customer has used in relation to their budget. This comparison is used to track attainment of water use reduction goals for the agency and is included in the customer's bill to encourage compliance with the water budgets.

### 3.3 Re-Evaluation and Improvement Process

The WSCP will be re-evaluated at least every five years in coordination with the UWMP update and more frequently at the discretion of the Board. An evaluation on the effectiveness of the water shortage response actions on demand levels will be conducted following future implementation of the WSCP. The evaluation will compare the expected percent demand reduction against actual reductions, and measures in the WSCP will be revised appropriately. IRWD will also assess the effectiveness of the communication plan so that it may be modified as appropriate in the future.

## 4 Emergency Supplies

IRWD's Water Banking Program provides an important water management tool to improve imported water reliability and protect IRWD customers during potential shortages. This source of supply is in addition to the supplies that IRWD draws upon during non-shortage times and is only used as "extraordinary supply" during shortages triggered by MWD allocations or other conditions.

Water banking is the practice of recharging water to underground storage aquifers during wet periods and recovering this water for later use. IRWD's stated goal in its Policy Position for Water Banking, Transfers and Wheeling (2017) is to provide a cost effective and reliable supplemental source of water that could be called upon during drought conditions or supply interruptions. In the event of a major supply interruption, this water would be available to fulfill IRWD's estimated needs for imported water over extended periods of time. IRWD's Water Banking Program provides IRWD the ability to store and recover this supplemental water to meet long-term supply reliability requirements. IRWD considers dependence on overdrafting the Orange County Groundwater Basin by pumping above OCWD's BPP as a supply of last resort. This is a feasible and available supply that exists as a backup should IRWD's Water Banking Program not have adequate supplies to meet the needs of a shortage condition.

## 5 Shortage Response Actions

In addition to basic measures, which are always in effect, there are different types of response measures that can be implemented by IRWD in the event of a supply shortage. These response measures represent a “toolbox” with a range of actions that can be used in combination, depending on the severity and duration of the shortage.

- a) Voluntary reduction measures through expansion and enhancement of IRWD’s conservation and outreach programs
- b) Use of the IRWD’s budget-based rate structure
- c) End use prohibitions and use of mandatory enforcement measures
- d) Operational drought control measures.

### 5.1 Basic Measures Always in Effect

The following basic measures are considered good water management practices and are always in effect in IRWD’s service area regardless of whether a shortage level is declared. These measures are contained in IRWD’s Rules and Regulations (Section 15).

- a) **Gutter Flooding** - No person shall cause or permit any water furnished to any property within IRWD to run or to escape from any hose, pipe, valve, faucet, sprinkler, or irrigation device into any gutter or otherwise to escape from the property if such running or escaping can reasonably be prevented.
- b) **Leaks** - No person shall permit leaks of water that he has the authority to eliminate.
- c) **Washing Hard Surface Areas** – Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys is prohibited except when necessary to alleviate safety or sanitary hazards.
- d) **Washing of Motor Vehicle** – No person shall wash a motor vehicle with a hose not fitted with a shut-off nozzle or similar functioning device.
- e) **Use of Potable Water in a Fountain** – No person shall use potable water in a fountain or other decorative water feature, except where the water is recirculated.
- f) **Application of Potable Water to Outdoor Landscapes** – No person shall apply potable water to outdoor landscapes during and within 48 hours after measurable rain.
- g) **Irrigation of Street Medians** – No person shall use potable water to irrigate ornamental turf on public street medians.
- h) **Newly Constructed Homes and Buildings** – No person shall use potable water to irrigate landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.
- i) **Waste** - No person shall cause or permit water under his or her control to be wasted.

In addition, IRWD has a budget-based rate structure based on the cost of service, which also limits the amount of water allocated to each customer to an amount that is reasonable for the customer’s needs and property characteristics, reducing wasteful use of water. When a declared shortage condition is not in effect, basic water budgets established by IRWD are limited to the amount that is reasonable for the customer’s needs and property characteristics and exclude wasteful use.



## 5.2 Voluntary Reduction Measures

IRWD has always taken a proactive approach to water conservation and is looked to as a leader by other water agencies throughout the state and country. IRWD implements a wide range of conservation programs designed to target all customer sectors. They are continually evaluated to maximize water savings and modified to integrate the latest water efficient technologies and practices. Specific programs that IRWD currently relies upon to promote water conservation are listed below.

- Free on-site assistance and customized reports for customers in all sectors to help identify opportunities for water savings, eliminate water waste, and to recommend appropriate programs and strategies to reduce water demands.
- Water Smart Reports that provide enhanced customer engagement through multiple communication methods.
- Turf replacement installation and rebate programs.
- Rebates for weather-based irrigation controllers, drip irrigation and rain barrels.
- Direct installation programs and rebates for high efficiency plumbing devices.
- Rebates for high efficiency clothes washers.
- Rebates for commercial and industrial efficiency devices, such as cooling tower conductivity controllers
- Performance based incentive program for commercial, industrial and institutional (CII) customers to upgrade equipment and improve their water processes to provide greater water use efficiency. High use CII accounts are targeted for participation in the program.
- Fix A Leak program.
- Robust system water loss prevention and meter testing programs.

During the recent implementation of the WSCP in 2014 and 2015, IRWD took a proactive approach in expanding and enhancing these conservation and outreach efforts as part of a Drought Action Plan. In the event of a future water shortage, IRWD will develop a similar implementation plan to increase levels of voluntary conservation using an adaptive approach, while considering the IRWD's financial stability and the ease and timing of implementation. Under this action, the following measures will be considered:

- a) **Expand Conservation Programs** – Contract with a qualified firm or recruiting temporary staff to significantly increase resources to expand existing water use efficiency programs, including the residential survey program, large landscape survey program, and outdoor education and workshops.
- b) **Increased Rebate Funding** – Enhance incentives and rebate programs, such as turf replacement installation, high efficiency clothes washers, and commercial and industrial devices.
- c) **Targeted Outreach** – IRWD will increase ongoing outreach efforts to more aggressively target wasteful tier customers. Additional outreach includes employee training at high use businesses, working with the public sector on raising public awareness, and demonstrating reduced usage at public sites.
- d) **Direct Install Programs** – Implement direct install programs to retrofit inefficient devices and landscape equipment.

## 5.3 Use of Budget-Based Rates

IRWD's budget-based rate structure was instituted in 1991 to promote the efficient use of water and is designed to provide customers with a significant economic incentive to use the non-wasteful amount of water required to serve indoor, landscape, commercial/industrial and institutional demands. This is accomplished by setting a customized monthly water budget for each customer account that is based upon a variety of factors such as: irrigated area, daily weather characteristics, number of residents, industrial or commercial business type, and other more unique characteristics such as the presence of a pool, livestock or specialized industrial equipment.

Water is sold to customers under a four-tier structure based upon their monthly water budget, which varies for landscape use relative to weather patterns. Customers using water within budget purchase water in the Low Volume and Base Rate tiers resulting in lower water bills. Customers using more than their budget purchase water in the Inefficient and Wasteful Tiers, resulting in higher water bills and a strong pricing signal to curb excessive use. The higher rates for over budget use incorporate the additional cost to IRWD of acquiring water supplies to meet over-budget demand, as well as the additional cost of demand management measures in a shortage. IRWD's 2017-18 domestic residential commodity rates for each of the four tiers are shown in Table 5-1.

**Table 5-1: Commodity Rates for Residential Customers**

Customer Tier	Percent of Budget	Rate Per CCF
Low Volume	0 – 40%	\$1.36
Base Rate	41 – 100%	\$1.70
Inefficient	101 – 140%	\$4.09
Wasteful	141% +	\$12.06

### 5.3.1 Adjustments to Budget-Based Rates

Application of any or a combination of water budget adjustment strategies will place customers into the higher usage tiers, which acts as a reporting and enforcement mechanism by creating a strong financial incentive for customers to reduce demands by paying their proportional cost of receiving water service. Three types of water budget adjustments can be established and refined based on customer response in such a way that specified uses are discouraged. Adjustments to the water budgets, tiers and rates will be at the discretion of the Board and subject to public notice and rate hearing process under Proposition 218.

- a) **Adjusting the Tier Thresholds** – This strategy does not adjust the actual water budget formula itself, but rather adjusts the percentage thresholds for the over-budget tiers. The current tiers are thresholds for the various account types. Adjusting the tier thresholds downward would have the effect of shifting more use into the higher tiers. Customers in these tiers would be subject to increased rates depending on the extent of their use (percentage of use over budget). Reducing the tier thresholds incentivizes customers to consume less water.
- b) **Customer Water Budget Adjustments** – An adjustment to the water budget entails refining the water budget formula. This can be done either as a simple percentage adjustment or by adjusting a specific portion of the formula. For example, residential water budgets are made up of an indoor plus an outdoor budget component. It is possible to adjust the outdoor component downward to allow for less outdoor irrigation or eliminate it altogether depending on the need for demand reductions. Water budgets could also be set to levels that would eliminate all outdoor water use including irrigation, car washing, pool filling, agricultural use of non-recycled water etc. Under this scenario, the indoor component could be left the same or could be altered as necessary.
- c) **Rate Increases for Over-Budget Use** – This approach entails adopting higher rates for over budget use and would be linked to purchases of imported water at MWD's penalty rates, among other things. The establishment of utility rates is subject to the requirements of Proposition 218, which requires that established rates do not exceed the proportional cost of service to any specific class of customers.

### 5.3.2 Adjustments to Budget-Based Rates

A detailed analysis of the customer usage by tier, using the most recently available data, is one of the first steps that should be undertaken in developing demand management strategies in response to shortage conditions. IRWD has developed the *Water Shortage Contingency Plan Multiplier Tool* to estimate demands and potential water savings from budget-based rates during shortage conditions. The tool is based on the use of a multiplier to be applied to the

percentage thresholds for customer tiers. An example of a hypothetical 75% multiplier is shown in Table 5-2. Note that the tool does safeguard water supplies for uses that meet public health needs by maintaining the current definition of the Low Volume tier.

**Table 5-2: Example of Multiplier Applied to Tier Definition**

Customer Tier	Current Tier Definition	Multiplier (75%)
Low Volume	0 – 40%	0 – 40%
Base Rate	41 – 100%	41 - 75%
Inefficient	101 – 140%	76 – 106%
Wasteful	141% +	107% +

The use of the *Water Shortage Contingency Plan Multiplier Tool* is based on the following four steps:

1. **Data on Usage by Customer Category** – The tool uses the most recent available monthly billing data by tier for Single Family Residential, Multi-Family Residential, Landscape, Commercial, Industrial, and Public Authority customers. All data is for non-recycled water (the tool does include an analysis of recycled water use). For longer term planning, the tool incorporates demand forecasting and estimates future demand hardening from conservation.
2. **Identify Savings Potential** – The savings potential in each customer category is defined to discourage specific uses of water. During the early shortage levels, the tool targets the elimination of discretionary (primarily outdoor) uses of water, as defined by water use in the Inefficient and Wasteful tiers. At deeper levels of shortage, the tool targets additional savings, up to the elimination of all outdoor water use beyond what is required to maintain drought-friendly landscaping. During an emergency, the tool targets up to the elimination of all outdoor water use, and up to minimum indoor amount required for public health and safety needs.
3. **Estimate Response Rate** – The estimated water use reductions achieved from implementing changes to the budget-based rates is calculated by assessing recent research on customer ability and willingness to comply with rate-based measures, as well as IRWD’s experience with use of budget-based rates and the previous implementation of the WSCP.
4. **Determine Water Use Reductions** – The final step involves balancing water use reductions across customer categories to achieve the desired level of demand management. The multipliers as applied to each customer class will vary due to several factors, including the targeting of discretionary uses where appropriate and avoiding impacts to the economy. Table 5-3 provides a hypothetical example of multipliers applied to each customer category and the resulting estimated savings.

**Table 5-3: Example of Savings Estimate**

Customer Sector	Multiplier	Estimated Savings
Single Family	0.75	15%
Multi Family	0.80	12%
Landscape	0.60	30%
Commercial	0.9	5%
Industrial	0.9	5%
Public Authority	0.9	5%
<b>Total Non-Recycled Savings:</b>		<b>12%</b>

## 5.4 End Use Prohibitions

Through adopted resolutions, IRWD has provisions for mandatory prohibitions of certain end uses, if necessary, based on the water shortage level declared. Examples of consumption reduction measures used by IRWD are summarized as follows:

- a) **Serving of drinking water** – Only to be served upon request in eating or drinking establishments.
- b) **Ban on car-washing and pool-filling** – Demand reductions on car-washing and pool filling that cannot be achieved through voluntary measures and financial incentives related to adjustments in the budget-based rate structure would be attained through a ban on these actions.
- c) **Municipal Uses** – Elimination of specific municipal uses such as unrequired hydrant flushing.
- d) **Construction Activities** – Recycled water shall be required for construction activities, including earthwork, dust control and clean-up. IRWD may, at its discretion, waive this requirement if it can be demonstrated to IRWD's satisfaction that compliance with the requirement imposes undue hardship.
- e) **Street Sweeping** – The use of recycled water shall be required for street sweeping activities. IRWD may, at its discretion, waive this requirement if it can be demonstrated to IRWD's satisfaction that compliance with the requirement imposes undue hardship.
- f) **Commercial Car Washes** – Commercial conveyor and in-bay car wash systems must reuse water if equipped to do so.
- g) **Common Interest Associations** – Common interest associations shall not fine or assess owners of separate interests for reducing or eliminating the watering of vegetation or lawns, unless the association uses only recycled water for irrigation of the association's common areas and recycled water is also available at the irrigated area of the separate interest.

### 5.4.1 Critical Shortage Measures

In an emergency, the primary function of IRWD's water supply system is to meet essential public health and safety needs. IRWD may determine that it is necessary to use mandatory restrictions and possible discontinuation of non-health and safety related service to achieve the necessary demand reductions at crisis level shortages. In addition to the measures implemented in all prior stages, IRWD may impose any combination of the following mandatory measures.

- a) **Potable Irrigation Ban** – Outdoor irrigation would be the initial target for any demand reductions or eliminations that cannot be met through voluntary measures and financial incentives related to adjustments in the budget-based rate structure.

- b) **Flow restrictors** – Under extreme conditions of noncompliance, IRWD could install flow restrictors in individual service lines. Thus, water would be available for drinking, cooking, sponge baths, and slow fill of toilet tanks, but showers and other high volume type uses would not be possible. Under these conditions individual customer reaction would be severe. It would probably be necessary to augment the customer service field service staff to maintain surveillance of these services to assure that unauthorized changes are not made by the customer.
- c) **Mandatory Restrictions and Fines** – IRWD's ability to establish restrictions on water use and to possibly discontinue non-health and safety related service in the case of repeat violators is provided for under the California Water Code, Division 1, Chapters 3 and 3.5.

#### 5.4.2 Enforcement

IRWD's Rules and Regulations (Section 15) provide for enforcement and penalties that may apply to violators during a water shortage. An excess use charge based upon the budget-based rate structure, which is always in effect, is sufficient to encourage demand reduction to required levels. Depending on the level of shortage, IRWD may reduce customer billing water budgets, tighten the tiers, increase rates, or some combination of those strategies to obtain the necessary reductions. IRWD also has the ability to establish restrictions on water use or to discontinue service in the case of repeat violators under the Water Code of the State of California.

### 5.5 Operational Drought Control Measures

Recycled water has proven to be a reliable and effective drought-resilient supply since sewage flows remain virtually unaffected by dry years. During a water supply shortage, IRWD will conduct an evaluation that will focus on expanding the authorized use of recycled water where it can replace potable water use. Due to regulatory requirements, conversions and expansions of use may take longer to implement than other actions but can be expedited when feasible, particularly for projects that are already in process. The following is a list of recycled water customer development programs that can be expanded during a water supply shortage:

- a) Potable Irrigation Conversions
- b) Industrial Process Water Conversions
- c) Cooling Towers Conversions
- d) Street Sweeping/Construction
- e) Agricultural Customers

## 6 Stages of Action

The levels of shortage are declared at the discretion of IRWD's Board depending on the assessment of the available water supplies and demands. As part of the declaration, the Board will implement specific demand management measures. **Table 6-1** provides the levels of shortage that may be declared, and a combination of the potential strategies that are likely to be sufficient to achieve the necessary demand reductions according to the severity and duration of the shortage. It is at the Board's discretion to use a combination of water shortage measures in a way it deems most appropriate. A draft Board resolution for the declaration of a specified shortage level is included as **Appendix A**.

**Table 6-1: Shortage Levels and Response Actions Considered**

Shortage Level	Response Type	Supply Shortage Response Actions Considered	Estimated Savings
Level 1	Voluntary	Increase outreach efforts for over-budget customers and expand leak alert program	10%
Level 2	Voluntary	Expand residential survey program, large landscape survey program, outdoor education programs and workshops, and establish water waste reporting "hotline"	11% - 20%
	Rate Based	Review of water budgets and potential adjustments to target discretionary outdoor uses for residential and landscape customers	
	End Use Prohibitions	Discourage filling of fountains, pools, and water features and other discretionary uses	
	Operational Measures	Conduct evaluation on operational measures to reduce potable water use and expand the authorized use of recycled water	
Level 3	Voluntary	Increase rebate amounts, targeted outreach and employee training at high use businesses, implement a public outreach campaign and work with public sector on raising public awareness and demonstrating reduced usage at public sites	21% - 30%
	Rate Based	Review of residential and landscape water budgets and target potential adjustments to limit residential and landscape customers to efficient irrigation of low drought tolerant landscaping	
Level 4	Voluntary	Implement direct install programs to retrofit inefficient devices and landscape equipment	31% - 40%
	Rate Based	Review commercial, industrial, and public authority budgets and consider adjustments to maximize potential savings while minimizing economic impacts	
	End Use Prohibitions	Elimination of specific municipal uses such as hydrant flushing, street cleaning, and water-based recreation	
Level 5	Voluntary	Implement pay to save incentive programs for industrial customers	41% - 50%
	Rate Based	Review residential and landscape budgets and consider adjustments to target the elimination of all non-recycled outdoor uses	
	Mandatory Measures	Eliminate non-recycled water outdoor use (100% reduction)	
Level 6	Rate Based	Review of residential budgets and potential adjustments to target all uses not required for health and safety	51% +
	Mandatory Measures	Use of flow restrictors on severely over-budget accounts that are non-responsive to outreach, and other mandatory restrictions and enforcement, as necessary	

### **6.1 Level One (Shortage Warning – up to 10% shortage)**

Level 1 is a shortage warning and low-level shortage condition intended to address supply reductions of up to 10%. Measures considered Level 1 would include the following voluntary actions:

- Increase public awareness of water supply situation and conservation opportunities
- Encourage diligent repair of water leaks

The measures used in Level 1 are designed to achieve reductions in outdoor over-irrigation. An enhanced public awareness campaign would be targeted toward customers that use water in excess of their water budget amounts to help them identify the source of their overuse and correct the problem. General conservation efforts include dedicated pages on IRWD's website, information provided in the customer newsletter, and drought-related presentations to groups such as city council, community associations, chambers of commerce, business groups, and schools.

### **6.2 Level Two (Significant Shortage Condition – up to 20% shortage)**

Level 2 is a significant shortage condition intended to address supply shortages between 11% and 20%. Measures considered under Level 2 would incorporate the actions taken under Level 1, and would include the following:

- Expand water conservation programs and projects, including residential survey program, large landscape survey program, outdoor education programs and workshops
- Establish water waste reporting "hotline"
- Review of budgets and potential adjustments to target discretionary outdoor uses for residential and landscape customers.
- Prohibitions on filling of fountains, pools, and water features, as well as specific municipal uses.

The measures used in Level 2 are intended to target discretionary uses of water. These measures require shorter lead time to implement, although it should be noted that rate-based measures are subject to public notice and a rate hearing process under Proposition 218. Voluntary measures can include short-term expansion of existing programs and may include new programs that can be implemented quickly. Over-budget usage from the changes to tiers would also offset the additional administrative and implementation costs to IRWD including increased staffing to address the expansion of IRWD's water conservation programs and projects.

### **6.3 Level Three (Significant Shortage Condition – up to 30% shortage)**

Level 3 is a severe shortage condition intended to address supply shortages between 21% and 30%. Measures considered under Level 3 would incorporate the actions taken under Level 2, and would include the following:

- Enhance incentives for rebate programs, such as turf replacement installation, high efficiency clothes washers, and commercial and industrial devices.
- Targeted outreach, including employee training at high use businesses, work with public sector on raising public awareness, and demonstrating reduced usage at public sites.
- Implement a public outreach campaign and work with public sector on raising public awareness and demonstrating reduced usage at public sites.
- Conduct analysis of landscape budgets and implement potential adjustments to budget-based rates to target elimination of all outdoor water use beyond what is required to maintain drought friendly landscaping.

The measures used in Level 3 are intended to target deeper outdoor use reductions in residential and landscape customers and additional voluntary reductions from commercial, industrial, and institutional customers. These measures may require a longer time to implement due to the need for coordination workshops, establishing and prioritizing objectives, and Board approval of funding.

#### **6.4 Level Four (Severe Shortage Condition – up to 40% shortage)**

Level 4 is a severe shortage condition intended to address supply shortages between 31% and 40%. Measures considered under Level 4 would incorporate the actions taken under Level 3, and would include the following:

- Implement direct install programs to retrofit inefficient devices and landscape equipment.
- Conduct analysis of commercial, industrial, and public authority budgets, and consider adjustments to maximize potential savings while minimizing economic impacts.
- Elimination of specific municipal uses such as hydrant flushing, street cleaning, and water-based recreation.

The measures used in Level 4 are intended to target commercial, industrial, and public authority customers while minimizing negative economic impacts. A Level 4 shortage would require further adjustments to budget-based rates, new measures that may require more time for direct install programs to launch, and Board approval of funding and award of contracts.

#### **6.5 Level Five (Crisis Shortage Condition – up to 50% shortage)**

Level 5 is a crisis shortage condition intended to address supply shortages between 41% and 50%. Measures considered under Level 5 would incorporate the actions taken under Level 4, and would include the following:

- Implement pay to save incentive programs for industrial customers.
- Review residential and landscape budgets and consider adjustments to target the elimination of all non-recycled outdoor uses.
- Eliminate non-recycled water outdoor use (100% reduction).

The measures used in Level 5 are intended to eliminate all non-recycled outdoor use. The measures may require policy changes, enforcement mechanism and consequences such as ability to levy fines or penalties for violations.

#### **6.6 Level Six (Crisis Shortage Condition – exceeding 50% shortage)**

Level 6 is a crisis shortage condition intended to address supply shortages exceeding 50%. Measures selected under Level 6 would be designed to incorporate the objectives listed under Level 5, and achieve the following further reductions in use:

- Review of residential budgets and potential adjustments to target all uses not required for health and safety.
- Use of flow restrictors on severely over-budget accounts that are non-responsive to outreach and other mandatory restrictions and enforcement, as necessary.

At a Level 6, the Board may determine that it is necessary to use mandatory restrictions and possible discontinuation of non-health and safety related service to achieve the necessary demand reductions.

## **7 Communication Plan**

IRWD's communication plan includes the various channels IRWD will utilize to convey critical messages regarding water shortage allocations and voluntary and mandatory actions. Public outreach programs can help increase awareness of water shortages, while customer services and workshops can encourage rate-payers to actively participate in demand reducing strategies. A strong communication plan will educate IRWD customers, including local leaders and the business community, on the water supply situation; what actions are proposed; what the intended achievements are; and how these actions are to be implemented. While specific types of messaging are deployed at various shortage response levels, how these messages are conveyed to the public are described in this communication plan.

The single most important step IRWD can take in implementing voluntary measures is to inform customers in order to help reduce water demand. IRWD will employ additional strategies to achieve the necessary demand reductions in a



shortage situation. Most of the effort will be focused on providing additional outreach to high usage tier customers. The community will be informed through the website, press releases, billing inserts, water conservation booths, community association meetings, newsletters etc. Literature will be provided on the shortage condition, conservation methods, and water-saving devices and be distributed through various local organizations and communication channels. The communication channels listed below can help convey the need for immediate conservation.

**Public Outreach Program and Social Media** – IRWD’s public outreach is aimed at promoting voluntary water conservation, something which IRWD has always done. Conservation is a constant ethic and goal, promoted throughout the service area, regardless of drought conditions. IRWD makes extensive use of its website and social media, including Facebook, Twitter, Instagram and NextDoor, to continually remind customers of the conservation message. The IRWD water use efficiency microsite and the IRWD website heavily features conservation and easy to use irrigation scheduling guideline, information on incentives, and efficient irrigation. IRWD also informs its customers through billing inserts, mailers, water conservation booths, newsletters, postcards, community association meetings, and local public events. Outreach is accomplished by having key IRWD personnel present to groups such as the city council, community associations, chambers of commerce, business groups, etc.

**Drought Response Center** – In order to respond to increased customer requests for on-site assistance, higher call volumes, and new and expanded water efficiency program offerings, additional temporary staff and consultants will be brought on to augment the water efficiency staff. IRWD will also establish a hot line to respond to customer questions and a special email response program. A drought information webpage will also be provided. The webpage will have both local and statewide drought information in one easy to access location.

**Campaign** – A water conservation or shortage response campaign message will be vigorously promoted to influence public attitudes toward water use.

**Media** – Extensive use of all available forms of media will be employed and coordinated with other agencies. This includes public service messages on local outlets and press releases in local newspapers. The messaging and level of response will be correlated with the need for demand reductions.

**Customer Service** – Customers will be encouraged to work collaboratively to save water and to call IRWD’s water use efficiency experts for assistance in finding water leaks or providing ways to use water more efficiently. IRWD’s Customer Service Department can assist in identifying wasteful activities within the IRWD service area. IRWD staff will contact the customer associated with the property and offer on-site assistance and recommendations to address the problem.

**Workshops and Tours** – IRWD already offers many workshops and tours to its customers a part of an ongoing outreach effort. During a drought, IRWD will hold workshops targeted toward helping customers reduce outdoor water use and be more efficient. These workshops will be held in various locations throughout the service area to reach an increased number of customers. A self-guided garden tour will be established to assist customers in identifying drought friendly landscapes.

**Targeting Over-Allocation Customers** – IRWD will increase ongoing outreach efforts to more aggressively target wasteful tier customers. Customers in the wasteful tier are notified through a variety of methods including mail, email and telephone. IRWD will continue to offer on-site assistance and audits to customers to help identify the source of wasteful tier use and to provide recommendations for reducing water use.

**Community Events** – IRWD will hold large community events that feature workshops, discussions and hands on learning opportunities. These events will be coordinated with the cities within the service area and with the County of Orange.

## 8 Financial Plan

The California Water Code Section 10632 requires an analysis of the impacts of each of the actions taken for conservation and water restriction on the revenues and expenditures of the water supplier. The WSCP does not provide a detailed analysis of revenue and expenditure impacts of water shortages because IRWD's billing structure is designed to be insulated from revenue swings resulting from deviations between actual and budgeted water sales and from declining or reduced water sales. IRWD's billing structure consists of a fixed meter charge and a commodity charge based on the number of units of water used. Meter charges are set to meet IRWD's fixed costs of operation (e.g. salaries, supplies, etc.). The base commodity charge is set to match the cost of producing, purchasing and delivering water. Therefore, IRWD can recover its fixed costs regardless of the quantity of water sold, whereas the water sales at any level will cover the costs of providing water. This system has proven to be effective in balancing revenue and expenditures. Table 8-1 and Table 8-2 show components of revenue and expenditure impacts that were evaluated and found to have either minimal or no significant impacts.

**Table 8-1: Actions and Conditions of the Impact Expenditure**

Type	Anticipated Revenue Reduction
Reduced Sales	Minimal to No Impact
Development of Reserves	Minimal to No Impact
Impact of Supplier's Higher Rates (Tier 2)	Likely Passed through to Customer
Category	Anticipated Cost
Change in Quantity of Sales	Minimal to No Impact
Increased Staff Salaries/Overtime	Minimal to No Impact
Increased Costs of New Supplies/Transfers/Exchanges	Minimal to No Impact

**Table 8-2: Proposed Measures to Overcome Revenue Impacts**

Name of Measure	Summary of Effects
Review of Rate Adjustment	IRWD can revise its rate structure during water shortage stages which can increase commodity sale revenues if needed to offset MWD shortage tier rates
Reserves	IRWD maintains reserves that can stabilize water rates during times of reduced water sales
Decreased or Deferred Capital and Maintenance Expenditures	If necessary, IRWD can postpone capital expenditures and defer certain maintenance expenditures

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## Appendix A - Draft Water Shortage Contingency Resolution

RESOLUTION NO. 2018- \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF  
IRVINE RANCH WATER DISTRICT DECLARING  
WATER SHORTAGE LEVEL \_\_\_\_\_

Irvine Ranch Water District (“**IRWD**”) has adopted Rules and Regulations For Water, Sewer, Recycled Water, and Natural Treatment System Service (the “**Rules and Regulations**”).

Section 15 of the Rules and Regulations, entitled “Water Conservation and Water Supply Shortage Program and Regulations” (“**Section 15**”) was adopted by this Board of Directors on *[date]*, following a public hearing held upon notice duly given and based on findings of necessity for the adoption of the water conservation program contained in said Section 15, and a summary was duly published following adoption, in accordance with California Water Code Section 375.

The Board of Directors has adopted an amended Water Shortage Contingency Plan, which serves as the resource and supporting document for the implementation of Section 15.

Section 15 provides that the Board of Directors may declare levels of shortage and describes six levels of shortage with approximate ranges of conditions and the corresponding water use reductions to be achieved.

The Water Shortage Contingency Plan describes an illustrative list of measures that may be implemented in each level, and Section 15 further provides that at the time of declaring a level of shortage conditions, the Board in its discretion will determine the particular response measures that will be implemented, which may include measures in a different level from the level(s) shown or other measures in lieu of or in addition to those measures.

Section 15 provides that the application of shortage level response measures or restrictions may vary as to type of water service, and that through the declaration of a shortage level, the Board will determine and set forth how and to what extent, if any, the implementation of measures or restrictions on potable water service will be applied to non-potable water services furnished by IRWD.

Because the water reduction mandate only applies to potable water, IRWD’s response measures in this declaration address potable water.

Section 15 is intended to complement and be used in tandem with the allocation-based tiered pricing structure implemented as a demand management measure on an ongoing basis as part of the District’s rates and charges.

As contemplated in Section 15 and the Water Shortage Contingency Plan, the Board has, by separate action through the adoption of Resolution No. \_\_\_\_\_, implemented demand management measures through adjustments in the allocation-based pricing structure.

THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT  
THEREFORE RESOLVES AS FOLLOWS:

Section 1. The Board of Directors hereby finds that a significant water shortage condition, involving a [\_\_\_\_\_] % shortage, exists and declares that Level [\_\_\_\_\_] to be in effect as of the date of this Resolution.

Section 2. The following measures shall be in effect during the Level [\_\_\_\_\_] shortage condition, including measures that are always in effect [*and measures that were implemented in Level[s] One [through \_\_\_\_]*].

**Measures Always In Effect**

[INSERT HERE]

**Measures To Remain In Effect From Level/s/ One [through \_\_\_\_] /**

[INSERT HERE]

**Additional Measures In Effect In Level / \_\_\_\_ /**

*[Section 3. The declaration of water shortage condition Level \_\_\_\_\_, made by this Board of Directors on [date], is hereby rescinded and superseded by this declaration.]*

This resolution is being signed and adopted on [date].

[insert signature blocks]

May 29, 2018

Prepared and

Submitted by: Cheryl Clary *cc*

Approved by: Paul A. Cook *PAC*

PUBLIC HEARING

CHANGES TO EXISTING RULES AND REGULATIONS  
SECOND READING AND ADOPTION

SUMMARY:

Staff has compiled proposed changes to the District's Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service. The proposed changes include both substantive and non-substantive changes. The primary substantive changes proposed in this update are as follows:

- Addressed illegal tampering or diversion of water or sewage. These issues are addressed in the subsections entitled Illegal Connections, Diversions or Tampering (section 4.7), Fire Hydrants (section 4.9), and Enforcement and Penalties (section 14) and the related sections that provide enforcement for this activity;
- Updated the District's conservation and water supply shortage program that includes a significant reformation of the IRWD Water Supply Shortage Levels (section 15.5) and the related sections that provide enforcement for overuse; and
- Updated local limits set forth in Exhibit C.

The non-substantive changes are as follows:

- Inserted headings and simplified language throughout in order to aid the reader in navigating and understanding the document;
- Eliminated unused definitions;
- Updated definitions; and
- Inserted clarifying language on the application procedure (section 4.2).

Numbering changes were implemented to ensure consistency throughout the document.

This item was included in the May 14, 2018 agenda to provide a first reading of the resolution and the Secretary was directed to place the resolution on the agenda for the May 29, 2018 meeting of the Board of Directors for a second reading, hearing and adoption.

OUTLINE OF PROCEEDINGS

President: Declare this to be the time and place for the hearing on the Resolution.

President: Request the Secretary to report the manner by which the Notice of Hearing was given.

Secretary: The Notice of this hearing was published in the Orange County Register on April 29, 2018 and May 13, 2018. The notice was also posted in the District office on May 11, 2018. The Secretary presents an Affidavit of Posting and Proof of Publication for the Board to receive and file.

- Board: RECOMMENDED MOTION: RECEIVE AND FILE THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY.
- President: Inquire of the Secretary whether there have been any written communications.
- Secretary: Respond.
- President: Request a report from the Executive Director of Finance and Administration.
- Exec. Dir. of Finance and Adm. Report and describe the proposed revisions and indicate that the clarifications and revisions to the Rules and Regulations are summarized in Exhibit "B".
- President: Inquire whether anyone is present who wishes to address the Board concerning the amended Resolution.
- President: Inquire whether there are any comments or questions from members of the Board of Directors.
- President: Ask for a motion to close the hearing, a second reading of the resolution, that further reading of the resolution be waived, and adoption of the resolution.
- Board: RECOMMENDED MOTION: THAT THE HEARING BE CLOSED, THAT THE SECOND READING OF THE RESOLUTION BE READ BY TITLE ONLY AND THAT FURTHER READING OF THE RESOLUTION BE WAIVED, AND THAT THE FOLLOWING RESOLUTION BE ADOPTED BY TITLE:
- President: Request that the Secretary read the resolution by title only.
- Secretary: Read the title.

RESOLUTION NO. 2018-

RESOLUTION RESCINDING RESOLUTION NO. 2015-23  
AND ESTABLISHING REVISED RULES AND REGULATIONS  
OF THE IRVINE RANCH WATER DISTRICT FOR WATER,  
SEWER, RECYCLED WATER, AND NATURAL  
TREATMENT SYSTEM SERVICE AND EXHIBIT "A" THERETO.

BACKGROUND:

From time to time, staff proposes changes to IRWD's Rules and Regulations. In this process, formatting and presentation changes are included and some wording and definitions have been

updated to promote consistent and conforming nomenclature throughout the document. The primary focus of this update targeted the prohibition of tampering or diversion of District sources and assets and updating the District's water supply shortage levels and the many sections influenced by these topics. In addition, the local limits set forth in Exhibit C to the Rules and Regulations were updated. Recommended changes are included in the attached redlined document provided in Exhibit "A" and will be adopted by resolution as provided in Exhibit "B".

#### Illegal Connections, Diversions and Tampering with District Assets and Resources:

Illegal connections, diversions, and tampering with District assets and resources are addressed in several sections within the Rules and Regulations document. The two most significant updates are in sections 4.7 (Illegal Connections, Diversions, or Tampering) and 4.9 (Fire Hydrants) with the addition of section 4.9.2, addressing unpermitted use of fire hydrants as a waste of water and subjecting the user to interim or permanent revocation of the underlying connection permit. These violations are recognized as crimes in the California Penal Code and violations in the Water Code and Civil Code and will be subject to all applicable penalties and fees.

#### Updating the District's Water Supply Shortage Levels:

The District updated its Water Shortage Contingency Plan, and the IRWD Water Supply Shortage Levels (section 15.5) provides representative measures that may be applied during various levels of shortage. Each shortage level reduction target and actionable measures have been updated.

The District's legal counsel has reviewed the proposed changes.

#### FISCAL IMPACTS:

The program is currently being administered, and the proposed revisions are not expected to result in a significant fiscal impact to IRWD.

#### ENVIRONMENTAL COMPLIANCE:

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

#### LIST OF EXHIBITS:

Exhibit "A" – Redlined Proposed Rules and Regulations  
Exhibit "B" – Resolution Establishing Revised Rules and Regulations

RULES AND REGULATIONS  
FOR WATER, SEWER,  
RECYCLED WATER,  
AND NATURAL TREATMENT SYSTEM SERVICE

Irvine Ranch Water District  
Orange County, California

Effective June     , 2018



~~IRVINE RANCH WATER DISTRICT~~

~~RULES AND REGULATIONS FOR WATER, SEWER, RECYCLED WATER AND  
NATURAL TREATMENT SYSTEM SERVICE~~

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**INSERT NEW TABLE**

Exhibits:

A. Maps

A-1 Water Improvement Districts

A-2 Sewer Improvement Districts

A-3 Cities within IRWD Boundaries

B. Rates and Charges for Water, Sewer, and Recycled Water Service (~~Separate Document~~)

C. Maximum Allowable Local Limits

SECTION 1: GENERAL

**Availability of Service Subject to these Rules and Regulations.** Water, sewer, recycled water, and natural treatment system service by the Irvine Ranch Water District, subject to the availability of facilities, adequate capacity in facilities, or funds or financing for the construction thereof, or all of the foregoing, is available on the following terms and conditions including all ~~fees and charges hereinafter established and provided for under Exhibit B.~~ Service ~~on the basis herein set forth is intended to will~~ be made available to each member of the public or each segment of the public on the same basis to the extent applicants, owners, or customers are similarly situated and desire to be served and may be served in an equal and comparable manner.

~~The general areas presently included within the Boundaries. The boundaries of the District and the existing~~ Improvement Districts are ~~as established by the Board from time to time and depicted on Exhibits A-1 (Potable Water System Improvement Districts) and A-2 to these Rules and Regulations. (Sewer System Improvement Districts). The cities and villages within the District's boundaries are depicted on Exhibit A-3. Upon a change in the boundaries of the District or any of its Improvement Districts, Exhibits A-1 and A-2 hereto are by this reference incorporated herein and may be changed, and A-3 will be revised and replaced as necessary. The area served by the District is discussed further in Section 1: Section 1: Section 3 from time to time. In such instances, revised Exhibits A-1 and A-2 or portions thereof will be substituted to these Rules and Regulations. Such.~~

**Improvement Districts.** ~~The~~ Improvement Districts have been formed for the purpose of funding the construction and acquisition of facilities and capacities to provide water, sewer, and recycled water service. ~~It is contemplated that The Board may consolidate or form additional Improvement Districts will be formed, as deemed proper by the Board, at a later date or that annex additional areas may be annexed, as determined by the Board, to the existing Improvement Districts or any Improvement Districts subsequently established within the District.~~

**Contracts.** Contracts with the District may also provide for the funding of construction and acquisition of facilities for water, sewer, recycled water or natural treatment system service. Such contracts require the construction of necessary facilities or the payment of the capital cost and annual cost of operating and maintaining such facilities.

**Facilities Plan.** The plans for facilities to be constructed within the District and ~~each of the existing and future any~~ Improvement Districts are intended to be an integrated part of the District's Water Resources Master Plan, Sewer Master Plan, Natural Treatment System Master Plan, Sub-Area Master Plans, and addenda thereto, ~~which and~~ are ~~approved from time to time, hereinafter in some instances~~ referred collectively to as ~~"the Plan."~~

~~As it is the mandate of~~ **Recycled Water.** The State of California ~~to effect~~ mandates conservation of water resources whenever possible, ~~and accordingly~~ the Plan ~~is also directed toward~~ includes collecting, treating, and reclaiming sewage and wastewater and beneficially reusing the resulting

## IRVINE RANCH WATER DISTRICT

recycled water. The District intends that recycled water use comply with any and all applicable Federal, State, and local laws, regulations, and other governmental requirements. If the District determines that recycled water service is feasible under Section 4.12, the applicant, owner, or customer will be required to utilize recycled water service.

~~It is the intent of~~**Urban Runoff – Natural Treatment System.** ~~The District that such recycled water be used in a manner that is in compliance with any and all applicable Federal, State, and local statutes, ordinances, regulations, and other requirements~~

~~If recycled water service is determined by the District to be feasible in accordance with Section 4.12, the applicant, owner or customer will be required to utilize recycled water service.~~

~~It is also the intent of the District intends,~~ in cooperation with the County and Cities, to ~~provide service in the treatment of~~**treat certain** urban runoff through the operation, maintenance and monitoring of constructed water quality wetlands and bio-retention cells, known as Natural Treatment Systems. Natural Treatment Systems ~~shall~~**will** be sited in various locations in the District, as outlined in the Natural Treatment System Master Plan or as ~~otherwise~~ determined by the District. Use of the Natural Treatment System for urban runoff treatment ~~shall~~**is** be subject to the requirements of these Rules and Regulations. ~~The District will determine~~ the level of treatment ~~provided shall be at the discretion of the District.~~ Property owners and developers will be responsible for any urban runoff minimization or other best management practices that may be required by the County or Cities, notwithstanding the operation of the District's natural treatment systems.

**Land Use.** The District constructs ~~the~~ facilities ~~needed~~ in concert with environmental and land use decisions. The District neither determines nor intends to determine or precipitate land use decisions or the accomplishment of any plans of development of various owners of undeveloped property within the District.

**Sewer Service Requires Water Service.** In most instances, ~~the~~ sewer service is ~~available as herein~~ provided only where the District ~~is assured to its satisfaction~~**has determined** that ~~in perpetuity~~ it will also be providing **permanent** water service to the applicant, customer, or property owner ~~or the successor thereto for which sewer service is desired.~~

~~Requirements set forth in~~**Variiances.** ~~The District may modify by special contract the requirements of~~ these Rules and Regulations, including but not limited to applicable rates and charges, ~~may be modified by special contract where, in the opinion of the district, only upon the determination that~~ unique circumstances exist.

SECTION 2: DEFINITIONS

For the purpose of these Rules and Regulations, the following terms, phrases, words, and their derivations shall have the meaning given below. When not inconsistent with the context, words used in the present tense include the future, words in the plural include the singular number, and words in the singular include the plural number. The word "shall" is always mandatory and not merely directory.

AIR-GAP SEPARATION shall mean means a physical break between a supply pipe and a receiving vessel. The air gap shall be at least double the diameter of the supply pipe, measured vertically above the top rim of the vessel, and in no case less than one inch.

APPLICANT shall mean means any person, firm, corporation, association, or agency who desires to obtain water, sewer, recycled water and/ or natural treatment system service from the District.

APPLICATION RATE shall mean means the rate at which irrigation water, expressed in inches per hour, is applied to a DESIGN AREA.

APPROVED CHECK VALVE shall mean means a check valve that seats readily and completely. It must be carefully machined to have free moving parts and assured water tightness. The face of the closure element and valve seat must be bronze, composition, or other non-corrodible material that will seat tightly under all prevailing conditions of field use. Pins and bushings shall be of bronze or other non-corrodible, non-sticking material, machined for easy, dependable operation. The closure element (e.g., clapper) shall be internally weighted or otherwise internally equipped to promote rapid and positive closure in all sizes where this feature is obtainable. <sup>\*1</sup>

APPROVED DOUBLE CHECK VALVE ASSEMBLY shall mean means an assembly of at least two independently acting approved check valves including tightly closing shut-off valves on each side of the check valve assembly and suitable leak-detector drains plus connections available for testing the water tightness of each check valve. <sup>\* \*</sup>

~~1.~~ APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE shall mean means a device incorporating two or more check valves and an automatically operating differential relief valve located between the two checks, two shut-off valves, and equipped with necessary appurtenances for testing. The device shall operate to maintain the pressure in the zone between two check valves, less than the pressure on the District's water supply side of the device. At cessation of normal flow, the pressure between the check valves shall

<sup>1</sup> Devices used within the District shall be included on the list of devices approved by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

IRVINE RANCH WATER DISTRICT

be less than the supply pressure. In case of leakage of either check valve, the differential relief valve shall operate to maintain this reduced pressure by

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\* Devices used within the District shall be included on the list of devices approved by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall be open to the atmosphere thereby providing an air gap in the device. To be approved, these devices must be readily accessible for maintenance and testing, and installed in a location where no part of the valve will be submerged. \*

AUTOMATIC SYSTEM ~~shall mean~~means with reference to landscape irrigation systems; automatic controllers, valves, and associated equipment required for the programming of effective water application rates when using recycled water.

AUXILIARY WATER SUPPLY ~~shall mean~~means any water supply on or available to the premises other than the District's potable water and recycled water supplies.

BACKWATER DEVICE ~~shall mean~~means a unit that permits flow in lines normally under open channel flow conditions, such as sewers, to occur in one direction only by mechanically blocking the flow or by providing a pressure relief opening such that flow may not occur in the uphill direction, as approved by the District and local governing agencies.

BASE INDEX means a water budget applicable for commercial, industrial or public authority usage.

BUILDING SEWER - see "UPPER LATERAL.""

BOARD ~~shall mean~~means the Board of Directors of the District.

COMMODITY CHARGE ~~shall mean~~means a charge imposed by the District for all water used by general metered, temporary, and agricultural customers; ~~whether such water used is actually metered or only estimated.~~

CONNECTION FEE ~~shall mean~~means a charge imposed by the District for obtaining water, sewer, recycled water or natural treatment system service from the District, including charges for capacity. ~~The charge in no event shall be less than or on conditions other than as specified by the District or as required by any and all applicable Federal, State, or local statutes, regulations, ordinances, contracts, or other requirements.~~ Connection fees are set forth in Exhibit B to these Rules and Regulations.

CONSTRUCTION MANUAL ~~shall mean~~means the District's "Construction Manual for the Construction of Water, Sewer, and Recycled Water Facilities," as amended from time to time.

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CONTINGENCY PLAN is the Water Shortage Contingency Plan adopted by the District, as amended from time to time.

CROSS CONNECTION ~~shall mean~~means any unprotected connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved as safe, wholesome, and potable for human consumption.

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~~not or cannot be approved as safe, wholesome, and potable for human consumption.~~

\* Devices used within the District shall be included on the list of devices approved by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

CUSTOMER ~~shall mean~~means any person, firm, corporation, association, or agency ~~who uses or desires~~that has a permit to obtain water, sewer, recycled water and/or natural treatment system service from the District.

DESIGN AREA ~~shall mean~~means the specific land area or facilities designated to be served through on-site facilities when used in reference to recycled water systems.

DISTRICT ~~shall mean~~means the Irvine Ranch Water District.

IMPROVEMENT DISTRICT ~~shall mean~~means any of the Improvement Districts of the District existing or hereafter established.

INFILTRATION RATE ~~shall mean~~means the rate at which the soil will accept water, expressed in inches per hour, during the irrigation period.

IRRIGATION SYSTEM ~~shall mean~~means all equipment and materials required for applying irrigation water to the design area from the service connection including all piping, valves, sprinkler heads, and appurtenances.

LATERAL CONNECTION ~~shall mean~~means the point of connection of the customer's upper lateral with the lower lateral of the District.

LOWER LATERAL ~~shall mean~~means the District's facility between its collection system and the lateral connection, which ~~shall is~~ normally ~~be~~ the exterior boundary of the easement or the street or access road right-of-way.

LOWER LATERAL CHARGE ~~shall mean~~means a charge imposed by the District for installation by the District of a lower lateral.

MANAGER or GENERAL MANAGER ~~shall mean~~means the General Manager of the District or the person authorized by the Board or the General Manager to act for him.

NATURAL TREATMENT SYSTEM ~~shall mean~~means the network of constructed water quality wetlands and bio-retention cells providing treatment of urban runoff. Natural treatment systems are not flood control facilities.

NON-POTABLE WATER ~~shall mean~~means that water that has not been treated for human consumption in conformance with the standards referred to in the definition of



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POTABLE WATER, below, such as untreated imported water received from the Metropolitan Water District of Southern California, non-potable well water, and water collected in the District's reservoirs from natural runoff.

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~~California, non-potable well water, and water collected in the District's reservoirs from natural runoff.~~

NON-RECYCLABLE SEWAGE ~~shall mean~~means any and all liquid or solid waste substance other than recyclable sewage emanating from within the District, including but not limited to liquid or solid waste substance from any production, manufacturing, or processing operation. Non-recyclable sewage ~~shall include~~includes any liquid or solid substance that cannot be treated or disposed of by the then-existing facilities of the District's Reclamation Plant for the treatment or disposal of sewage by reason of the design thereof, applicable waste discharge or other requirements, actual or possible increased operation and maintenance costs, or possible damage to the District's facilities.

NON-RECYCLABLE WASTEWATER SEWERAGE FACILITIES ~~shall mean~~means facilities used in the collection of wastewater that is not to be treated for direct beneficial use or a controlled use that otherwise would not occur. Such non-recyclable wastewater sewerage facilities shall generally be limited to industrial and commercial wastes that would have a detrimental effect on the treatment processes of the reclamation plant and the resultant recycled water.

NTS DESIGN GUIDELINES ~~shall mean~~means the District's "Natural Treatment System Design Guidelines," as amended from time to time

OFFSITE FACILITIES ~~shall mean~~means facilities under the control of the District including but not limited to water, sewer, and recycled water pipelines, reservoirs, pumping stations, fire hydrants, manholes, valves, connections, supply interties, treatment facilities, natural treatment systems and other appurtenances and property up to the point of connection with the customer's facilities.

ONSITE FACILITIES ~~shall mean~~means facilities under the control of the applicant, owner, or customer including but not limited to residential, commercial, and industrial building water and sewerage systems, landscape irrigation systems, and agricultural irrigation systems. For water and recycled water service, the onsite facilities shall be those downstream of the service connection, which shall normally be the downstream end of the meter tailpiece.

ONSITE RECYCLED WATER SUPERVISOR ~~shall mean~~means a qualified person designated by a recycled water user and approved by the District. This person shall be knowledgeable in the construction and operation of onsite recycled water and irrigation systems and in the application of the guidelines, criteria, standards, and rules and regulations for recycled water.

PERMIT ~~shall mean~~means a processed and approved application ~~to~~ and agreement with the District for service.

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PERSON ~~is~~means any individual, firm, partnership, association, company, or organization of any kind.

PLAN ~~shall refer to~~means the plans for facilities to be constructed within the District and each of the existing and future Improvement Districts are intended to be an integrated part of the District's Water Resources Master Plan, Sewer Master Plan, Natural Treatment System Master Plan, Sub-Area Master Plans; and addenda thereto, which are approved from time to time.

POTABLE WATER ~~shall mean~~means that water furnished to the customer which meets applicable local, state and federal standards for drinking water.

PRETREATMENT ~~shall mean~~means treatment that the ~~district~~District may require prior to permitting discharge of sewage into any District sewerage facility if necessary to insure compliance by the District with these Rules and Regulations and any and all applicable Federal, State, or local statutes, ordinances, regulations, contracts, or all of the foregoing, individually or collectively, or if determined by the District to be necessary to protect the facilities of the District from any possible present or future damage.

PROCEDURES GUIDE ~~shall mean~~means the District's "Procedural Guidelines and General Design Requirements," as amended from time to time.

PROPERTY OWNER or OWNER ~~shall mean~~means the holder of legal title, contract purchaser, or lessee under a lease with an unexpired term of more than one (1) year jointly with the holder of title.

RECLAMATION PLANT ~~shall mean~~means District treatment facilities that receive and treat wastewater for beneficial uses.

RECYCLABLE SEWAGE ~~shall mean~~means wastewater that can be treated and recycled by the District's facilities so as to be usable for beneficial purposes.

RECYCLED WATER ~~shall mean~~means disinfected tertiary recycled water which is produced by the treatment of wastewater by a District reclamation plant and is suitable for direct beneficial uses in accordance with California Administrative Regulations Title 22, Division 4, Chapter 3.

RECYCLED WATER DISTRIBUTION SYSTEM ~~shall mean~~means individually or collectively any recycled water facility or facilities which are installed by the District or financed, constructed, and dedicated to the District by an applicant, owner, or customer or which are the result of local initiative and financing in tracts and subdivisions, as well as commercial or industrial developments, and which are typically less than 6"in diameter. The District shall determine what facilities are part of a distribution system from time to time as necessary. The District's determination in this regard shall be final and conclusive.

RECYCLED WATER FACILITIES ~~shall mean~~means facilities used in the storage, pumping, and conveyance of recycled water. The term recycled water facilities may be used

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synonymously with the term irrigation water facilities in the context of references to the District's irrigation water system master plan.

RECYCLED WATER SERVICE CONNECTION ~~shall mean~~means the point of connection of the customer's recycled water line with the recycled water service line of the District, which ~~shall~~will normally be the downstream end of the recycled water meter tailpiece.

RECYCLED WATER SERVICE LINE ~~shall mean~~means the District's facility between its recycled water distribution system and the recycled water service connection.

RECYCLED WATER SERVICE LINE CHARGE ~~shall mean~~means a charge imposed by the District for installation by the District of recycled water meters and service lines.

~~2. RECYCLED WATER TRANSMISSION MAINS shall mean recycled water lines and appurtenances typically 6" and larger purchased or constructed by the District with bond proceeds and/or capacity charges or those constructed by an applicant, owner, or customer subject in whole or in part to reimbursement. The District shall determine what facilities are recycled water transmission mains from time to time as necessary based on the currently adopted master plan and the terms and provisions of any reimbursement agreements. The District's determination in regard to these matters shall be final and conclusive.~~

RECORD DRAWINGS ~~shall mean~~means drawings that correctly show the completed facilities as constructed or modified (as-built).

RULES AND REGULATIONS ~~shall mean~~means these "Rules and Regulations for Water, Sewer, Recycled Water and Natural Treatment System Service," as amended from time to time.

SECURITY DEPOSIT ~~shall mean~~means monies required to be deposited with the District for the purpose of guaranteeing payment of monthly or bimonthly utility bills rendered for water, sewer, recycled water or natural treatment system service.

SELF-REGENERATIVE WATER SOFTENER ~~shall mean~~means a unit that in removing minerals from water produces a waste containing minerals in greater amounts than those in the influent water.

### SEWAGE – see WASTEWATER

SEWER COLLECTION SYSTEM ~~shall mean~~means individually or collectively any sewer facilities which are financed, constructed, and dedicated to the District by an applicant, owner, or customer or which are the result of local initiative and financing in tracts and subdivisions, as well as commercial or industrial developments, and which are typically less than 12" in diameter. Sewer collection systems shall include dry sewers installed by developers prior to construction of trunk sewers. The District shall determine what facilities are part of a collection system from time to time as necessary. The District's determination in this regard shall be final and conclusive.

IRVINE RANCH WATER DISTRICT

SEWER [SEWERAGE] FACILITIES ~~shall mean~~means any facilities used in the conveyance, pumping, and treatment of wastewater.

SERVICE CHARGE ~~shall mean~~means a monthly or bimonthly charge established by the District from time to time for water, sewer, recycled water or natural treatment system service. This charge does not include the commodity charge for the consumption of water or recycled water.

SURCHARGE ~~shall mean~~means a charge imposed by the District for the provision of a special service not normally provided by the District, such as situations involving unusual quantity or quality requirements. This surcharge may include, but is not necessarily limited to, pumping surcharges.

TRUNK SEWERS ~~shall mean~~means sewer lines and appurtenances purchased or constructed by the District with bond proceeds and/or capacity charges or those constructed by an applicant, owner, or customer subject in whole or in part to reimbursement typically larger than 12" in diameter. The District shall determine what facilities are trunk sewers from time to time as necessary based on the currently adopted master plan and the terms and provisions of any reimbursement agreements. The District's determination in regard to these matters shall be final and conclusive.

UNAUTHORIZED DISCHARGE ~~shall mean~~means any release of recycled water that violates the Rules and Regulations or any applicable federal, state, or local statute, regulation, ordinance, contract, or other requirement.

UPPER LATERAL ~~shall mean~~means the line from the lateral connection to the building or improvements of the applicant, owner, or customer

URBAN RUNOFF ~~shall mean~~means dry and wet weather low flow runoff from urban spaces and small storm flow.

WASTEWATER ~~shall mean~~means liquid and water carried waste and water, whether treated or untreated, discharged into or permitted to enter a District sewer. Also sometimes called SEWAGE.

WASTEWATER CONSTITUENTS AND CHARACTERISTICS ~~shall mean~~means the individual chemical, physical, bacteriological, and radiological parameters, including volume and flow rate and such other parameters that serve to define, classify, or measure the quality and quantity of wastewater.

WATER ~~shall mean~~means, in the general usage of these Rules and Regulations, potable water.

WATER BUDGET means an a reasonable amount of water for your a given customer's needs and property characteristics, including: the number of occupants, lot size, size of irrigated area, any business requirements, and climate. See also BASE INDEX.

WATER DISTRIBUTION SYSTEM ~~shall mean~~means (individually or collectively) any water facilities ~~which~~that are financed, constructed, and dedicated to the District by an

## IRVINE RANCH WATER DISTRICT

applicant, owner or customer or which are the result of local initiative and financing in tracts and subdivisions, as well as commercial or industrial developments, and which are typically less than 12" in diameter. Water distribution systems shall include all fire hydrants. The District shall determine what facilities are part of a distribution system from time to time as necessary. The District's determination in this regard shall be final and conclusive.

WATER FACILITIES ~~shall mean~~ means any facilities used in the treatment, storage, pumping, and conveyance of water.

WATER SERVICE CONNECTION ~~shall mean~~ means the point of connection of the customer's building water line with the water service line of the District, which shall normally be the downstream end of the water meter tailpiece.

WATER SERVICE LINE ~~shall mean~~ means the District's facility between its distribution system and the water service connection.

WATER SERVICE LINE CHARGE ~~shall mean~~ means a charge imposed by the District for installation by the District of water meters, service lines, and connections for private fire protection facilities.

- ~~3. — WATER TRANSMISSION MAINS shall mean water lines and appurtenances purchased or constructed by the District with bond proceeds and/or capacity charges or those constructed by an applicant, owner, or customer subject in whole or in part to reimbursement typically larger than 12" in diameter. The District shall determine what facilities are water transmission mains from time to time as necessary based on the currently adopted master plan and the terms and provisions of any reimbursement agreements. The District's determination in regard to these matters shall be final and conclusive.~~

SECTION 3: AREA SERVED

The Rules and Regulations pertain to water, sewer, recycled water, and natural treatment system service to land or improvements, or both, ~~lying~~ within the boundaries of the District, ~~unless specific provision is made by agreement with the District for and to~~ service outside of ~~such~~its boundaries. ~~pursuant to contract~~. If water, sewer, recycled water, or natural treatment system facilities and/or capacity do not exist in the immediate area, ~~then~~ the applicant, owner, or customer ~~shall~~must provide or finance ~~such~~those facilities and/or ~~that~~ capacity. The owner of property outside of a then-existing Improvement District, which property has adequate water, sewer, recycled water and/or natural treatment system facilities and/or capacity or funds therefore, must cause all such facilities and/or capacity or funds to be transferred to the District.

Annexation. Property not within the District and/or not within an Improvement District, and which is to be provided with service by the District, is subject to annexation to the District and/or Improvement District(s). Annexation to the District and/or Improvement Districts may, in turn, be subject to annexation to other agencies, such as Metropolitan Water District of Southern California, Municipal Water District of Orange County, Orange County Water District and/or Orange County Sanitation District, except as otherwise provided by agreement.

Improvement Districts. The District, ~~at its discretion~~, may from time to time contract with an applicant, owner, or customer to initiate and pursue to completion the establishment of an Improvement District and the sale of bonds to provide the funds to construct the District facilities or capacity necessary for service to distribution or collection facilities that are required to be provided by the applicant, owner or customer as a condition of obtaining service from the District.



SECTION 4: GENERAL REQUIREMENTS

4.1 SERVICE CONDITIONS

~~Water, sewer and natural treatment system service shall be provided~~ **Service by Permit Only.** The District ~~only if a permit for such will provide~~ water, sewer and natural treatment system service ~~only if a permit for that service~~ is obtained in the manner ~~hereinafter provided described below~~, unless otherwise determined by the Board. Furthermore, if the District has determined that recycled water ~~shall will~~ be provided in accordance with the provisions of Section 4.12, ~~such the~~ service ~~shall will~~ be provided only if a permit for ~~such~~ recycled water service is obtained in the manner ~~hereinafter provided described below~~, unless otherwise provided by the Board.

**Service Subject to These Rules & Regulations.** Water, sewer, recycled water and natural treatment system service ~~shall be is~~ available only in accordance with ~~these~~ Rules and Regulations, as well as applicable federal, state, and local statutes, ordinances, regulations, and contracts, and other requirements including, but not by way of limitation, the California Water Code, and other state statutes and regulations imposed by the California Regional Water Quality Control Boards ~~—Santa Ana Region~~, and state and local health departments, as well as the terms of any service agreement and permit issued by the District. ~~Any such permit may be revoked by~~ The District ~~and thereupon all such may revoke any permit at which time all~~ water, sewer, recycled water and natural treatment system service ~~shall under that permit will~~ cease in the manner provided for in these Rules and Regulations (see Sections 7 and 14).

~~4.1.1 WATER SUPPLY SUFFICIENCY~~

4.1.1 Water Supply Sufficiency

(1) In 2001, the California State Legislature enacted legislation to improve coordination between the water supplier and the city or county during the land use entitlement process for certain large-scale developments, to ensure that projected water supplies will meet the proposed project's water demands in addition to the water supplier's planned demands.

(2) The California statutes enacted by ~~this~~ at legislation include:

(a) Water Code Section 10910 et seq. (the "Water Supply Assessment Law"), which requires a water supply assessment in conjunction with the California Environmental Quality Act (CEQA) process, and Government Code Section 66473.7 (the "Verification Law"), which requires a water supply verification in conjunction with the tentative map approval process. ~~The ("CEQA") process. The Water Supply Assessment Law applies to subdivisions of more than 500~~

units and certain other categories of projects defined by the Assessment Law. ~~The~~

~~(a)~~(b) Government Code Section 66473.7 (the “Water Supply Verification Law”), which requires a water supply verification in conjunction with the tentative map approval process. The Water Supply Verification Law applies to subdivisions of more than 500 units, subject to specified exemptions.

~~(3)~~ The assessment Water Supply Assessment Law and verification the Water Supply Verification Law require ~~a determination to be made by the~~ District to determine, based on the record, whether the District’s currently available and under-development water supplies are sufficient to meet the demands of ~~the applicant’s~~ project and the District’s existing and planned uses over a 20-year projection during normal, single-dry and multiple-dry years.

~~(2)~~(4) Applicant’s Duties in Connection with Water Supply Assessments. The applicant is responsible for completing the process established by the city or county, including required application submittals, to secure a water supply assessment and/ or water supply verification from the District if required for the applicant’s project. ~~A water supply assessment or verification does not entitle the project to water service or to any right, priority or allocation in any supply, capacity or facility, or affect the District’s obligation to provide service to its customers or potential~~

~~(3)(5) future customers.~~ **No Entitlement to Service.** Any water supply assessment or verifications prepared by the District will not entitle the applicant's project to water service or to any right, priority, or allocation in any supply, capacity, or facility, or affect the District's obligation to provide service to its customers or potential future customers. In order to receive service, the applicant must meet all of the applicable requirements of these Rules and Regulations.

## 4.2 APPLICATION PROCEDURE

4.2.1 **Application.** An application for water, sewer, recycled water and natural treatment system service must be made in writing, via the telephone, the District website, or in person. The District may require an application be signed by the applicant, and the owner or customer, if they are not one and the same. The Manager ~~in his discretion~~ may provide an abbreviated form of application for permits ~~whenif he determines that~~ no unusual facts ~~are determined in his discretion to~~ exist. ~~Other than specified above, the form of application shall be furnished by the District.~~

4.2.2 **Information Required.** The applicant may be required to provide the following information per account:

- (1) Name of applicant(s)
- (2) Date service is required
- (3) Location of service
- (4) Mailing address
- (5) Purpose for which service is to be used (e.g. residential, commercial or irrigation)
- (6) Contact phone number
- (7) Social Security Number or Tax Identification Number
- (8) Driver License Number, Passport, or State Identification
- (9) Such other information as the District may reasonably require.

4.2.3 **Application Fees and Deposits.** The applicant shall pay a non-refundable, one-time service establishment fee. A security deposit may be assessed in lieu of providing a Social Security Number or Tax Identification Number or based on prior credit history with the District. See Exhibit B for fee and deposit amounts.

4.2.4 **Additional Discharge Permit.** An applicant for sewer service may be required to obtain a discharge permit for use of the District's sewerage facilities in addition to the permit required for all applicants for sewer service. The conditions under which the ~~above mentioned~~ additional permit is required are based on quantities and constituents of wastewater discharged into the District's sewerage facilities. Section 7 ~~herein~~ sets forth these requirements. The applicant shall comply with all Federal and State requirements including, but not by way of limitation, any and all

requirements of the Environmental Protection Agency and any commitments for reimbursements required by the Environmental Protection Agency in excess of the charges of the District. These requirements are set forth in the Federal Water Pollution Control Act and the Code of Federal Regulations, which by this reference are herein incorporated as though set forth in full.

**4.2.5 Compliance with Law; Additional Approvals.** ~~By applying for service,~~ the applicant for a water, sewer, recycled water, or natural treatment system service permit ~~under these Rules and Regulations must state thereon that he~~ agrees to comply with the requirements of any and all applicable Federal, State, and local statutes, ordinances, regulations and other requirements. The District may, at its discretion, require specific prior approval of any permit by any Federal, State, or local agency having jurisdiction over or an interest in the operation of the District's facilities.

**4.2.6 Additional Requirements.** Upon receipt of an application, the Manager shall review the application and make ~~such~~ any investigation ~~relating thereto~~ ~~as~~ he deems necessary. The Manager may prescribe requirements in writing to the applicant as to the facilities necessary to be constructed, the manner of connection, the financial requirements, and the use of service including the availability of adequate water, sewerage, recycled water, and natural treatment system facilities, and in cases of sewer service pretreatment facilities, if necessary, to insure initial and future continued compliance with the District's Rules and Regulations and any other applicable requirements.

~~Permits for water, sewer, recycled water and natural treatment system service and any connection for service made as provided in the permit issued under these Rules and Regulations pursuant to receipt of an application for such service shall be subject to the following conditions:~~

4.3 PERMITS

4.3.1 **Compliance.** The applicant shall adhere to requirements prescribed by these Rules and Regulations and to any additional requirements prescribed by the Manager or by the Board, or both, to insure compliance with the District's Rules and Regulations as to obtaining water, sewer, recycled water and natural treatment system service and as to characteristics, quality, and quantity of recyclable and non-recyclable sewage that the District is willing to receive into its facilities.

~~4. —~~ **Payment Prior to Permit Issuance.** The applicant shall pay the District's specified fees and charges prior to the issuance of a permit. These charges are ~~as~~ set forth in Exhibit B ~~and the respective portions thereof, which set forth applicable rates and charges of the District. Exhibit B hereto and the rates and charges provided for therein are by this reference incorporated herein,~~ and may be changed by the District from time to time. ~~In such instances, a revised Exhibit B or a portion thereof will be substituted to these Rules and Regulations.~~

4.3.2 ~~In instances where~~ If assessment bond ~~proceedings provide~~ proceeds finance facilities normally funded by connection fees or by a developer subject to reimbursement, ~~such then those~~ assessments ~~shall~~ must be paid concurrently with the payment of ~~such the~~ associated connection fees. The Board may defer in its discretion ~~such the~~ payment of any such assessment bonds in instances when an interim nonresidential use is to occur.

4.3.3 **Termination of Service.** By reason of circumstances beyond the control of the District, or in order to protect the facilities of the District, or for the protection of the public health, safety, and welfare of the residents or property owners of the District, ~~the District may terminate service may be terminated~~ under the conditions set forth below:

(1) Water, sewer, recycled water, and/or natural treatment system service may be terminated on a temporary or permanent basis in the manner provided for in Section 7 or Section 14 ~~herein~~ at any time the ~~applicant's, owner's, applicant's, owner's,~~ applicant's, owner's, or customer's operations do not conform to the applicable requirements, as provided for herein.

(2) The District may terminate recycled water service on a temporary basis at any time recycled water at the terminal point of the District's reclamation plant does not meet the requirements of regulatory agencies, including those prescribed by the State of California, Administrative Code, Title 22, Chapter 4. Recycled water service will, in ~~such that~~ case, be restored ~~at such time that~~ when the recycled water at the terminal point of the

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reclamation plant again meets the requirements of regulatory agencies or ~~at such time that~~when the District supplements the recycled water system from sources other than the reclamation plant.

- 4.3.4 **Limit of Liability.** The District shall not be liable for any damage by water or recycled water or otherwise resulting from defective plumbing, broken or faulty services, or water or recycled water mains; or resulting from any condition of the water or recycled water itself, or any substance that may be mixed with or be in the water or recycled water as delivered to any customer. All applicants for service connections or water or recycled water service shall be required to accept such conditions of pressure and service as are provided by the distribution system at the location of the proposed service connection and to hold the District harmless from all damage arising from low pressure or high pressure conditions or from interruptions of service. The District shall not be liable for any damage by sewage or inadequate capacity, from defective plumbing, broken or faulty upper or lower laterals, sewers, or collection systems resulting from any conditions beyond the control of the District or otherwise.

### 4.4 SIZE, LOCATION, AND INSTALLATION OF SERVICE LINE OR LOWER LATERAL

- 4.4.1 **Water and Recycled Water Service Lines.** The District ~~reserves the right to~~may determine the size of the water and recycled water service lines, the service connections, and the meters and ~~shall~~will also ~~have the right to~~determine the kind and size of backflow protection devices for potable water service, in accordance with Section 4.10, and any and all other appurtenances to the service. The water or recycled water service lines shall be installed to a curb line or property line of the customer's property, abutting upon a public street, highway, alley, easement, lane, or road (other than a freeway) in which are installed water and/or recycled water mains of the District.

#### ~~1.~~ **Lower Lateral and Lateral Connections**

- 4.4.2 **.** The District ~~shall~~may determine and specify in the permit the size, location, and manner of installing the lower lateral. Such design shall be in accordance with the District's Procedures Guide and Construction Manual. If a lower lateral is installed by the applicant, owner, or customer, the lower lateral joints shall remain exposed until they have been inspected and approved by the District. The size, slope, alignment, and materials of construction of the lower lateral and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling of the trench shall conform to the District's Procedures Guide and Construction Manual. The size, slope, alignment, and materials of construction of the upper lateral and the methods to be used in excavating, placing of the pipe, jointing, testing,

and backfilling of the trench shall conform to the applicable plumbing code(s) enacted and enforced by the cities of Irvine, Laguna Beach, Lake Forest, Newport Beach, Orange, Santa Ana, and Tustin, as well as by the County of Orange or its successor.

4.4.3 **Natural Treatment System Design.** The District reserves the right to give final approval of the design of natural treatment systems by developers. ~~Such~~ The design ~~shall~~must be in accordance with the District's Procedures Guide, Construction Manual, and NTS Design Guidelines.

#### 4.5 LIMITATIONS ON SERVICE CONNECTIONS:

~~No permit shall~~Permits will be issued ~~except on~~according to the following conditions:

##### 4.5.1 Water Service Connections

(1) Each residence and/or building under separate ownership must be provided with a single and separate water service connection and water meter except under special conditions as determined by the District. Except as provided below, two or more buildings under one ownership and on the same lot or parcel of land ~~shall~~must be supplied by a single water meter. A separate landscape irrigation meter ~~shall be~~is required for a property under ~~certain~~the conditions described in Section 4.16.

(2) The District reserves the right to limit the number of buildings, such as apartments, or the area of land under one ownership to be supplied by one water service connection and water meter.

(3) Except for a condominium building, not more than one water meter for domestic or commercial supply shall be installed for one building, except under special conditions as determined by the District.

(4) A water service connection and water meter ~~shall~~must not be used to supply adjoining property of a different owner, or to supply property of the same owner across a street or alley.

(5) When property provided with a water service connection and water meter is subdivided, ~~such~~that connection and meter ~~shall~~will be considered as serving the lot or parcel of land that it directly or first enters. Additional water mains and/or service lines will be required for all subdivided areas in accordance with these Rules and Regulations.

(6) All water used on any premises where a meter is installed must pass through the meter. Customers ~~shall~~will be held responsible and charged for all water passing through their meters.

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(7) Every water service ~~shall~~will be equipped with an angle curb stop or wheel valve on the inlet side of the meter; ~~such that~~ valve or angle curb stop ~~being~~is intended exclusively for the use of the District in controlling the water supply through the water service line. If the curb stop or wheel valve is damaged by the customer's use to an extent requiring replacement, ~~such that~~ replacement ~~shall~~will be at the customer's expense.

(8) If the customer's rate of consumption results in excessive wear of the meter, or is such that the meter is unable to measure the flow of water accurately, the District may increase the size of the meter and require payment of the actual cost of installing the new meter.

(9) Fire protection systems must not be supplied through District meters that serve more than one residential unit.

(10) As of July 1, 2018, water meter service lines must not be combined, connected or looped on the customer side. Private or customer side service lines must be kept independent from other service lines and supply independently plumbed zones within the same building. Any water meter service lines that were combined, connected, or looped on the customer side and permitted by the District prior to July 1, 2018 will be considered legal non-conforming uses and may remain (subject to permit) unless and until the property is redeveloped.

### 4.5.2 Lower Laterals

(1) For single family detached unit residential development a separate and independent lower lateral ~~shall~~must be provided for every individual parcel or building under individual ownership.

(2) For condominium developments the following minimum number of lower laterals ~~shall~~must be provided:

(a) *Non Stacked*: 1 lower lateral per every two units — Minimum 4" size.

(b) *2-Two-Story Stacked*: 1 lower lateral per every four units - Minimum 6" size.

(c) *Multi-Story*: 2 lower laterals per building — Minimum 6" size.

(3) For apartment developments the following minimum number of lower laterals ~~shall~~must be provided: 1 lower lateral per building — Minimum 6" size



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(4) The District reserves the right to limit the number of buildings or the area of land under one ownership to be connected to one lower lateral.

(5) When property provided with a lower lateral is subdivided, ~~such that~~ lower lateral ~~shall~~ will be considered as serving the lot or parcel of land that it directly or first enters. Additional sewers and/or lower laterals may/will be required for all subdivided areas in accordance with these Rules and Regulations.

### 4.5.3 Recycled Water Service Connections

(1) The District reserves the right to limit the area of land under one ownership to be supplied by one recycled water service connection and recycled water meter.

(2) A recycled water service connection and recycled water meter shall not be used to supply adjoining property of a different owner.

(3) When property provided with a recycled water service connection and recycled water meter is subdivided, such connection and meter shall be considered as serving the lot or parcel of land that it directly or first enters. Additional recycled water mains and/or recycled water service lines will be required for all subdivided areas in accordance with these Rules and Regulations.

(4) All recycled water used on any premises where a meter is installed must pass through the meter. Customers shall be held responsible and charged for all recycled water passing through their meters.

(5) Every recycled water service line shall be equipped with an angle curb stop or wheel valve on the inlet side of the meter; such valve or angle curb stop being intended exclusively for the use of the District in controlling the recycled water supply through the recycled water service line. If the curb stop or wheel valve is damaged by the customer's use to an extent requiring replacement, such replacement shall be at the customer's expense.

~~District in controlling the recycled water supply through the recycled water service line. If the curb stop or wheel valve is damaged by the customer's use to an extent requiring replacement, such replacement shall be at the customer's expense.~~

4.6 RELOCATION OF WATER SERVICE LINE, LOWER LATERAL, OR RECYCLED WATER SERVICE LINE OR FIRE HYDRANT

~~Should~~ If a water service line, lower lateral, or recycled water service line or fire hydrant installed pursuant to the request of the applicant, owner, or customer ~~beis~~ of the wrong size or installed at a wrong location, ~~then~~ the cost of all changes required ~~shall~~must be paid by the applicant, owner, or customer. All water services, lower laterals, and recycled water services and fire hydrants provided prior to final street improvements ~~shall~~will be considered temporary and the costs for all repairs or changes required to be performed by the District ~~shall~~must be paid by the applicant, owner, or customer.

4.7 ILLEGAL CONNECTIONS, DIVERSIONS, OR TAMPERING

~~4.7.1 No person shall make connection to the District's water, sewer, recycled water or natural treatment system facilities without a permit or except as provided in the permit issued by the District. Specifically, but not by way of limitation as to any connection to the District's sewerage facilities;~~  
~~no~~Definitions.

(1) "Divert" means to change the intended course or path of water or wastewater into or out of the District's system without the authorization or consent of the District. Any unpermitted discharge into the District's facilities, and any unpermitted withdrawal of potable or recycled water from the District's facilities is a "diversion."

(2) "Tampering" means the unauthorized entering, breaking, damaging, destroying, uncovering, defacing, rearranging, injuring, altering, or interference with any temporary or permanent structure (including any pipeline), equipment (including any pumps or back-flow devices), or appurtenance owned by the District or that is part of the District's water, wastewater, recycled water, or natural treatment systems. Any unpermitted connection to the District's facilities is "tampering."

4.7.2 Prohibition. Diversion and tampering are prohibited.

4.7.14.7.3 Specific Prohibited Diversions to Sewers: The following must not be connected to a District sewer facility (or to a building sewer or building

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drain that in turn is connected directly or indirectly to a District sewer facility); roof downspouts, exterior foundation drains, areaway drains, car wash pads not covered by a roof, or other sources of surface runoff or ground water shall be connected to a District sewer facility or to a building sewer or building drain that in turn is connected directly or indirectly to a District sewer facility.

**4.7.4 Penalties for Diversion or Tampering.** Diversion and tampering are crimes under the California Penal Code and are violations of the Water Code and the Civil Code. Diversion and tampering may be subject to charges and penalties, as well as referral to the District Attorney for criminal prosecution. All charges and penalties shall be applicable and collected in accordance with section 14 and Exhibit B of these Rules and Regulations and pursuant to all other applicable laws and regulations.

### 4.8 METER TESTING

4.8.1 If a water or recycled water meter fails to register during any period or is known to register inaccurately, the customer shall be charged ~~with an using a~~ reasonable average daily consumption during the same month shown by the reading of the meter when in use and registering accurately based on prior consumption or based other reasonable calculation in the absence of historical consumption data. ~~Any customer may~~ Upon the customer's written demand that and payment of a testing deposit, the District will examine and test the meter through which water or recycled water is being furnished ~~be examined and tested by the District for the purpose of ascertaining whether or not to determine whether~~ it is correctly registering the amount of water or recycled water being delivered through it. ~~Such demand shall be in writing and shall be accompanied by a deposit equal to the charge for testing as determined by the District.~~

4.8.2 ~~Upon receipt of such demand and deposit, if the District will have determines~~ the meter ~~examined and tested and, if upon such test the meter shall be found to register over two percent (2%) more water than actually passes through it, then the District shall properly adjust the meter or replace the meter shall be properly adjusted or another meter substituted therefore, return the deposit shall be returned, and adjust the water or recycled water customer's bill for the current month will be adjusted proportionately accordingly.~~ If the meter ~~should be found to register registers~~ not more than two percent (2%) more water than actually passes through it, ~~the deposit shall be retained by then~~ the District will retain the deposit as the expense of making the test testing cost.

### 4.9 FIRE HYDRANTS

Fire hydrants connected to the ~~District's mains~~ District's mains and fire hydrants that are served by an applicant, owner, or customer fire line are provided for the

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sole purpose of furnishing water to fight fires and shall be opened and used only by persons authorized by the District. ~~In the event that~~If the District ~~authorizes~~permits the use of ~~such~~

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4.9.1 hydrants for purposes other than extinguishing fire, ~~such authorization shall that~~ permit will be granted only through the procedures and provisions contained in Section 4.1 of these Rules and Regulations. Rates to be charged for water extracted from ~~such a~~ hydrant for temporary construction use or other purposes ~~shall will~~ be in accordance with the applicable schedule contained in Exhibit B to these Rules and Regulations.

4.9.2 Unpermitted hydrant use is hereby deemed a waste of water, and is be subject to interim or permanent revocation of the underlying connection permit and a fees or fines pursuant to Section 14 and Exhibit B of these District Rules and Regulations. Interim and or permanent revocation of water service provided for the sole purpose of fighting fires may require, pursuant to Orange County Fire Authorities regulations, the applicant, owner, or customer to provide sufficient fire protection and or fire watch at at no cost to the District.

### 4.10 WATER BACKFLOW PREVENTION

#### 4.10.1 General

(1) The purpose of these provisions is to protect the District's potable water supply against actual or potential cross-connections by isolating, within the premises, contamination or pollution that may occur because of undiscovered or unauthorized cross-connection on the premises. These provisions are in accordance with the California Administrative Code, Title 17 (Public Health), entitled "Regulations Relating to Cross-Connections."

(2) These provisions shall be in addition to and not in lieu of the controls and requirements of other regulatory agencies, such as local governmental agencies and local and State Health Departments. These regulations are intended to protect the District's potable water supply and are not intended to provide regulatory measures for protection of users from the hazards of cross-connections within their own premises. Notwithstanding these provisions, the District accepts no responsibility for cross-connections or resulting hazards or contamination.

(3) The District has developed an active cross-connection control program with a Cross-Connection Control Inspector to administer the program. Any questions or notifications regarding these provisions or the program should be directed to the Inspector.

(4) Backflow prevention devices, as required in these provisions, shall be provided installed, tested, and maintained by the applicant, owner, or customer at his expense. For specific materials and installation requirements, see the District's Procedures Guide and Construction Manual. The devices shall be located on the premises served and shall not be on the District's portion of the system. All devices shall be readily accessible for testing and maintenance and no device shall be submerged at any time.

(5) When water service is initiated, the applicant must provide sufficient information, including plumbing and building plans, to enable the District to determine the level of backflow protection required. The proper backflow protection, as determined by the District, shall then be installed and inspected before water service is provided.

(6) Each time there is a change of customer (either owner or tenant) on any commercial or industrial premise, the new or previous owner or customer shall notify the District immediately. The District will then reassess the level of protection required. Also, any alterations to existing onsite facilities that may affect the level of protection required must be reported immediately to the District.

(7) From time to time, representatives of any health agency having jurisdiction and/or the District may conduct evaluations of any premises where water service is provided by the District. The purpose of such evaluations is to determine if any actual or potential cross-connections exist, if there are any unapproved uses, and to assess compliance with applicable laws and regulations. The applicant owner or customer shall provide reasonable cooperation in facilitating such evaluations.

(8) Additional information concerning backflow prevention may be obtained from the "Manual of Cross-Connection Control," Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, School of Engineering.

4.10.2 **Where Protection is Required.** Backflow protection for the District's potable water supply shall be provided on each water service connection to:

(1) ~~premises-Premises~~ having an auxiliary water supply such as recycled or non-potable water. If the auxiliary water supply is approved for potable use by the public health agency having jurisdiction, backflow protection will not be required.

(2) ~~premises-Premises~~ on which any substance is handled in such fashion that could permit entry into the water system. This shall include the handling of process waters and waters originating from the District's system that have been subject to deterioration in sanitary quality.

(3) ~~premises-Premises~~ that have internal cross-connections, unless such cross-connections are abated to the satisfaction of the District and approved by the state or local health agency.

(4) ~~premises-Premises~~ having intricate plumbing and piping arrangements or where not all portions of the premises are readily accessible for inspection purposes.

(5) ~~premises-Premises~~ having a repeated history of cross-connections being established or re-established.

(6) ~~p~~Premises being served water through a temporary above ground water service connection.

4.10.3 **Type of Protection.** The type of protection required is related to the degree of hazard that exists on the premises served. The type of protective device that may be required (listed in increasing level of protection) includes: Double Check Valve (DC), Reduced Pressure Principle Backflow Prevention Device (RPPD), and an Air Gap Separation (AG). The water user may choose a higher level of protection than required by the District. The minimum types required, relative to various situations shall be as required by California Administrative Regulations, Title 17, or to the extent not covered thereby, as determined by the District and/or health agency.

4.10.4 **Inspection and Maintenance of Protective Devices.**

(1) It shall be the duty of the water user on any premises on which backflow prevention devices are installed to have competent inspections made at least once a year, or more often in those instances where successive inspections indicate repeated failure. All inspections and testing shall be performed by a tester certified by the local health department. The devices shall also be tested immediately after they are installed, relocated or repaired and shall not be placed in service unless they are functioning as required.

(2) The District will notify the applicant, owner or customers when routine testing is needed and also supply them with the necessary forms that must be filled out each time a device is tested or repaired. The notice will include the date when the test must be completed, generally 30 days after the date of the notice. The completed, original forms shall be returned to the District. Copies of the completed forms shall also be sent to the local health department. The applicant, owner or customer shall notify the District any time the device is repaired, replaced or relocated. A device shall be repaired or replaced by, and at the expense of the water user, whenever it is found to be defective. Records of all such tests and repairs shall be maintained by the water user. The District may request records regarding any backflow prevention device on the premises.

(3) A device may be removed for repair or replacement, provided that (a) water use is discontinued until repair or replacement is completed and the device is returned to service, or (b) the service connection is equipped with other backflow protection approved by the District. A retest will be required following the repair or replacement of the device.

(4) A device may be relocated following confirmation by the District that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the device.

**4.10.5 Marking Safe and Unsafe Water Lines**

(1) Where the premises other than single-family residences contain dual or multiple water systems and piping, the exposed portions of pipelines shall be painted, banded, or marked at sufficient intervals to distinguish clearly which water is safe for drinking purposes and which is not safe. All outlets intended for drinking purposes shall be plainly marked to indicate that fact.

(2) For single-family residences which have recycled water services provided, only those water outlets which serve non-potable water shall be marked with the words “Recycled Water - Do Not Drink.”

(3) For single-family residences which contain water systems, all potable water service piping shall all be designed and constructed in compliance with IRWD’s Procedures Guide.

**4.10.6 Reporting of Pollution or Contamination.** In the event of contamination or pollution of the potable water system due to a cross-connection on the premises, the local health officer and District shall be promptly advised by the person responsible for the water system so that appropriate measures may be taken to mitigate the contamination or pollution.

**4.10.7 Water Service Termination.**

(1) ~~When~~If the District determines that water uses or conditions encountered by the District represent a clear and immediate hazard to the District’s water supply that cannot be immediately abated, the District shall institute the procedure for discontinuing water use. Conditions or water uses that create a basis for water service termination shall include, but are not limited to, the following:

- (a) Refusal to install a required backflow prevention device.
- (b) Refusal to test a backflow prevention device.
- (c) Refusal to repair a faulty backflow prevention device.
- (d) Refusal to replace a faulty backflow prevention device.
- (e) Direct or indirect connection between the District’s water system and a sewer.
- (f) Unprotected direct or indirect connection between the District’s water system and a system or equipment containing contaminants.
- (g) Unprotected direct or indirect connection between the District’s water system and an auxiliary water system.



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- (h) A situation which presents an immediate health hazard to the District's water system, as determined by the health agency or the District.
- (i) At single-family residences which contain water systems, the installation of any piping shall be in conformance with IRWD's Procedures Guide.

(2) For conditions 4.10.7(1, 2, 3, 4), a, b, c, d or 9j above, the District will terminate service to a customer's premises as follows:

- (a) First Notice. The District will notify the applicant, owner or customers when routine testing or corrective action is needed and also supply them with the necessary forms that must be filled out each time a device is tested or repaired. The notice will include the date when the test or corrective action must be completed, generally 30 days after the date of the notice. ~~The completed, original forms shall be returned to the District. Copies of the completed forms shall also be sent to the local health department.~~

(1) The completed, original forms shall be returned to the District. Copies of the completed forms shall also be sent to the local health department.

(2) The applicant, owner or customer shall notify the District any time the device is repaired, replaced or relocated.

- (b) Second Notice. A second notice shall be sent to each water user ~~who~~that does not have the ~~ir~~ backflow prevention device tested or take other corrective action as prescribed in the first notice within the time allowed. The second notice will give the water user a 15-day period to have the ~~ir~~ backflow prevention device tested or take other corrective action.

- (c) Third Notice. If no action is taken within the 15-day period, then a third notice will be sent to the water user giving the water user a final 10-day period to have the device tested or take other corrective action.

- (d) Notice of Service Termination. If no action is taken within the 10-day period, then the District will notify the user that water service will be terminated and proceed to turn off the water until the device is tested and passes the test or other corrective action is taken and approved. If no action is taken within the time period stated in the District's Notice of Service Termination, then water service may be terminated in accordance with Section 14, ENFORCEMENT AND PENALTIES.

~~If no action is taken within the allowed time period, water service may be terminated in accordance with Section 14, ENFORCEMENT AND PENALTIES.~~

(3) For conditions ~~5, 6, 4.10.7(1)e, f, g,~~ or ~~8h~~ above, the District will make reasonable effort to advise the water user of intent to terminate water service. Then, the District will terminate the water service and lock the service valve in the closed position. Water service will not be reinstated until correction of all violations has been approved by the District. Failure to correct the violations may result in permanent termination of water service in accordance with Section 14, ENFORCEMENT AND PENALTIES.

#### 4.11 SEWER BACKFLOW PREVENTION

4.11.1 Residences and other buildings served by the District's sewerage facilities shall be protected from the backflow of wastewater in the lower laterals as herein provided. Drainage piping serving fixtures, the flood level rims of which are located below the rim elevation of the uphill manhole of the District sewer and above the crown level of the District main sewer, shall drain by gravity into the District main sewer and shall be protected from backflow of sewage by installing an approved type backwater device, and each such backwater device shall be installed only in that branch or section of the drainage system that receives the discharge from fixtures located below the elevation of the curb or property line.

4.11.2 Backwater devices required by this section ~~shall~~must be located where they will be readily and easily accessible for inspection and repair at all times and, unless continuously exposed, ~~shall~~must be enclosed in a watertight masonry pit fitted with an adequately sized removable cover.

4.11.3 The applicant, owner, or customer ~~shall~~must provide and maintain, at his expense, backwater devices and appurtenances as required in this section. Each such device ~~shall~~must be located on the property it protects and ~~shall~~must not be allowed in the public right of way.

#### 4.12 USE OF RECYCLED WATER

4.12.1 **Determination of Feasible and Authorized Uses.** In accordance with the provisions of Section 1, the uses of recycled water may include, but not by way of limitation, landscape irrigation, agricultural irrigation, natural treatment system irrigation, construction water, industrial process water, cooling tower makeup water, water for flushing toilets and urinals, trap primers in dual-plumbed buildings, and public and private recreational impoundment. Each such use must be considered for approval by the District on a case-by-case basis, and the District may determine in its discretion whether it is feasible to furnish recycled water for the specific use involved. Prior to approving such uses, the District may, in its discretion, set forth specific requirements as conditions to providing such services

and/or require specific prior approval from the appropriate regulatory agencies. The District's determination of feasibility will be based on the following factors:

- (1) Whether recycled water may be furnished for the intended use at a reasonable cost to the customer and the District;
- (2) Whether recycled water use is in accordance with the standards of treatment and water quality requirements set forth in Title 22, Chapter 4, of the Code of California Regulations and all other applicable federal, state and local laws and regulations;
- (3) Whether the use of recycled water can be made in a manner not detrimental to public health.

#### 4.12.2 Requirement to Use Recycled Water

The District will identify customers who are located within the District's service area and within an area identified in the Plan as an area capable of receiving service from the District's recycled water system and will determine the feasibility of providing recycled water service to these customers. The District will also review applications for new permits to determine the feasibility of providing recycled water service to these applicants. If recycled water service is determined by the District to be feasible, applicants for new water service ~~shall be required~~ **to must** install onsite facilities to accommodate both potable water and recycled water service in accordance with these Rules and Regulations. The District may also require existing customers to retrofit existing onsite water service facilities to accommodate recycled water service. Potential recycled water customers identified by the District that elect not to use recycled water that is available but can use recycled water in compliance with State and County regulatory requirements, these Rules and Regulations and can meet the criteria identified in Section 13550 of the California Code of Regulations, may be subject to the provisions in Section 4.12.5 of this document. Potential recycled water customers that believe recycled water cannot be used at their site shall provide written justification to support their position. The District assumes identified customers meeting the above referenced criteria can use recycled water until or unless the potential recycled water customer can provide documentation otherwise. If the District's recycled water distribution system has not yet been extended to the vicinity of the customer's property, the District may require a written commitment from the customer to use recycled water when the extension has been made. A customer that does not provide a written commitment may be subject to the provisions in Section 4.12.6. If the District does not require the use of recycled water service, the customer may obtain recycled water service upon request but only if the District has determined that recycled water service to the customer is feasible and authorizes such use.

#### 4.12.3 Installation Costs

Except as otherwise provided herein, when an existing customer is required by the District to convert to recycled water service, the customer will pay the reasonable capital costs of retrofitting the onsite water service facilities (as defined in Section 4.12.4.1) and the District will provide the offsite facilities necessary to deliver recycled water to the meter. Applicants for new

or expanded water service shall be responsible for the full capital cost of onsite recycled water facilities and applicant-furnished offsite distribution facilities required as a condition of service pursuant to Section 5.

#### 4.12.4 Process of Determination

The following describes the process by which the District will determine which potential recycled water customers may be served, contact by District, response by potential recycled water customers and appeal provision to the District's Board of Directors:

- (1) District staff will identify potential sites at which it believes recycled water may be used. Identified potential recycled water use sites must meet the following criteria:
  - (a) Recycled water is served to an available location. "Available location" ~~shall mean~~ means (1) the District's recycled water distribution system is in a street adjacent to the subject property, or (2) the District has notified a customer that if a written commitment to use recycled water has been received from the customer, the District will complete an extension of the distribution system to a street adjacent to the customer's property, and the customer has failed or refused to provide the written commitment, and any determination sought by the customer pursuant to 4.12.4.(3) through 4.12.4.(6) has become a final and non-appealable determination that recycled water use is feasible;
  - (b) The District can provide recycled water in the needed volume, quality, pressure and flow rate;
  - (c) The anticipated use(s) at the subject site are allowed for in Title 22 of the California Code of Regulations;
  - (d) The construction/retrofit can be accomplished in compliance with Federal, State, County and District requirements;
  - (e) The anticipated use(s) will not negatively impact public health;
  - (f) The use of recycled water will not diminish water rights; and
  - (g) Recycled water is available at a reasonable cost, meaning:
    - (1) The commodity cost for recycled water is less than the commodity cost for a like quantity of ~~non-interruptible~~ potable water; and
    - (2) The net customer cost of facilities and appurtenances required to be installed can be amortized by the difference in potable

and recycled water rates over a period of not more than one-hundred and twenty (120) months.

- (2) District will contact potential recycled water use site representative to discuss the use of recycled water.
- (3) Potential recycled water customers shall respond to District inquiries as to its ability to use recycled water. Customer and IRWD shall engage in dialogue to determine if recycled water can be used. At the completion of dialogue, the potential recycled water customer shall have ninety (90) calendar days to indicate its intent regarding the use of recycled water. If recycled water can be used, the customer shall work with the District toward the successful introduction and use of recycled water including obtaining regulatory approvals. If, according to the customer, recycled water cannot be used, customer shall provide written documentation to the General Manager to support their position.
- (4) District staff will review documentation provided by customer supporting why recycled water cannot be used.
  - (a) In the case of potential customers that provide sufficient evidence as to why recycled water cannot be used, District shall consider the matter closed; or
  - (b) In the case of potential customers that elect not to respond to District inquiries or do not provide documentation as to why recycled water cannot be used, the General Manager or designee shall report those occurrences to the Water Resources Policy and Communications Committee. With Water Resources Policy and Communications Committee approval, the General Manager or designee shall send a certified letter to the potential recycled water customer urging contact with the District to continue meaningful dialogue regarding the potential use of recycled water. The potential recycled water customer shall have thirty (30) calendar days in which to contact the District. If the potential recycled water customer does not respond within thirty (30) calendar days, a second certified letter will be sent notifying the potential recycled water customer that the billed per Section 4.12.5 of this document beginning sixty (60) calendar days after notification.
- (5) The potential recycled water customer who contends recycled water is not feasible based on criteria described in Sections 4.12.4.(1) may appeal to the General Manager by filing a written appeal within thirty (30) calendar days of the date of the notice described in Section 4.12.4.(4.). The General Manager shall consider the information provided and respond within thirty (30) calendar days to the potential recycled water customer.

~~(30) calendar days to the potential recycled water customer.~~

(6) The decision of the General Manager may be appealed to the Board of Directors in writing filed with the District Secretary within thirty (30) calendar days of the General Managers decision. The Board of Directors will conduct a hearing to consider the appeal at the next regularly scheduled Board meeting. The decision of the Board of Directors shall be transmitted in writing to the potential recycled water customer within thirty (30) calendar days of the hearing. The decision of the Board of Directors is final.

**1. Recycled Water Non-Conforming Use Billing Rate**

4.12.5 For potential recycled water customers that elect not to comply with section 4.12.2 ~~of this document~~ (“Requirement to Use Recycled Water”) and fail to provide reason(s) why recycled water cannot be used, all metered potable water use at the site that could otherwise be served with recycled water shall be billed at the applicable potable water rate plus the “non-conforming use” rate until the site is converted or acceptable justification as to why the recycled water cannot be used is provided. No refunds will be provided unless a justification is accepted by the District.

4.12.6 **Potential Recycled Water Customer Non-Participation/Non-Cooperation.** Potential recycled water customers identified and contacted by the District that elect not to use recycled water or are not cooperating with the District as defined in Section 4.12.4 of this document, will be billed as defined in Section 4.12.5 of this document. In cases where the potential recycled water customer elects not to pay their bill, that customer will be subject to the provisions in Section 1.20 (“Delinquency and Service Restoration Charges”) of the District’s prevailing “Schedule of Rates and Charges.”

4.12.7 **Termination of Prior Recycled Water Service.** If an end user that was previously accepting recycled water elects to suspend or terminate delivery of recycled water and use potable water for reasons other than those identified in Section 4.12.4 of this document, that end user may be subject to the provisions in Section 4.12.6.

**4.13 SCHEDULING RECYCLED WATER; SUPPLY OF OTHER WATER TO RECYCLED WATER DISTRIBUTION SYSTEM**

Recycled water shall be used in compliance with District’s “Procedural Guidelines and General Design Requirements.” The District reserves the right to control and schedule the use of recycled water if, in the opinion of the Manager or his designated representative, scheduling is necessary for purposes including, but not limited to, the maintenance of an acceptable working pressure in the recycled water system and providing for reasonable safeguards in relation to public health. Guidelines for such scheduling shall be as deemed appropriate by the Manager or his designated representative. The District reserves the right to supply potable or non-potable water to the District’s recycled water distribution system from time to time, as the Manager or

his designated representative determines to be necessary or useful to augment the recycled water supply to such system. The supply of such other water to the system shall be at the District's discretion and shall not change the rates or charges billed for recycled water service nor relieve any recycled water customer of the applicable requirements of the Rules and Regulations, including but not limited to Section 6.2.2.

#### 4.14 EMERGENCY CONNECTIONS TO RECYCLED WATER SYSTEM

If in the opinion of the District, an emergency exists whereby in all or a portion of the recycled water system recycled water is not available, the Manager may approve a temporary connection to the potable water system. Before ~~such~~ temporary connection is made, the portion without recycled water ~~shall~~**must** be isolated by an air gap separation from the remainder of the recycled water system either at individual services or on the offsite system, as determined by the District and an approved backflow prevention device or devices of the type determined in accordance with Section 4.10 herein, shall be installed on the potable water line or lines in accordance with these Rules and Regulations and any and all applicable rules and regulations of the State and local health departments. Before the emergency connection or connections shall be removed, whether onsite or offsite, the customer shall notify the District's cross-connection department. This emergency connection or connections shall be removed before connection is re-established to the remainder of the recycled water system.

#### 4.15 RESPONSIBILITY FOR MAINTENANCE

4.15.1 **Water and Recycled Water.** The applicant, owner, or customer is responsible for maintaining all onsite facilities that are under the ownership of parties other than the District.

4.15.2 **Sewer - Single Family Units.** The applicant, owner, or customer is responsible for maintenance of the upper lateral and lower lateral. Any upper lateral or lower lateral shall be cleared and cleaned by the applicant, owner, or customer at his own expense. The upper lateral is the responsibility of the owner to repair or reconstruct. The lower lateral is the responsibility of the District to repair or reconstruct.

#### ~~4.13.1~~ **Sewer - Multi-Dwelling Units (Condominium Complexes and Townhomes)**

4.15.3 **).** Maintenance of onsite sewer main lines shall be the responsibility of the District up to the main line cleanout or last manhole. In order to qualify for such maintenance, these facilities must be fully dedicated to the District, including proper easements, and approved by the Manager or his designee. All laterals upstream of the main line are the responsibility of the applicant, owner or customer to maintain, repair, or reconstruct

4.15.4 **Sewer – Commercial and Industrial Properties.**

(1) If the property has a single sewer lateral connection, the applicant, owner, or customer is responsible for maintenance of the upper lateral and lower lateral. Any upper lateral and lower lateral shall be cleared and cleaned by the applicant, owner, or customer at his own expense. The upper lateral is the responsibility of the owner to repair or reconstruct. The lower lateral is the responsibility of the District to repair or reconstruct.

(2) If the property has an onsite sewer collection system, the maintenance of onsite sewer main lines shall be the responsibility of the District up to the main line cleanout or last manhole. In order to qualify for such maintenance, these facilities must be fully dedicated to the District, including proper easements, and approved by the Manager or his designee. All laterals upstream of the main line are the responsibility of the applicant, owner, or customer to maintain, repair, or reconstruct.

#### 4.15.5 **Obstruction of or Deposit of Material in Meter Boxes or Hydrants**

(1) No person shall place, dispose, or deposit or permit the placement, disposal or deposit of oil, toxic, hazardous or contaminated liquid or waste, trash, dirt, building materials or other substances, objects or obstructions in, on or around meter boxes, and it shall be the responsibility of each applicant, owner, or customer to prevent meter boxes, District hydrants or other District facilities from becoming obstructed or obscured by such applicant, owner, or customer's trees, shrubs, plants or in any other manner so as to impede their use or access to them or make their location difficult to determine.

(2) If such substances, objects or obstructions are not cleaned and removed or are permitted to obscure or impede such facilities, the District may, after providing reasonable notice to the applicant, owner or customer, accomplish the cleaning and removal and charge the applicant, owner or customer for the cost of doing so.

#### 4.15.6 **Natural Treatment Systems.** The developer shall be responsible for maintenance during the construction and establishment period as specified in the Procedures Guide and the NTS Design Guidelines.

~~The developer shall be responsible for the establishment and maintenance of the natural treatment system as specified in the Procedures Guide and the NTS Design Guidelines.~~

#### 4.16 **WATER EFFICIENCY, CONSERVATION AND MANAGEMENT PRACTICES**

4.16.1 As stated in Section 1 ~~herein~~, it is the desire of the District to effect conservation and efficient use of water resources whenever possible, such measures being consistent with legal responsibilities to utilize the water resources of the State of California and the District. Without limiting standards that may otherwise apply



pursuant to Section 4.1, facilities and fixtures shall meet the applicable water efficiency standards referenced in this section.

4.16.2 Facilities for irrigation of new or existing parks, median strips, landscaped public areas or landscaped areas, lawns, or gardens surrounding single-family homes, condominiums, townhouses, apartments, and industrial parks shall be designed and installed in such a way as to ~~conserve water, and~~ meet or exceed the water efficiency requirements of any applicable local or State standards.

4.16.3 After January 1, 2008 a separate landscape meter shall be required to provide new water service to a property with more than 5,000 square feet of landscape irrigated with potable water. This provision does not apply to single family residential connections, agricultural crops or landscape, or where water service has previously been provided.

4.16.4 Recycled water is considered a water resource by the District, therefore, the same restrictions shall apply for all uses of recycled water as for potable water.

4.16.5 Rate and extent of application of water shall be controlled by the user so as to minimize run-off from the irrigated areas.

4.16.6 All plumbing fixtures installed shall meet or exceed the applicable standards in effect at the time of service application.

#### 4.17 INTERIM WATER SERVICES

4.17.1 **General.** The District's potable water system has been master planned to serve the ultimate needs of residential, commercial, and industrial developments in the District's service area. Design and construction of facilities are phased in unison with the above mentioned developments. However, the District will provide service for interim uses whenever possible, although such uses shall be subject to the conditions set forth herein.

#### 4.17.2 Temporary Service Connections

(1) Temporary service connections are primarily installed for the convenience and use of individuals, contractors, and companies during construction work. However, they are not limited to construction purposes but may be installed for any use.

(2) The Contractor or other person applying for a meter or meters shall be held responsible for loss or damage to the meter from the time it is installed until it is removed, or until 48 hours after notice in writing has been given the District that the contractor or other person is finished using the meter.

(3) Flows through a 2 1/2 inch or larger temporary service fire hydrant meter shall be limited to a maximum of 250 gallons per minute, unless otherwise authorized in writing at the time of application. Any deliberate attempt on the

part of the applicant or user to increase the flow is just cause for the District to discontinue service.

(4) The District reserves the right to interrupt service without notice if such usage is causing pressure in the system to drop below an acceptable range.

(5) Each temporary service customer shall make every attempt to maintain a constant flow through the meter. To achieve this requirement, the customer may be required to provide and install a storage facility (construction tank, small interim reservoir, etc.), approved by the District, in conjunction with the meter.

(6) When using fire hydrants for temporary service connections, no more than one outlet per hydrant shall be used for this purpose; however, the use of siamese fittings approved by the District is acceptable provided that the additional flow does not significantly impair pressures in the distribution system.

(7) The maximum duration of time a temporary service may be applied for is six months. At the conclusion of six months, the customer may reapply for service, subject to approval from the District.

#### 4.17.3 Agricultural Service Connections

(1) The District reserves the right to regulate agricultural users without notice if pressures in the distribution system drop below the minimum acceptable range. The District reserves the right to interrupt agricultural service at any time without notice if such usage is causing pressures in the system to drop below a minimum acceptable range. When pressure is resumed to an acceptable range for a reasonable period of time, all regulated agricultural services will be returned to their requested flows. Repeated occurrences of pressures dropping below a minimum acceptable range may result in permanent discontinuation by the District of the agricultural user's service upon 30 days, notice.

(2) All requests for water and recycled water for agricultural purposes must be made 24 hours in advance of the intended use. Only authorized District personnel will set and adjust flows from all agricultural service connections.

(3) Water and recycled water for agricultural use shall be delivered at a constant rate.

(4) All changes in flows will be made between the hours of 7:00 a.m. and 3:00 p.m. All changes in flow shall be requested prior to 10:00 a.m. the day prior to the intended change.

SECTION 5: FACILITIES DESIGN AND CONSTRUCTION

5.1 GENERAL

All offsite water, sewer, recycled water and natural treatment system facilities and all onsite recycled water facilities shall be designed and constructed according to the requirements, conditions, and standards set forth in the Procedures Guide and Construction Manual which document is on file at the office of the District, and by this reference is incorporated herein.

The recycled water system, including both offsite and onsite facilities, shall be separate and independent of any potable water system.

Any required backflow prevention devices on potable water services and flow or pressure control devices shall be downstream of the meter and provided by the applicant, owner, or customer at his expense.

5.2 OFFSITE WATER, SEWER, RECYCLED WATER FACILITIES

Any water distribution, sewage collection, recycled water distribution system facilities determined by the District to be required to provide service within developments of the property within the District shall be provided by the applicant, owner, or customer at his expense.

Plans and specifications for all water distribution, sewer collection, recycled water distribution facilities shall be submitted to and approved by the District in advance of construction.

The District will assume responsibility for providing water, sewer, and recycled water service to the point of connection (individual lots for residential water and sewer service and residential yard recycled water irrigation service) of such development upon transfer to the District of title to all facilities in the required systems and any necessary easements therefore. All easements shall be in a form acceptable to the District and not subject to outstanding obligations to relocate such facilities or any deeds of trust, except in instances where such is determined by the Board or the Manager to be in the best interests of the District.

Modification or relocation of the meter or other facility which results in nonconformance with applicable provisions of these Rules and Regulations, the Procedures Guide or the Construction Manual is prohibited and shall be corrected at the expense of the applicant, owner, or customer. Upon failure or refusal of the applicant, owner or customer to make such correction, the District may, after providing reasonable notice to the applicant, owner or customer, make the correction and charge the applicant, owner or customer for the cost of doing so.

5.3 ONSITE RECYCLED WATER FACILITIES

Any onsite recycled water facility shall be provided by the applicant, owner, or customer at his expense. The applicant, owner, or customer shall retain title to all such onsite facilities.

Onsite recycled water facilities, in addition to conforming to the Procedures Guide and Construction Manual shall conform to local governing codes, rules, and regulations. The Cities of Costa Mesa, Irvine, Lake Forest, Newport Beach, Orange, Santa Ana, and Tustin, and the

County of Orange shall have authority over materials, equipment, design, and construction methods used for onsite recycled water facilities within their jurisdiction, provided that when the District's Procedures Guide and Construction Manual require a higher quality material, equipment, design or construction method than that required by the above local governing codes, rules, and regulations, the District's Procedures Guide and Construction Manual shall be controlling.

Plans and specifications and record drawings shall be prepared and submitted to the District in accordance with the Procedures Guide and Construction Manual. Plans and specifications must be approved by the District prior to commencing construction. Prior to commencement of service to any onsite system using recycled water, record drawings shall be provided and approved and the installed system shall be tested under active conditions to ensure that the operation is in accordance with the intent of these Rules and Regulations.

In accordance with Section 1 herein, in those areas where recycled water is not immediately available for use when the design area is ready for construction, and if the District has determined that recycled water will be supplied in the future, the onsite facilities shall nevertheless be designed to use recycled water. Provisions shall be made and these Rules and Regulations followed to allow for connection to the recycled water facilities when they become available. In the interim, potable domestic water will be supplied to the recycled water facilities through a temporary potable meter connection. A backflow preventer of the type determined in accordance with Section 4.10 herein will be required as long as the onsite facilities are using potable water. The backflow preventer shall be downstream of the meter and shall be a part of the onsite facilities. The District will remove the backflow preventer and will make the connection to the onsite facilities when recycled water becomes available.

#### 5.4 NATURAL TREATMENT SYSTEM FACILITIES

Natural treatment systems that are designated as capital facilities shall be designed and constructed by the District. All other natural treatment systems shall be designed, constructed and established by the developer in accordance with the District's Procedures Guide and the NTS Design Guidelines.

Plans and specifications for developer-constructed natural treatment systems shall be submitted to and approved by the District in advance of construction.

#### 5.5 CONVERSIONS OF EXISTING FACILITIES FOR RECYCLED WATER

Where it is required pursuant to Section 4.12.2 that any existing water system be converted to a recycled water facility, a comprehensive investigation shall be performed by or for the District. The facilities to be converted to recycled water use shall be investigated in detail, including review of any record drawings, preparation of required reports, and determinations by the District of measures necessary to bring the system into full compliance with these Rules and Regulations for recycled water service including, but not limited to Section 5.3 thereof and the District's Procedures Guide and Construction Manual. No potable water facilities shall be connected to or incorporated in the recycled water system that have not been approved for recycled water service by the District.

5.6 ALTERNATE FINANCING FOR AFFORDABLE AND/OR LOW INCOME HOUSING PROJECTS

5.6.1 **Request for Public Financing.** If property within the District for which water, sewer and/or recycled water service is requested will include not less than ten percent of the units as affordable and/or low income housing units as herein defined or has been designated by the City of Irvine, County of Orange, or other such entity for land use which requires that a portion of the units being developed shall be affordable and/or low income housing units as herein defined, any such applicant, owner or customer when requesting water, sewer and/or recycled water service for such property may request the District to initiate proceedings pursuant to applicable laws to form a special assessment district for the purpose of publicly financing the offsite and onsite water, sewer and/or recycled water facilities necessary to serve said development as well as any assessable portion of the future capital costs which will be incurred by or benefit the initial property owners at the time of connection to said facilities. The proposed assessment district shall include all of the area eligible for alternate financing as provided for in this Section 5.5.1 and such other area logically served by the facilities as determined by the District in its discretion. This proviso is intended to include the affordable and/or low-income housing units as well as the market rate units for which service is requested pursuant to this Section 5.5.1.

5.6.2 **Initiation of Public Financing.** Upon receiving a request pursuant to Section 5.5.1, the District shall, unless it makes the findings set forth in Section 5.5.3, initiate proceedings pursuant to applicable laws to form a special assessment District for the purpose of publicly financing the offsite and onsite water, sewer and/or recycled water facilities necessary to serve said development as well as any assessable portion of the future capital costs which will be incurred by or benefit the initial property owners at the time of connection to said facilities.

5.6.3 **Refusal to Initiate Public Financing.** The District may deny a request made pursuant to Section 5.5.1 only after notice and a public hearing and only if it finds that such assessment district financing is no longer consistent with sound municipal financing practices or is not economically feasible for the particular project. If other means of such alternate financing are available and are consistent with sound municipal financing practices, such other means of financing shall be implemented by the District. In making a finding under this Section 5.5.3, the District shall render a written decision which identifies the evidence it relied upon and the reasons supporting its decision.

5.6.4 **Time for Acting on Request.** The District shall act upon a request made pursuant to Section 5.5.1 within 60 days of the receipt of the request.

~~5.1.1~~ **Affordable and/or Low Income Housing.**

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5.6.5 “Affordable and/or Low Income Housing” ~~as used herein shall have~~ has the same meaning as used in the housing element adopted pursuant to Government Code Section 65580 of the governmental agency having jurisdiction over the zoning of any given development.

~~5.1.2~~ **Off-Site Facilities.**

5.6.6 “Off-Site Facilities” ~~as used herein shall mean~~ means other than in-tract facilities which are not paid for by the District pursuant to its Rules and Regulations from general obligation bonds or otherwise.

5.6.7 **Coordination with Other Agencies.** When possible, in the event that District agrees to initiate proceedings pursuant to Section 5.5.1, the District will attempt to coordinate such proceedings with similar proceedings initiated by another agency or other agencies having jurisdiction over other aspects of the infrastructure required for the development such as, but not by way of limitation, streets, lighting, open space, sidewalks, and curbs.

**SECTION 6: FACILITIES OPERATION**

**6.1 OFFSITE WATER, SEWER, RECYCLED WATER AND NATURAL TREATMENT FACILITIES**

Operation and surveillance of all of the District's offsite water, sewer, recycled water and natural treatment system facilities, including, but not limited to, water, sewer, and recycled water pipelines, reservoirs, pumping stations, fire hydrants, manholes, valves, connections, supply interties, treatment facilities, and other appurtenances and property up to and including the District's meter, shall be under the management and control of the District. No other persons except authorized employees and/or representatives of the District shall have any right to enter upon, inspect, operate, adjust, change, alter, move, or relocate any portion of the foregoing or any of the District's property. In the event that such should occur, all charges and penalties shall be applicable and collected. Such action shall also be in violation of any and all applicable federal, state, and local statutes, ordinances, regulations, and other requirements.

**6.2 ONSITE FACILITIES**

**6.2.1 General.** The operation and surveillance of onsite water distribution, sewer collection, and recycled water distribution facilities are the responsibility of the applicant, owner, or customer.

**6.2.2 Onsite Recycled Water Facilities**

(1) The operation and surveillance of all onsite recycled water system facilities using the District's recycled water, shall be under the management of an "Onsite Recycled Water Supervisor" designated by the applicant, owner, or customer and approved by the District.

(2) If there is a non-resident owner, a local Onsite Recycled Water Supervisor shall be appointed. For single-family residences which have a recycled water service connection, the owner shall be considered to be the designated "Onsite Recycled Water Supervisor" unless otherwise indicated on the application for the service connection request. In the event that someone other than the owner is designated as the "Onsite Recycled Water Supervisor" and this person is no longer associated with the property, the owner shall again be considered the "Onsite Recycled Water Supervisor" until written notification is made to the District. The District shall furnish the name of the Onsite Recycled Water Supervisor to the Regional Water Quality Control Board and State and County Health Departments at least 30 days prior to commencing service.

(3) However, pursuant to Section 8.2 of these Rules and Regulations, the Manager or authorized representatives of the District shall monitor and inspect the entire recycled water system, including onsite and offsite facilities, and for these purposes shall have the right to enter upon the customer's premises during reasonable hours.

(4) The Onsite Recycled Water Supervisor shall be responsible for the installation, operation, and maintenance of the onsite recycled water system, enforcing applicable requirements of the District's permits, preventing potential hazards related to such system, maintenance of the system plans in "as-built" form, and distribution of recycled water in accordance with applicable laws and permits held by the District.

(5) In particular, but not by way of limitation, the Onsite Recycled Water Supervisor shall have the following responsibilities in relation to operation of onsite facilities:

- (a) To make sure that all operations personnel are trained and familiarized with the use of recycled water.
- (b) To furnish their operations personnel with maintenance instructions, controller charts, and record drawings to ensure proper operation in accordance with the onsite facilities design and these Rules and Regulations.
- (c) To prepare and submit to the District one (1) set of record drawings.
- (d) To notify the District of any and all updates or proposed changes, modifications, or additions to the onsite facilities, which changes shall require approval by the District and shall be designed and constructed according to the requirements, conditions, and standards set forth in the District's and set forth in these Rules and Regulations, including but not limited to Section 5.3 thereof. In accordance with the above referenced requirements, conditions, and standards changes must be submitted to the District for plan check and approval prior to construction. The construction shall be inspected by the District, and revised record drawings and controller charts shall be approved by the District. The District may, if it deems such to be in the best interest of the District, waive or modify any of the foregoing.
- (e) To ensure that the recycled water facilities remain in accordance with these Rules and Regulations including the District's Procedures Guide and Construction Manual. For example, but not by way of limitation, as stated in the design criteria section of the above referenced specifications:
  - (1) Cross-connections between potable water facilities and onsite recycled water facilities are forbidden.
  - (2) Hose bibs on recycled water facilities are forbidden.



- (3) Drinking fountains shall be protected from the spray of recycled water.
  - (4) The District shall provide special labels for any backflow preventer and house pressure regulator, and homeowner agrees to inform plumbing or landscaping contractors of the presence of recycled water on the site.
- (f) To operate and control the system in order to prevent direct human consumption of recycled water and to control and limit runoff. The applicant, owner, or customer shall be responsible for any and all subsequent uses of the recycled water. Operation and control measures to be utilized in the regard shall include, where appropriate, but not be limited to the following:
- (1) Onsite recycled water facilities shall be operated to prevent or minimize discharge onto areas not under control of the customer. Full circle sprinklers shall not be used adjacent to sidewalks, roadways, and property lines and sprinkler types shall be selected so as to confine the discharge from sprinklers to the design area.
  - (2) The operation of the onsite recycled water facilities shall be during the periods of minimal use of the service area. Consideration shall be given to allowing a maximum dry-out time before the design area will be used by the public.
  - (3) Recycled water shall be applied at a rate that does not exceed the infiltration rate of the soil. Where varying soil types are present, the design and operation of the recycled water facilities shall be compatible with the lowest infiltration rate of the soil present.
  - (4) When the application rate exceeds the infiltration rate of the soil, automatic systems shall be utilized and programmed to prevent or minimize the ponding and runoff of recycled water. The sprinkler shall not be allowed to operate for a time longer than the landscape's water requirement. If runoff occurs before the landscape's water requirements are met, the automatic controls shall be reprogrammed with additional watering cycles of shorter duration to meet the requirements. This method of operation is intended to control and limit runoff.
- (g) To orally report any failure in the onsite recycled water system that causes an unauthorized discharge of recycled water, or other non-compliance with applicable laws and the District's permits to the

District and to the Regional Water Quality Control Board and State and County Health Departments, within 24 hours from the time the Onsite Recycled Water Supervisor becomes aware of the circumstances. The Onsite Recycled Water Supervisor shall also make a written submission to the District, with a copy to the Regional Water Quality Control Board and State and County Health Departments, within five days of the time the Onsite Recycled Water supervisor becomes aware of the circumstances, which shall contain (a) a description of the non-compliance and its cause; (b) the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and (c) steps taken or planned to reduce, eliminate and prevent recurrence of the non-compliance.

- (h) To comply with any and all applicable Federal, State, and local statutes, ordinances, regulations, contracts, these Rules and Regulations, the service application and agreement, and all requirements prescribed by the Manager and the Board pursuant to Section 4. In the event of violation, all charges and penalties shall be applied and collected by the district.

6.2.2 **Onsite Recycled Water Supervisor Training Program.** The District may, from time to time, require that an "Onsite Recycled Water Supervisor" obtain instruction in the use of recycled water, such instruction being provided by or approved by the District.

SECTION 7: USE OF DISTRICT SEWERAGE FACILITIES

7.1 GENERAL

- 7.1.1 The provisions established in Section 7 shall pertain to all discharges into any District sewerage collection facility that either directly or indirectly transports wastewater to the District's Michelson Water Recycling Plant. The last paragraph of this Section 7.1 provides information relating to the applicable requirements for discharges into District sewerage collection facilities that transport wastewater to facilities other than the Michelson Water Recycling Plant.
- 7.1.2 Pursuant to the authority provided by California Government Code Section 54739, 54740, and by other applicable provisions of law, provisions are made in this document for the regulation of wastewater discharges into the District's sewerage facilities in order to comply with Federal and State of California policies and requirements and to permit the District to meet applicable standards of treatment plant effluent quality. These Rules and Regulations establish quantity and quality limitations on all wastewater discharges, which may adversely affect the District's sewerage systems, processes, or effluent quality. It is the intent of these limitations to improve the quality of wastewater being received for treatment; an implication of this intent is the District's policy of discouraging an increase in the quantity (mass emission) of waste constituents being discharged. This document also provides for regulation of the degree of waste pretreatment required, the issuance of permits including those for wastewater discharge connections, and the establishment of penalties for violation of these Rules and Regulations.
- 7.1.3 Since the District is committed to a policy of wastewater renovation and reuse in order to provide an alternate source of water supply, the renovation of wastewater through secondary and tertiary wastewater treatment processes may necessitate more stringent quality requirements on wastewater dischargers than those required by other governmental regulatory agencies.
- 7.1.4 The District has joined the Orange County Sanitation District (OCSD) in order to secure an alternate method of sewage treatment and disposal. To accomplish the administration of this union within the portion of the District that is within Revenue Area 14 of OCSD, the District entered with OCSD into a Memorandum of Understanding effective February 11, 1987, to provide for cooperative implementation of these Rules and Regulations and the ordinance of the Orange County Sanitation District as part of its regulations. In the event of a conflict between the District's Rules and Regulations and OCSD's ordinance, OCSD's ordinance shall have precedence, unless the District's Rules and Regulations are more stringent. The OCSD ordinance is also applicable in areas of the District that are

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within other portions of OCSD that do not transport water to the District's Michelson Water Recycling Plant. Similarly, the area of the District within the service area of the South Orange County Wastewater Authority (SOCWA) is subject to SOCWA's discharge regulations as adopted by the District, and the area discharging to the Chiquita System of Santa Margarita Water District (SMWD), the Portola Hills area, is subject to SMWD's discharge regulations as adopted by the District. In each case where dischargers are subject to the discharge regulations of two agencies, it is the responsibility of the discharger to meet the discharge requirements of both agencies.

### 7.2 SPECIAL DEFINITIONS

In addition, unless otherwise defined herein, terms related to water quality shall be as adopted in the latest edition of Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, the American Water Works Association and the Water Environment Federation (herein referred to as "**Standard Methods**"). The testing procedures for waste constituents and characteristics shall be as provided in 40 CFR 136, (Code of Federal Regulations: Title 40; Protection of Environment; Chapter I United States Environmental Protection Agency (US EPA); Part 136, Test Procedures for the Analyses of Pollutants), or as specified herein. Other terms not herein defined shall have the definitions given such terms in the latest adopted applicable editions of the California codes applicable to building construction adopted pursuant to the California Building Standards Law.

The terms hereinafter set forth shall have the following meanings when used in these Rules and Regulations or any permits or orders issued pursuant hereto, and the following definitions supersede the definitions in Section 2 for purposes of this Section 7:

~~Administrative Complaint shall mean~~ **ADMINISTRATIVE COMPLAINT means** a document used by the District to initiate a proceeding to impose civil penalties pursuant to Section 7.6.2.7.2.

**BIOCHEMICAL OXYGEN DEMAND (BOD) shall mean means** the quantity of oxygen utilized in the biological oxidation of organic matter under standard laboratory procedure in five (5) days at twenty (20) degrees Celsius expressed in terms of milligrams per liter mass per volume (mg/l) as determined by appropriate testing procedure.

~~Board shall mean the Board of Directors of the Irvine Ranch Water District.~~

~~Building Drain - Sanitary shall mean~~ **BUILDING DRAIN - SANITARY means** that part of the lowest horizontal piping of a drainage system which receives sanitary or

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industrial sewage only, inside the walls of a building and conveys it to the building sewer beginning three (3) feet outside the building wall.

~~Building Drain - Storm shall mean~~ **BUILDING DRAIN - STORM means** that part of the lowest horizontal piping of a drainage system which receives stormwater or other clear water discharge, but no wastewater, from soil and other drainage pipes inside the walls of a building and conveys it to the building sewer beginning three (3) feet outside the building wall.

~~(3) feet outside the building wall.~~

~~Building Sewer - Sanitary shall mean~~ **BUILDING SEWER - SANITARY means** a sewer pipe receiving flow from a single building and connecting to a sewer main or lateral, and constructed on private property, except for street crossing.

~~Building Sewer - Storm shall mean~~ **BUILDING SEWER - STORM means** the extension from the building storm drain to the public sewer or other place of disposal which conveys storm water or other clear water drainage, but no sanitary or industrial sewage.

~~Bypass shall mean~~ **BYPASS means** the intentional diversion of waste streams from any location within an industrial users facility not approved in a user's permit.

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California Water District Law shall mean CALIFORNIA WATER DISTRICT LAW means the law of the State of California that governs the formation of California Water Districts and establishes procedures and powers of such Districts.

California Toxics Rule shall mean CALIFORNIA TOXICS RULE means the most current update of numeric criteria for priority toxic pollutants established for the State of California as codified in 40 CFR Part 131.38.

CHEMICAL OXYGEN DEMAND (COD) shall mean means the measure of chemically oxidizable material in domestic or other waste waters as determined by appropriate testing procedures and expressed in terms of milligrams per liter (mg/l).

CLASS I USER shall mean means any user who discharges wastewater that is subject to Federal Categorical Pretreatment Standards; or averages 25,000 gallons per day or more of regulated process wastewater; or is determined to have a reasonable potential to adversely affect the District's facilities or operation or for violating any pretreatment standard, local limit, or discharge requirement; or may cause pass through or interference with the District's or OCSD sewerage facilities.

CLASS II USER shall mean means any industrial user who discharges wastewater at a volume greater than 10,000 gallons per day and has a BOD and Suspended Solids greater than 375 mg/L, that discharges wastes other than sanitary, and that is not otherwise required to obtain a Class I permit.

CODE OF FEDERAL REGULATIONS (CFR) or FEDERAL REGULATIONS shall mean means the codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government.

Coliform shall mean COLIFORM means any number of organisms common to the intestinal tract of man and animals whose presence in sanitary sewage is an indicator of pollution.

Collection Sewer shall mean COLLECTION SEWER means a sewer whose primary purpose is to collect wastewaters from individual point source discharges.

Combined Sewage shall mean COMBINED SEWAGE means a combination of both wastewater and storm or urban runoff.

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~~Combined Sewer shall mean~~COMBINED SEWER means a sewer intended to receive both wastewater and storm or urban runoff.

~~Compatible Pollutant shall mean~~COMPATIBLE POLLUTANT means BOD, suspended solids, pH, coliform bacteria, and such additional pollutants as are now or may be in the future specified and controlled by the District's permit, for its wastewater treatment works as said works have been designed and are operated to reduce or remove such pollutants. Some compatible pollutants may be considered non-compatible when discharged in significant quantities.

~~Composite Sample shall mean~~COMPOSITE SAMPLE means a collection of individual samples obtained at selected intervals based on an increment of either flow or time. The resulting mixture (composite sample) forms a representative sample of the waste stream discharged during the sample period. Samples will be collected during the time manufacturing, processing, and/or sewer discharge occurs.

~~Department Head shall mean~~DEPARTMENT HEAD means that person duly designated by the General Manager to direct the Industrial Waste Program and perform those delegated duties as specified in these Rules and Regulations.

~~Discharger shall mean~~DISCHARGER means any public or quasi-public agency, including the State of California and the United States of America but not including the District, individual, partnership, firm, company, association, society, corporation, or group discharging, causing the discharge of, or proposing to discharge or cause the discharge of any wastewater into a public sewer. Used interchangeably with the term "User" and "Industrial User".

~~Dissolved Solids shall mean~~DISSOLVED SOLIDS means that concentration of matter in the sewage consisting of colloidal and particulate matter 0.45 micron in diameter or less, and both organic and inorganic molecules and ions present in solution.

~~DISTRICT shall mean Irvine Ranch Water District.~~

~~District Connection Charge shall mean~~DISTRICT CONNECTION CHARGE means a fee imposed by the District for connecting directly to a public sewer or to a sewer which ultimately discharges into the District sewerage facility.

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District's Sewerage Facilities shall mean **DISTRICT'S SEWERAGE FACILITIES** means any property belonging to the District used in the treatment, reclamation, reuse, transportation, or disposal of wastewater or sludge.

Domestic Wastewater shall mean **DOMESTIC WASTEWATER MEANS** THE LIQUID AND SOLID WATERBORNE WASTES DERIVED FROM THE ORDINARY LIVING PROCESSES of humans of such character as to permit disposal, without special treatment, into the public sewer or by means of a private disposal system.

Dwelling Unit shall mean **DWELLING UNIT** means one or more habitable rooms which are intended or designed to be occupied by one family with facilities for living, sleeping and cooking.

Easement shall mean **EASEMENT** means an acquired legal right or interest for the specific limited use of land owned by others.

**EFFLUENT** shall mean **means** any liquid outflow that is discharged to the sewer.

**ENFORCEMENT COMPLIANCE SCHEDULE AGREEMENT (ECSA)** shall mean **means** a mutual agreement between the District and permittee in accordance with Section 7.6.2.2.

**FEDERAL PRETREATMENT REQUIREMENT, NATIONAL PRETREATMENT STANDARD, PRETREATMENT STANDARD or STANDARD** shall mean **means** any regulation containing pollutant discharge limits promulgated by the EPA in accordance with 40 CFR 307 (b) and (c) which applies to Industrial Users. This term includes prohibitive discharge limits established pursuant to 40 CFR 403.5. Categorical pretreatment standards are promulgated in 40 CFR Chapter I, Subchapter N or 40 CFR Parts 401-471.

Floor Area shall mean **FLOOR AREA** means the area included within the surrounding exterior walls of a building or portion thereof, exclusive of ramps, docks, vent shafts and courts. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above.

Garbage shall mean **GARBAGE** means solid wastes from the domestic and commercial preparation, cooking and dispensing of food, and from the handling, storage and sale of food.



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~~Grab Sample shall mean~~**GRAB SAMPLE means** a sample taken from a waste stream on a one-time basis without regard to the flow in the waste stream and without consideration of time.

~~INDUSTRIAL USER shall mean~~**INDUSTRIAL USER means** any user that discharges industrial wastewater.

~~Industrial Wastewater shall mean~~**INDUSTRIAL WASTEWATER means** all liquid wastes resulting from the processes employed in industrial manufacturing, trade, or business establishments, as distinguished from domestic wastes.

~~Industry shall mean~~**INDUSTRY means** any establishment listed in the Standard Industrial Classification Manual, 1972 Edition, or revision thereof, which is categorized in Divisions A, B, D, E, or I.

~~Infiltration shall mean~~**INFILTRATION means** the water unintentionally entering the District's sewerage facilities, or sanitary building drains and sewers, from the ground, through such means as, but not limited to, defective pipes, pipe joints, connections, or manhole walls.

~~Infiltration/Inflow shall mean~~**INFILTRATION/INFLOW means** the total quantity of water from both infiltration and inflow without distinguishing the source.

~~Inflow shall mean~~**INFLOW means** the water discharge into the District's sewerage facilities, or building storm drains and sewers, from such sources as, but not limited to, roof leaders, cellar, yard, and area drains, foundation drains, unpolluted cooling water discharges, drains from springs and swampy areas, manhole covers, cross connections from storm sewers and/or combined sewers, catch basins, storm waters, surface runoff, street wash waters or drainage. (Inflow does not include, and is distinguished from infiltration.)

~~Inspector shall mean~~**INSPECTOR means** a person authorized by the General Manager to inspect any existing or proposed wastewater generation, conveyance, processing and disposal facilities.

~~Interceptor Sewer shall mean~~**INTERCEPTOR SEWER means** a sewer whose primary purpose is to transport wastewater from collection sewers to a treatment facility.

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~~Interference shall mean~~ **INTERFERENCE means** a discharge which, by itself or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the District's facilities, its treatment processes or operations, or its sludge process, use, or disposal, or causes a violation of any requirement of the District's permits (including an increase in the magnitude or duration of a violation) or prevents sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

~~Local Sewering Agency shall mean~~ **LOCAL SEWERING AGENCY means** any public or private corporation duly authorized under the laws of the state of California to construct and/or maintain public sewers.

~~MANAGER or GENERAL MANAGER shall mean the General Manager of the District or the person authorized by the Board or the General Manager to act for him.~~

~~Manifest shall mean~~ **MANIFEST means** that receipt which is retained by the generator of wastes for disposing solid wastes, recyclable wastes or liquid wastes as required by the District.

~~Mass Emission Rate shall mean~~ **MASS EMISSION RATE means** the weight of material discharged to the District's sewerage facilities during a given time interval. Unless otherwise specified, the mass emission rate ~~shall mean~~ **means** pounds per day of a particular constituent or combination of constituents.

~~"May"~~ **"MAY"** is permissive (see ~~"Shall"~~ **"**).

MEMORANDUM OF UNDERSTANDING (MOU) ~~shall mean~~ **means** any memorandum of understanding or other agreement between the District and OCSD governing the administration of the joint industrial waste pretreatment program.

MICROGRAMS PER LITER ( $\mu\text{g}/\text{l}$ ) ~~shall mean~~ **means** a unit measurement of the concentration of a water or wastewater constituent. It is 0.001 gram of the constituent in one (1) cubic meter of water. It has replaced the unit formerly used, parts per billion, to which it is approximately equivalent in reporting the results of water and wastewater analyses.

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MILLIGRAMS PER LITER (mg/l) ~~shall mean~~means a unit measurement of a concentration of water or wastewater constituent. It is 0.001 gram of the constituent in 1,000 milliliters of water. It has replaced the unit formerly used, parts per million, to which it is approximately equivalent in reporting the results of water and wastewater analyses.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) ~~shall mean~~means the Federal pollution regulation system as detailed in Public Law 92-500, Section 402, or a permit issued pursuant to such system.

~~New Source shall mean~~NEW SOURCE means those sources that are new as determined by 40 CFR 403.3 (k) as revised October 17, 1988.

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Non-compatible Pollutant shall meanNON-COMPATIBLE POLLUTANT means any non-treatable waste product, including non-biodegradable dissolved solids, which is not a compatible pollutant as defined herein.

Normal Domestic Wastewater shall meanNORMAL DOMESTIC WASTEWATER means all household-type discharges from places of human habitation including sanitary conveniences, kitchen and laundry wastes. Discharge wastes strength shall be considered to average 250 mg/l BOD and 250 mg/l Suspended Solids at a discharge rate of 100 gallons per capita per day.

Normal Working Day shall meanNORMAL WORKING DAY means the period of time during which the dischargers production or operation is taking place.

NPDES PERMIT shall meanmeans the National Pollutant Discharge Elimination System permit that is issued by the EPA setting the limits on constituents that the permittee may legally discharge. The limits are set in both concentration and quantity.

OCSD shall meanmeans the Orange County Sanitation District.

OCSD ORDINANCE shall meanmeans OCSD's ordinance establishing wastewater discharge regulations, currently in effect from time to time.

Pass Through shall meanPASS THROUGH means discharge through the District's facilities to navigable water or point of reuse which, alone or in conjunction with discharges from other sources, is a cause of a violation of the District's NPDES permit or Regional Water Quality Control Board Order.

Permittee shall meanPERMITTEE means a discharger who has received a permit to discharge wastewater into the District's sewerage facilities subject to the requirements and conditions established by the District and/or OCSD.

pH shall meanmeans the logarithm of the reciprocal of the quantity of hydrogen ions in moles per liter of solution used in expressing both acidity and alkalinity on a scale ranging from 0 to 14, where 7 represents neutrality, numbers less than 7 increasing acidity, and more than 7 increasing alkalinity.

Population Equivalent shall meanPOPULATION EQUIVALENT means a term used to evaluate the impact of industrial or other waste on a treatment works or stream. One

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population equivalent of normal domestic wastewater is 100 gallons of sewage per day, and/or 0.17 pounds of BOD, and/or 0.21 pounds of suspended solids. The impact on a treatment works is evaluated as the equivalent of the highest of the three parameters. Impact on a stream is the higher of the suspended solids parameters.

~~Pollutant shall mean~~ **POLLUTANT means** any constituent or characteristic of wastewaters on which discharge limitation may be imposed either by the District or the regulatory bodies empowered to regulate the District.

POTW ~~shall mean~~ **means** Publicly Owned Treatment Works.

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Pretreatment shall mean **PRETREATMENT means** the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to discharge of the wastewater into the District's sewerage facilities. The reduction or alteration can be obtained by physical, chemical or biological process, or process changes by other means.

Pretreatment Facility shall mean **PRETREATMENT FACILITY means** any works or devices for the treatment or flow limitation of wastewater prior to discharge into a public sewer.

Pretreatment Standards shall mean **PRETREATMENT STANDARDS means** requirements for the quality of wastewaters discharged into the District's sewerage facilities.

Priority Pollutants shall mean **PRIORITY POLLUTANTS means** a listing of the toxic pollutants identified by EPA as having the greatest environmental concern and as non-compatible and requiring pretreatment prior to discharge in order to prevent interference with District's operation, or to prevent sludge contamination or treatment system pass-through into receiving waters or into the atmosphere.

**PRIVATE SEWER shall mean** means a sewer which is not owned by the District.

Probation Order shall mean **PROBATION ORDER means** an order issued with terms and conditions to a permittee upon a violation of these Rules and Regulations or the terms, conditions, and limitations of its discharge permit, or upon a failure to make payment to the District of user charges, non-compliance fees, or any other fees.

Public Agency shall mean **PUBLIC AGENCY means** the United States and its agents, the State of California and any city, county, district, or other local governmental authority or public body of or within the State of California.

Public Sewer shall mean **PUBLIC SEWER means** a sewer owned and operated by the District, or a sewer operated by a local public agency which is tributary to the District's sewerage facilities.

Pumping Station shall mean **PUMPING STATION means** a station positioned at a location in a sewer system at which wastewater is pumped to a higher level.

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~~Regional Administrator shall mean~~REGIONAL ADMINISTRATOR means the Regional Administrator of Region IX of the EPA.

~~Regional Board shall mean~~REGIONAL BOARD means the California Regional Water Quality Control Board, Santa Ana Region or San Diego Region.

REGULATORY AGENCIES are those agencies having regulatory jurisdiction over operations of the District, such as including but not limited to the U.S. Environmental Protection Agency (EPA), the State Department of Health Services (DOHS), the State Water Resources Control Board (SWRCB), the California Regional Water Quality Control Board (RWQCB), the South Coast Air Quality Management District (SCAQMD) and Orange County Health Care Agency.

REGULATORY COMPLIANCE SCHEDULE AGREEMENT (RCSA) ~~shall mean~~means an agreement between the District and permittee requiring the permittee to implement pretreatment practices and/or install equipment to ensure compliance with future revised categorical pretreatment standards or revised discharge limitations.

~~Rules and Regulations shall mean~~RULES AND REGULATIONS means that document entitled "“Rules and Regulations for Water, Sewer, and Recycled Water Service”” containing District requirements, conditions, and limitations for connecting and discharging to the District’s sewerage facilities and other requirements, conditions and limitations, as may be amended and modified.

~~Sample Point shall mean~~SAMPLE POINT means a location approved by the District, from which wastewater can be collected that is representative in content and consistency of the entire flow of wastewater being sampled

SAMPLING AND EVALUATION PROGRAM (S&E) ~~shall mean~~means a program for the determination of mass emission of constituents or compliance or non-compliance with the conditions specified in the user’s permit.

~~Sampling Facilities shall mean~~SAMPLING FACILITIES means structure(s) provided at the user’s expense for the District or user to measure and record wastewater constituent mass, concentrations, collect a representative sample, or provide access to plug or terminate the discharge.

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~~Sanitary Sewer shall mean~~SANITARY SEWER means a sewer which carries sanitary and industrial wastes, and to which storm, surface and groundwater are not intentionally admitted.

SEWAGE ~~shall mean~~means wastewater.

~~Sewer shall mean~~SEWER means a pipe or conduit that carries wastewater or drainage water.

~~Sewer Lateral shall mean~~SEWER LATERAL means a building sewer as defined in the latest edition of the California Plumbing Code. It is the wastewater connection between the building's wastewater facilities and a public sewer system.

~~Sewerage Facilities or System shall mean~~SEWERAGE FACILITIES OR SYSTEM means any and all facilities used for collecting, conveying, pumping, treating, and disposing of wastewater and sludge.

~~"Shall"~~"SHALL" is mandatory; (see ~~"May"~~"May").

~~Shredded Garbage shall mean~~SHREDDED GARBAGE means garbage that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than 1/2 inch (1.25 centimeters) in any dimension.

~~Significant Industrial User shall mean~~SIGNIFICANT INDUSTRIAL USER means all users subject to Federal Categorical Pretreatment Standards and any other industrial user that discharges an average of 25,000 gallons per day or more of process wastewater; contributes a process waste stream which makes up 5% or more of the average dry weather hydraulic or organic capacity of the District's treatment facilities; or is designated by the District as a significant industrial user.



~~District's treatment facilities; or is designated by the District as a significant industrial user.~~

~~Significant Non-Compliance shall mean~~**SIGNIFICANT NON-COMPLIANCE means** a compliance status a) in which a major violation remains uncorrected for 45 days after notification of non-compliance; or b) which is a result of chronic violations (66% or more of all samples which exceed the daily maximum limit or average limit of the same constituent during a 6-month period), or acute violations (33% or more of all samples which exceed the product of the daily maximum limit or average maximum limit times the applicable technical review criterion in a 6-month period; or c) which is a result of failure to provide reports in response to Notice of Violation, permit application information, Report of Progress, a Report of Non-Compliance, or other reports required to administer these Rules and Regulations, within 30-days from the due date; d) any violation of any limitation that the District determined to cause alone or in combination with other discharges, interference or pass through; e) any discharge which has caused imminent endangerment to human health, welfare or to the environment, or has resulted in the District's exercise of its emergency authority (Section 7.6.2.6); f) failure to meet, within 90 days after the scheduled date, a compliance schedule milestone contained in a permit or enforcement action, for starting construction, completing construction, or attaining final compliance; or g) failure to accurately report non-compliance.

~~Sludge shall mean~~**SLUDGE means** any solid, semi-solid or liquid decant, supernate or supernate from a manufacturing process, utility service, or pretreatment facility.

~~Slug Load shall mean~~**SLUG LOAD means** any discharge of water or wastewater which in concentration of any pollutant or in quantity of flow will cause interference with the District's reclamation plant or subsequent Publicly Owned Treatment Works (POTW).

~~Spent Solutions shall mean~~**SPENT SOLUTIONS means** any substance defined as a hazardous waste by RCRA, 40 CFR 261.21 through 261.24, and unable to be used for its original purpose.

~~Spill Containment shall mean~~**SPILL CONTAINMENT means** an approved protection system installed by the permittee to prohibit the accidental discharge to the sewer of non-compatible pollutants.

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STANDARD INDUSTRIAL CLASSIFICATION (SIC) ~~shall mean~~means a system of classifying a user as identified in the 1987 or subsequent SIC manual as prepared by the Office of Management and Budget.

~~Standard Methods shall mean~~STANDARD METHODS means the laboratory procedures set forth in the latest edition, at the time of analysis, of “Standard Methods for the Examination of Water and Wastewater” prepared and published jointly by the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation, and 40 CFR Part 136, 3, 4 and 5, and/or other recognized procedures established by EPA and California Regional Water Quality Control Board.

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Storm Water shall mean **STORM WATER means** all water directly derived from rainwater which has not been utilized in domestic, agricultural, industrial or other beneficial use.

**SUSPENDED SOLIDS (SS) shall mean** **means** the solids that either float to the surface or are suspended in water, wastewater or other liquids and which are removable from said liquid through standard laboratory filtration procedure.

Technical Review Criteria shall mean **TECHNICAL REVIEW CRITERIA means** those factors which, when multiplied by the appropriate limitation, set the lower limit of a significant violation. The Technical Review Criteria factor is 1.2 for all limitations except for BOD, total suspended solids, fats, oil, and grease where the factor is 1.4.

**TOTAL ORGANIC CARBON (TOC) shall mean** **means** the measure of total organic carbon in domestic or other wastewater as determined by the appropriate testing procedure.

**TOTAL SOLIDS shall mean** **means** the sum of suspended and dissolved solids.

Toxic Substances shall mean **TOXIC SUBSTANCES means** any pollutant or combination of pollutants which upon exposure to or assimilation into any organism will cause adverse effects, such as cancer, genetic mutations and physiological manifestations.

Unpolluted Water shall mean **UNPOLLUTED WATER means** water to which no constituent has been added either intentionally or accidentally.

User shall mean **USER means** any person who discharges or causes a discharge of wastewater directly or indirectly to a public sewer. User shall also have the same meaning as "Discharger" or "Industrial User".

User Charge shall mean **USER CHARGE means** a charge imposed by the District for the provision of a special service not normally provided by the District, such as situations involving unusual quantity or quality requirements.

Waste shall mean **WASTE means** sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing or processing operation of whatever nature, including such wastes placed within containers of whatever nature, prior and for the purpose of disposal.

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~~Waste Minimization Practices shall mean~~ **WASTE MINIMIZATION PRACTICES** means plans or programs intended to reduce or eliminate discharges to the District's sewerage system or to conserve water, including, but not limited to, product substitutions, housekeeping practices, inventory control, employee education, and other steps as necessary to minimize wastewater and/or solid waste produced.

~~Wastehauler shall mean~~ **WASTEHAULER** means any person or entity, duly licensed, carrying on or engaging in vehicular transport of waste as part of, or incidental to, any business for that purpose.

~~Wastewater shall mean liquid and water-carried waste or water, whether treated or untreated, discharged into or permitted to enter a public sewer.~~

~~Wastewater Constituents and Characteristics shall mean the individual chemical, physical, biological, radiological and other parameters, including volume, flow rate, concentration and such other parameters that serve to define, classify, or measure the quality and quantity of wastewater.~~

~~Wastewater Discharge Permit shall mean~~ **WASTEWATER DISCHARGE PERMIT means** any of the following permits: Class I Permit, Class II Permit, Special Purpose Permit or FOG Wastewater Discharge Permit. Used interchangeably with the word "permit".

~~Wastewater Treatment shall mean~~ **WASTEWATER TREATMENT means** the structures, equipment and processes required to collect, transport and treat domestic and industrial wastewater and dispose of the effluent and accumulated residual solids.

### 7.3 WASTEWATER DISCHARGE REGULATIONS

**7.3.1 Prohibitions and Limitations on Wastewater Discharges.** These prohibitions apply to all Users of District sewerage facilities whether or not they are subject to Federal Categorical Pretreatment Standards or any other National, State or Local pretreatment standards or requirements. No person shall discharge or allow to be discharged wastewaters directly or indirectly into District's sewerage facilities that cause or are capable of causing, either alone or by interaction with other substances, interference with the operation of the District's sewerage facilities, including but not limited to the following:

(1) Oils and Grease. Wax, grease or oil of mineral origin in a concentration of more than 100 mg/l whether emulsified or not, or any other waste containing substances which may precipitate, solidify or become viscous at temperatures between 32° and 150°F (0° and 65°C) at the point of discharge into the District's sewerage facilities).

(2) Explosive Mixtures. Liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the District's sewerage facilities or to the operation of the District's sewerage facilities. At no time shall the discharge into the District's sewerage facilities have a closed cup flash point less than 140°F (60°C). Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides.

(3) Noxious Materials. Noxious or malodorous solids, liquids or gases, which, either singly or by interaction with other wastes, are capable of creating a public nuisance or hazard to life, or are or may be sufficient to prevent entry into a sewer for its maintenance and repair.

(4) Improperly Shredded Garbage. Garbage that has not been ground or comminuted to such a degree that all particles will be carried freely in suspension under flow conditions normally prevailing in the public sewers, with no particle greater than one-half (1/2) inch in any dimension.

(5) Radioactive Wastes. No person shall discharge, or cause to be discharged, any radioactive waste into a public sewer except:

- (a) When the person is authorized to use radioactive materials by the State Department of Health or other governmental agency empowered to regulate the use of radioactive materials;
- (b) When the waste is discharged in strict conformity with current California Radiation Control Regulations (California Administrative Code, Title 17) for safe disposal;
- (c) When the person is in compliance with all rules and regulations of all other applicable regulatory agencies; and,
- (d) When a Class I permit has been obtained from OCS&D.

(6) Solid or Viscous Wastes. Solid or viscous wastes which will or may cause obstruction to the flow in a sewer, or otherwise interfere with the proper operation of the sewerage facilities. Prohibited materials include, but are not limited to, grease, uncomminuted garbage, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastic, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, and similar substances.

(7) Slug Loads. Wastewaters at a flow or containing such concentrations of pollutants that will cause interference with the District's treatment plant or subsequent POTW.

(8) Toxic Substances. Any toxic substances in amounts exceeding established standards, and any chemical elements or compounds, phenols or other taste or odor producing substances, or other substances which are not susceptible to treatment or which may interfere with the biological processes or efficiency of the treatment processes, cause acute worker health and safety problems, or that will pass through the District's sewerage facilities.

(9) Discolored Material. Wastes with objectionable color not removable by the treatment process.

(10) **Corrosive Wastes.** Any waste which will cause corrosion or deterioration of the District's sewerage facilities. All wastes discharged to a public sewer must have a pH value in the range of (6) to (12) standard units. Prohibited materials include, but are not limited to, acids, sulfides, concentrated chloride and fluoride compounds and substances which will react with water to form acidic products.

(11) **Organic Phosphorous Compounds.** Any amounts of organic phosphorus compounds released in a discharge at a flow rate or in a concentration which will cause pass through or interference with the sewerage facilities.

(12) **Non-Compliant Waste.** Any waste not in compliance with national categorical pretreatment standards as represented in 40 CFR Chapter I Subchapter N or 40 CFR Parts 401-471.

7.3.2 **Storm Water.** Ground water, street drainage, subsurface drainage, foundation drains, or yard drainage shall not be discharged directly or indirectly to the District's sewerage facilities. The District at its sole discretion may approve the discharge of such water by granting a Special Purpose Permit only when no alternative method of disposal is reasonably available. The applicant shall bear the burden of demonstrating that no alternative method of disposal is reasonably available. If a Special Purpose Permit is granted for the discharge of such water into a sewer, the user shall pay connection fees, applicable charges and fees for use and shall meet such other conditions as required by the District.

7.3.3 **Self-Regenerative Water Softeners.** Any brine waste discharge from an onsite self-regenerative water softener unit is prohibited. Installation of such onsite self-regenerative water softener units within the District is specifically prohibited. However, the District may, on an individual basis, approve such units if the applicant, owner, or customer demonstrates that such brine waste will be discharged into a permanent facility other than a District sewer as approved by the plumbing codes of the cities of Irvine, Laguna Beach, Newport Beach, Orange, Santa Ana, Tustin and the County of Orange or its successors, as may be applicable or as deemed justified by the District.

7.3.4 **Unpolluted Water.** Unpolluted water, such as single-pass cooling water, shall not be discharged through direct or indirect connection to a public sewer. The District may approve the discharge of such water only when no alternative method of disposal is reasonably available by issuing a Special Purpose Permit.

7.3.5 **Septic Tank and Cesspool Wastes.** Discharges of septic tank, or cesspool wastes, into the public sewer or directly into the treatment plant facilities is prohibited.

7.3.6 **Temperature.** No person shall discharge wastewater with a temperature higher than 140°F (60°C). Heat in discharged wastewater shall not cause the temperature of wastewater entering the headworks of any wastewater treatment plant to exceed 104°F (40°C).

7.3.7 **Point of Discharge.** No person, ~~excluding~~ District personnel involved in maintenance functions of sewer facilities, shall discharge any water, wastewater or any substance directly into a manhole or other opening in a sewer other than through an approved building sanitary sewer, unless upon written application by the user and approved by the District and payment of the applicable charges for use and fees.

7.3.8 **Wastewater Strength Limitations**

(1) No person shall discharge wastewater containing substances in excess of the quantities or concentrations listed in Exhibit B, Schedule of Rates and Charges, to these Rules and Regulations entitled “Discharge Limits”, or containing other materials, or having other characteristics, including, but not limited to, ammonia, biochemical oxygen demand (BOD), chemical oxygen demand, total organic carbon, suspended solids, oil or grease of animal or vegetable origin, total dissolved solids, and phenolic compounds in quantities that may cause or are found to cause problems, pass through, or interference with the sewerage facilities.

(2) No person shall discharge wastewater containing in excess of 0.01 mg/l of pesticides as a daily maximum, to include, but not limited to the following: DDT (dichlorodiphenyltrichloroethane, both isomers), DDE (dichlorodiphenylethylene), DDD (dichlorodiphenyldichloroethane), Aldrin, Benzene Hexachloride (alpha, beta, and gamma isomers), Chlordane, Endrin, Endrin aldehyde, TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin), Toxaphene (alpha)-Endosulphan, (beta)-Endosulphan, Endosulphan sulfate, Heptachlor, Heptachlor epoxide, and Dieldrin.

(3) No person shall discharge wastewater containing in excess of 0.01 mg/l of polychlorinated biphenyls as a daily maximum to include, but not limited to the following: Aroclors 1016, 1221, 1228, 1232, 1248, 1254, 1260, and 1262.

7.3.9 **Prohibition on Dilution.** No user shall increase the use of water in, or in any other manner attempt to dilute, a discharge as a partial or complete substitute for treatment to achieve compliance with these Rules and Regulations and the user’s permit or to establish an artificially high flow rate for permit mass emission rates.

7.3.10 **Prohibition on Infectious Waste.** The District shall have the authority to require that any discharge of an infectious waste to the sewer be rendered non-infectious prior to discharge if the infectious waste is deemed to pose a



threat to the public health and safety, or will result in any violation of applicable waste discharge requirements.

**7.3.11 Limitations on Disposal of Spent Industrial Solutions and Sludges**

(1) Spent solutions, sludges, and materials of quantity or quality in violation of, or prohibited by these Rules and Regulations, or any permit issued under these Rules and Regulations must be disposed of in a legal manner at a legally acceptable point of disposal as defined by the appropriate Regulatory Agency. All waste manifests shall be retained for a minimum of three years, and made available to the District upon request.

(2) No person shall batch dump to the District's sewerage facilities. Non-compliance fees applicable for such discharge will be as shown in Exhibit B, Schedule of Rates and Charges.

**7.3.12 New or Increased Pollutant Discharge.** No person shall increase the discharge of existing pollutants or discharge new pollutants that do not meet pretreatment standards, local limitations, or other requirements, or cause the District to violate any permit condition or limitation.

**7.3.13 Mass Emission Rate Determination.** Mass emission rates for non-compatible or compatible pollutants that are present or anticipated in the user's wastewater discharge may be set for each user and made a part of each user's permit. These rates shall be based on Local Discharge Limits contained in Exhibit C or Federal Categorical Pretreatment Standards, and the discharger's average daily wastewater discharge for the past three years, the most recent representative data, or other data acceptable to the General Manager or their designee.

**7.4 WASTEWATER DISCHARGE PERMITS**

**7.4.1 General.** In addition to District connection charges required by these Rules and Regulations, all significant industrial users, proposing to connect to or discharge into the District's sewerage facilities must first obtain a Wastewater Discharge Permit. No vested right shall be deemed given by issuance of permits provided for in this document. The issuance of a Wastewater Discharge Permit does not authorize the commission of any act causing injury to the person or property of another, nor relieve the discharger from compliance with, or protect the discharger from liability under Federal, State or local laws, nor guarantee the discharger a capacity right in the District's sewerage facilities.

**7.4.2 Permit Application Procedure**

Applicants for Wastewater Discharge Permits shall complete an application form available at the District's office. This application shall be accompanied by the applicable fees.

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As part of the permit application process the District may require the submittal of detailed plans for a review of existing or proposed construction of pretreatment facilities, spill containment facilities, monitoring and metering facilities, and operating procedures. The approval of the District shall be received prior to the start of construction. This review of plans and procedures shall in no way relieve the user of the responsibility of modifying the facilities or procedures in the future, as necessary, to meet the requirements of these Rules and Regulations or any requirements of other Regulatory Agencies.

If required the user shall submit four (4) copies of all drawings for review. All drawings shall include the following:

- (1) North arrow.
- (2) Scale size.
- (3) User name and address.
- (4) Drawing name and drawing number.
- (5) Date drawn or revised.
- (6) Name of drafter and person approving drawing.

These scaled drawings shall include but not be limited to depictions of the manufacturing process (waste generating sources), spill containment, pretreatment facilities, and monitoring/metering facilities. Schematic drawings of pretreatment facilities may be required. The District may also require that drawings be signed and sealed by a California Registered Chemical, Mechanical, or Civil Engineer.

Upon receipt of all required information, the application shall be processed and, upon approval, a permit will be issued, signed by a District representative, and returned to the applicant. When properly signed, the permit together with any documents attached thereto shall constitute a valid Wastewater Discharge Permit for the time period specified therein. Where the discharger becomes aware that relevant facts were omitted or incorrect information was submitted in the application, the facts or corrected information shall be promptly submitted to the District and the permit shall be amended if appropriate.

7.4.3 **Permit Conditions.** Wastewater Discharge Permits shall be expressly subject to all provisions of these Rules and Regulations and all other regulations, user charges and fees established by the District. The conditions of wastewater discharge permits shall be uniformly enforced by the District in accordance with these Rules and Regulations and applicable state and federal regulations. Permits may contain the following:

- (1) The unit charge or schedule of user charges and fees fixed in this section for the sewage to be discharged;
- (2) The average and maximum sewage constituents and characteristics which may be discharged into the District's sewerage facilities;

- (3) Limits on rate and time of discharge or requirements for flow regulations and equalization;
- (4) Requirements for installation of inspection and sampling facilities;
- (5) Pretreatment requirements;
- (6) Specifications for monitoring programs which may include sampling locations, frequency and method of sampling, number, types and standards for tests and reporting schedule;
- (7) Requirements for submission of technical reports or discharge reports;
- (8) Requirements for maintaining plant records relating to sewage discharge as specified by the General Manager, and affording the General Manager access thereto;
- (9) Mean and maximum mass emission rates, or other appropriate limits when non-compatible pollutants are proposed or present in the user's sewage discharge;
- (10) A time schedule for meeting certain pretreatment requirements;
- (11) Other conditions as deemed appropriate by the General Manager to insure compliance with this section.

7.4.4 **Duration of Permits.** Permits shall be issued for a specified time period, not to exceed four years. If the user is not notified by the District ninety days prior to the expiration of the permit, the permit shall be extended one additional year. The terms and conditions of the permit are subject to modifications and change by the District and OCSD during the life of the permit as limitations or requirements are modified and changed. The user shall be informed of any proposed changes in his permit at least thirty days prior to the effective date of change. Any change or new conditions in the permit shall include a reasonable time schedule for compliance.

7.4.5 **Transfer of a Permit.** Wastewater Discharge Permits are issued to a specific operation. A Wastewater Discharge Permit shall not be reassigned or transferred or sold to a new owner or lessee, new user, different premises, or a new or changed operation. In the event of any change in the name, ownership or control of the discharger's operation or a change in the operation itself, the discharger shall so notify the District. The District may require the new owner or operator to submit a new permit application.

7.4.6 **Permit Renewal or Modification.** An industrial discharger shall file a new application with the District sixty days prior to the expiration of its existing waste discharge permit, or the implementation of changes in the operation of a discharger which increase flows beyond that specified in the existing

permit or cause a significant change in the nature of the wastewater or location of the discharge, or which changes may result in non-compliance with these Rules and Regulations. A new application shall also be required to reestablish sewer service following revocation of a permit or upon disclosure of omitted relevant facts or incorrect information submitted in an application.

7.4.7 **Pretreatment.** Users shall make sewage acceptable under such limitations as may be established herein before discharging to the District's sewerage facilities. Any facilities required to pretreat sewage to a level acceptable to the District and OCSD shall be provided and maintained at the user's expense. Detailed plans, specifications and other pertinent data showing the pretreatment facilities and operating procedures shall first be submitted to the General Manager for review, and shall be approved by the General Manager before construction of the facility. These plans shall be signed by an engineer or responsible officer certifying that they will meet the pretreatment requirements. The review and approval of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the District under provisions of this section. Any proposed changes in the pretreatment facilities or method of operation subsequent to issuing a permit shall be reported to and be approved by the General Manager before implementing such changes. Such approval of plans or changes therein shall not exempt the user from compliance with any applicable code, ordinance, rule, regulation or order of any regulatory agency or governmental authority.

7.4.8 **Protection from Accidental Discharge.** Each user shall prevent accidental discharge to the public sewer of prohibited wastes or other materials regulated by these Rules and Regulations or Federal categorical pretreatment standard by providing spill containment facilities. Such facilities shall be provided and maintained at the user's expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the General Manager for review, and shall be approved by the General Manager before construction of the facility and before making any changes therein. The review and approval of such plans and operating procedures or change therein will in no way relieve the user from the responsibility of modifying the facility as necessary to provide the protection necessary to meet the requirements of this section or any other applicable code, ordinance, rule, regulation or order of any regulatory agency or governmental authority.

7.4.9 **Procedure for Accidental Discharge.**

(1) In the event the discharger is unable to comply with any of the permit conditions due to a breakdown of waste treatment equipment, accidents caused by human error or acts of God, the discharger shall notify the District by telephone as soon as he or his agents have knowledge of the incident, but within 24 hours. Confirmation of this notification shall be made in writing

within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the date of the incident, as well as what steps are being taken to prevent the problem from recurring and the results of repeat sampling and analyses.

(2) If it can be shown that the discharge is the cause of the District violating its discharge requirements or incurring extraordinary operational expenses or suffering loss or damage to the sewerage facilities, then that discharger may be responsible for any costs or expenses, including assessments by other agencies or the court, incurred by District.

7.4.10 **Types of Permits.** The Wastewater Discharge Permit shall be in one of three forms and is dependent upon the volume and characteristics of wastewater to be discharged. The three Wastewater Discharge Permits are: a Class I Permit, a Class II Permit, and a Special Purpose Permit.

~~(1) — Class I Permit;~~

~~(2) — Class II Permit;~~

~~(3) — Special Purpose Permit;~~

~~7.4.10.1 — Class I Permit~~

(1) . All Class I Users discharging or proposing to discharge into the District's sewerage facilities must obtain a Class I Wastewater Discharge Permit jointly issued by the District and OCSD before discharging.

(2) **Class II Permit.** A Class II permit shall be required for all Class II Users who are not required to obtain a Class I permit. The purpose of a Class II permit is to facilitate the collection of compatible pollutant surcharges from the user. All Class II Users discharging or proposing to discharge into the District's sewerage facilities must obtain a Class II Wastewater Discharge Permit by filing an application pursuant to Section 7.4.2.

(3) **Special Purpose Permit**

(a) A special purpose permit shall be required for a user proposing to discharge storm water, groundwater, surface runoff, subsurface drainage, or unpolluted water directly or indirectly to the District's sewerage facilities. This permit may be granted when no alternative method of disposal is reasonably available, or to mitigate an environmental risk or health hazard. The applicant shall bear the burden of demonstrating that no alternative method of disposal is reasonably available.

- (b) Applicants seeking a special purpose wastewater permit shall complete and file with the District, prior to commencing discharge, an application in the form prescribed by the District. This application shall be accompanied by the applicable fees, plumbing plans, a detailed analysis of the alternatives for disposal, or other data needed by the District for review.
- (c) Discharge conditions and limitations shall be no less stringent than Section 7.3 of these Rules and Regulations and Article 2 of the OCSD Ordinance. For constituents not listed in Section 7.3 of these Rules and Regulations or in Article 2 of the OCSD Ordinance, the District shall exercise its sole discretion to base conditions and limitations on the California Toxics Rule and other water quality criteria.
- (d) Monitoring requirements contained in the Special Purpose Permit for storm water, groundwater, surface runoff, subsurface drainage, or unpolluted water shall be for those non-compatible pollutants known or suspected to exist in the discharge and at least one analysis prior to sewer discharge shall be performed for all constituents contained in the most current Environmental Protection Agency (EPA) "Priority Pollutant" list, excluding Asbestos, and in other water quality criteria deemed appropriate by the District.

7.4.11 **Monitoring.** Management of a pollution control program requires a constant flow of information on the quantity and quality of discharges into the District's sewerage facilities. The monitoring of discharges serves three specific purposes. These purposes include ascertaining compliance with the Rules and Regulations, completion of necessary discharge reports as required, and determination of user charge fees, if applicable. There are several modes of a monitoring program. Self-Monitoring develops a data base, and provides the necessary information for determination of compliance and calculation of user charges, if applicable. This monitoring is performed by the user. Scheduled Monitoring is a systematic sampling and inspection survey of all industrial contributors to the District's sewerage facilities in accordance with a predetermined schedule. Unscheduled Monitoring is a random spot check of users to ascertain permit compliance. Demand Monitoring is conducted when some disruption of the District's sewerage facilities develops. The District will perform scheduled, unscheduled and demand monitoring to ensure compliance with the provisions of the Rules and Regulations and permits, and will review self-monitoring reports.

7.4.12 **Self-Monitoring.**

(1) Users required to obtain a Wastewater Discharge Permit may be required to develop a self-monitoring and reporting program. The frequency of self-monitoring and reporting will be based on the following criteria as evaluated by the District:

- (a) The effect of the discharger's wastewater on the District's sewerage facilities;
- (b) The degree of toxic materials which may pass through the treatment plant;
- (c) The need to ensure that any pretreatment standards are met;
- (d) The size, nature, and type of the industrial wastewater discharge;
- (e) The extent to which the user could contribute to violation of the District's discharge requirements.

(2) Self-monitoring programs include, at minimum, the following:

- (a) A minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organics.
- (b) For all other pollutants, 24-hour composite samples must be obtained through flow-proportional composite sampling techniques where feasible.
- (c) Where flow proportional composite sampling is infeasible, samples may be obtained through time-proportional composite sampling techniques or through a minimum of four (4) grab samples where the User demonstrates that this will provide a representative sample of the effluent being discharged.

(3) Samples collected shall be in accordance with proper sampling and handling techniques outlined in the latest edition of "Standard Methods" or that publication entitled "Methods for Chemical Analysis of Water and Wastes" published by the EPA, or other appropriate method approved by the Regional Board.

#### 7.4.13 Monitoring and Metering Facilities

The General Manager may require the user to construct at his own expense monitoring and metering facilities to allow inspection, sampling and flow measurement of the sewage or internal drainage systems. The General Manager may also require sampling and metering equipment to be provided, installed and operated at the user's expense. The monitoring and metering facility should normally be situated on the user's premises. When

such a location would be impractical or cause undue hardship on the user, the user may construct such facilities in the public right-of-way provided said user has obtained any and all permits required therefore and that such equipment is located so that it will not be obstructed by landscaping or parked vehicles. If the monitoring and metering facility is inside the user's fence, there shall be accommodations to allow access for District personnel, such as a gate secured with a District lock. There shall be ample room in or near such monitoring and metering facility to allow accurate sampling and compositing of samples for analysis. The monitoring and metering facility and sampling and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the user. Whether constructed on public or private property, the monitoring and metering facilities shall be provided in accordance with the District requirements and all applicable construction standards and specifications. Construction shall be completed within ninety days following written notification by the General Manager, unless a time extension is otherwise granted by the General Manager.

#### **7.4.14 Inspection and Sampling**

The District shall inspect the wastewater generating and disposal facilities of any user to ascertain whether the intent of these Rules and Regulations is being met and the user is complying with all requirements. Persons or occupants of premises where wastewater is created or discharged shall allow the District or its representatives ready access during the normal working day to all parts of the wastewater generating and disposal facilities and monitoring and metering facilities for the purposes of inspection and sampling. The District shall have the right to set up on the user's property such devices as are necessary to conduct sampling or metering operations. Where a user has security measures in force, the user shall make necessary arrangements so that personnel from the District will be permitted to enter without delay for the purpose of performing their specific responsibilities.

#### **7.4.15 Discharge Reports**

An industrial user discharging or proposing to discharge sewage into the District's sewerage facilities shall be required to file discharge reports periodically or at anytime requested by the District. Industrial users subject to Federal categorical pretreatment standards, shall submit to the District by June 30 and December 31, unless required more frequently by the standard or by the District, a report indicating the nature and concentration of pollutants in the discharge which are limited by such categorical pretreatment standards. Reports generated by OCS D may serve to meet this requirement. In addition, this report shall include a record of flows as required by the District. The District may agree to alter the months during which the reports are to be submitted based on an industrial user's high or low flow rates, holidays, budgets, etc.

Where the District has imposed mass limitations on an industrial user, the report shall indicate the mass of pollutants regulated by the pretreatment standards in the discharge of the industrial user. Where the District has imposed equivalent mass or concentration limits on an industrial user, the report shall contain a reasonable measure of an industrial user's long-term production rate. For all other industrial users subject to categorical pretreatment standards expressed in terms of pollutant discharge per unit of production, the



report shall include the industrial user's actual average production rate for the reporting period.

The District may also require an industrial user to include other information in the report including, but not limited to hours of operation, number and classification of employees, and quantities of liquid or gaseous materials stored on site even though they may not be discharged. Industrial users who monitor more frequently than required by permit must report the results of such monitoring.

Industrial users required to submit these reports or to keep other records under the conditions of their permit shall retain for three years all records of monitoring activities including dates, times, exact places, methods, names of persons who sampled and analyzed the discharge, and results of analysis, and shall make such records available for inspection and copying by the Regional Board, and the District. This period of retention may be extended during the course of any unresolved litigation regarding the User or the District, when requested by the Regional Board.

These reports shall be signed per Section 7.4.20 of the Rules and Regulations.

**7.4.16 Confidential Information.** All information and data on a user obtained from reports, questionnaires, permit applications, permits, monitoring programs, and from inspections shall be available to the public or other governmental agencies without restriction unless the user specifically requests confidentiality and is able to demonstrate to the satisfaction of the General Manager that the release of such information would divulge information, processes or methods which would be detrimental to the user's competitive position. Any such claim must be asserted at the time of submittal of the information by stamping the words "confidential business information" on each page containing such information. If a claim is so asserted, the District will treat the information in accordance with Chapter 40, Code of Federal Regulations, Part 2. When requested by the person furnishing a report or other document, the portions of a report or document which might disclose trade secrets or secret processes shall not be made available to the public, but shall be made available to governmental agencies; and such portions of a report or document shall be subject to use by the state or any state agency in judicial review or enforcement proceedings involving the person furnishing the report or document. Sewage constituents and characteristics will in no instance be recognized as confidential information.

**7.4.17 Toxic Solid Wastes.** Industrial dischargers identified as generators of toxic solid wastes shall be notified by the District of applicable requirements promulgated under the Solid Waste Disposal Act, and the Resource Conservation and Recovery Act (RCRA) and shall be referred to the State of California Department of Health Services. The foregoing provision shall in no way relieve the discharger of full responsibility for ascertaining and complying with all such requirements.

**7.4.18 Hazardous Waste Discharge.**

(1) All industrial dischargers are required to file a one-time notification with the District of the discharge of wastes which, if otherwise disposed of, would be considered RCRA hazardous wastes. Industrial dischargers which discharge more than 220 pounds (100 kilograms) of RCRA classified wastes per month must include in the notification an identification of hazardous constituents, estimates of mass and concentration on a monthly basis for twelve consecutive months. Industrial dischargers who discharge less than 33 pounds (15 kilograms) per month of non-acute hazardous waste as defined by RCRA do not have to report under this Section. In addition, industrial dischargers need not report pollutants already addressed under self-monitoring, baseline monitoring, and other periodic compliance reports.

(2) Industrial dischargers subject to this Section are required to certify that they have developed a program to reduce the volume or toxicity of hazardous wastes generated to the degree it has been determined to be economically practical.

7.4.19 **Baseline Monitoring Reports.** All dischargers may be required to comply with applicable mandatory toxic waste and pretreatment standards promulgated in accordance with Sections 307 and 308 of the Federal Water Pollution Control Act, or amendments thereto. Within 180 days of the date such pretreatment standards are promulgated, or become applicable to the discharger, dischargers subject to the standards shall submit a baseline monitoring report to the District and to the U.S. Environmental Protection Agency detailing, in accordance with Section 403.12, Chapter 40, Code of Federal Regulations, as amended, the discharger's compliance status with the regulations. If the discharger is in non-compliance, the report shall include a time schedule outlining how the discharger will achieve compliance within the date established for the applicable pretreatment standards. Progress reports, monitoring and reports of compliance shall also, as required by Section 403.12, be submitted by the discharger at the specified times.

7.4.20 **Signatory Requirements.** All reports and permit applications required by the District for satisfying Federal Regulations shall contain the following certification statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with Federal Pretreatment Requirements."

This statement shall be signed by a manager and the person responsible for environmental matters of the industrial user as defined in 40 CFR 403.12 (1) (1-4).

## 7.5 CHARGE FOR USE

### 7.5.1 General

The purpose of a charge for use is to insure that each recipient of sewerage service from the District pays its reasonably proportionate share of all the costs of providing that

sewerage service. Charges for use shall be used to recover the total cost of operation and maintenance, including the conveying, treating and disposing of wastewater in the District's sewerage facilities, as well as capital expenditures and reserve requirements for providing wastewater collection treatment and disposal. In addition, they will be used to reimburse District for the cost of monitoring and enforcement of these Rules and Regulations. Charges for sewerage service use will be the District's non-residential service/quantity/commodity rates as specified in the District's Schedule of Rates and Charges, based on return of metered water to the sewer. Dischargers may, upon request to the District, be permitted to have the amount of water being discharged into the sewer determined by means acceptable to the District. In lieu of the rates specified in the Schedule of Rates and Charges, upon request by the discharger and at the sole discretion of the District, an alternative service charge may be applied pursuant to Section 7.5.2 of these Rules and Regulations. Additional fees will be levied by the District for compatible or non-compatible pollutants in excess of those amounts specified in the user permit.

**7.5.2 Alternative Service Charge.** Dischargers may request the application of an Alternative Service Charge for use. The acceptance of such requests and the formation and continuing application of an Alternative Service Charge shall be at the sole discretion of the District. The Alternative Service Charge shall be based on the quantity and quality of water being discharged to the sewer from the discharger's facility, measured by a means acceptable to the District. The District may revise an Alternative Service Charge, or discontinue the application of an Alternative Service Charge to a discharger and apply the rates specified in the Schedule of Rates and Charges, if the District determines, in its sole discretion, that the Alternative Service Charge does not adequately recover costs in accordance with the purposes described in Section 7.5.1; such action may, but need not, be taken in conjunction with any enforcement remedies under Section 7.6.

(1) **Determination of Flow.** There are three methods for determining the volume of wastewater discharged into the sewer: direct measurement, metered water supply, or adjusted metered water supply. Those users exceeding 10% of the design capacity of any District sewerage facility may be required to provide a continuous, automatic total flow measurement system incorporating flow indication, totalization, and recording of the wastewater flow (direct measurement system). Those users not required to have a continuous wastewater flow measurement system shall use metered water supply or adjusted metered water supply measurements to determine flow. The District shall approve the method of wastewater flow measurement to be used in each instance.

- (a) **Direct Measurement.** Direct Measurement reports the volume of industrial wastewater determined by a full time flow meter, measuring the wastewater leaving the plant.
- (b) **Metered Water Supply.** Metered water supply reports the amount of industrial wastewater discharged when the flow volume is a measurement of the total water entering the user's

plant. This amount can be taken from water bills or flow measuring device which measures the intake of water from either the District, water wells, or other sources.

- (c) **Adjusted Metered Water Supply.** Adjusted metered water supply reports the amount of industrial wastewater discharged when amounts of water consumed in plant operations are subtracted from the total volume of metered water entering the plant. This results in a calculated rather than a measured flow volume of industrial wastewater leaving the plant. The adjusted metered water supply is determined by deducting measured quantities of water consumed in plant operations from the metered water supply.

(2) **Determination of Biological Oxygen Demand (BOD) and Suspended Solids (SS).**

- (a) The BOD and SS concentrations in the discharged wastewater shall be determined in accordance with the results of analytical tests performed on samples collected by the District and/or discharger and in a manner specified by the District. The frequency of sampling to determine wastewater strength shall be determined by the District.
- (b) The samples collected shall be in accordance with proper sampling and handling techniques outlined in the latest edition of “Standard Methods for the Examination of Water and Wastewater” (American Public Health Association), and/or 40 CFR 136 “Guidelines Establishing Test Procedures for the Analysis of Pollutants”, promulgated by the EPA or other appropriate methods approved for use by the Regional Board. Samples collected shall be delivered to a California State Certified Laboratory for analysis within the holding period of the sample. The District may require samples to be split for concurrent analyses.

- (3) The Alternative Service Charge for District approved dischargers shall be computed by the following formula:

$$\text{Charge for use} = VR_v + BR_b + SR_s$$

Where **V** = total volume of flow, in hundred cubic feet

**B** = total discharge of biochemical oxygen demand, in pounds

**S** = total discharge of suspended solids, in pounds

**R<sub>v</sub>, R<sub>b</sub>, R<sub>s</sub>** = unit charge rates for volume, BOD, and suspended solids, respectively, adopted and adjusted as

needed by the District Board of Directors as shown in Exhibit B, Schedule of Rates and Charges.

Each unit rate shall be based on the amount attributable to the respective component as a proportionate share of the total cost for operations and maintenance, capital expenditures, debt service, and reserve requirements for providing wastewater collection, treatment, and disposal in dollars per unit. Other measurements of the organic content of the wastewater of a discharger, such as COD or TOC may be used instead of BOD when BOD is not applicable. However, the discharger must establish for the District a relationship between the BOD of his wastewater and the other measured parameter to convert the other parameter to an equivalent BOD. This relationship shall be used by the District in determining the Alternative Service Charge for use. When wastewater from typical domestic use facilities is discharged separately from the other wastewaters of a discharger, the charge for use for discharging the domestic wastewater may be determined by using the following:

- (1) 10,000 gallons per employee per year; and,
- (2) 20 pounds of suspended solids per employee per year; and,

(3) 20 pounds of BOD per employee per year. (The number of employees will be considered at the average of people employed full time on a daily basis. This may be determined by averaging the number of people employed at the beginning and ending of each quarter, or other period that reflects normal employment fluctuations.)

**7.5.3 Special Purpose Discharge Permit Charge for Use.** A charge for use to cover all costs of the District for providing sewerage service and monitoring shall be established by the General Manager. A deposit determined by the General Manager to be sufficient to pay the estimated charges for use shall accompany the Special Purpose Discharge Permit application, and said deposit shall be applied to the charges for use.

**7.5.4 Charges for Non-Compliance.**

(1) Non-compliance with permit requirements, mass emission rate limits, concentrations, and/or these Rules and Regulations may be determined by an analysis of a grab or composite sample of the discharge of a permittee.

(2) If routine sampling of the discharge of a permittee reveals non-compliance by the permittee with the mass emission rates or other conditions and limitations specified in the permittee's discharge permit, or with any provisions of these Rules and Regulations, then the permittee shall pay fees to the District as specified in Exhibit B, Schedule of Rates and Charges. The purpose of the non-compliance fees is to compensate the District for additional costs of sampling, monitoring, laboratory analysis, treatment, disposal, and administrative processing incurred as a result of the non-compliance, and shall be in addition to and not in lieu of any penalties as may be assessed pursuant to Sections 7.6.2, 7.6.3, and 7.6.4, and charges under Section 7.5.8.

(3) Upon discovery of non-compliance with any pretreatment standard and requirement, the District shall be authorized to immediately proceed with enforcement action against the industrial user as outlined in Section 7.6. The user's status shall remain in violation until all necessary steps have been taken to restore or achieve compliance.

#### 7.5.5 **Damage to Facilities or Interruption of Normal Operations**

(1) When a discharge of wastes causes an obstruction, interference, damage, or any other impairment to District's operation or facilities, the District may assess a charge to the discharger for the work required to clean or repair the facility or costs incurred to resume normal operations and such discharge shall be grounds for permit revocation. A service fee of 25 percent of District's costs shall be added to these charges and shall be payable within forty five (45) days of invoicing by the District.

(2) If it can be shown that the discharge is the cause of the District violating its discharge requirements established by any Regulatory Agency or incurring additional expenses or suffering losses or damage to the sewerage facilities, then that discharger shall be responsible for any costs or expenses incurred by the District, including regulatory fines, penalties, and assessments made by other agencies or a court.

### 7.6 ENFORCEMENT

#### 7.6.1 **Duty of Enforcement**

(1) The General Manager is hereby charged with the duty of enforcing this Section. The provisions of this Section shall be applicable to any discharge and any building, structure or property temporarily or permanently connected to the District's sewerage facilities, whether the same is owned, operated or controlled by a private party or by a public agency, other than the District, or quasi-public agency, corporation or association.

(2) The District shall have legal authority to obtain remedies for non-compliance by industrial users with any pretreatment standard and requirement, including the authority to seek injunctive relief. The District shall have authority and procedures (after informal notice to the discharger) to immediately and effectively halt or prevent any discharge of pollutants which may constitute an imminent endangerment to the health or welfare of persons or to the environment, or cause interference with the operation of any treatment plant.

(3) In addition to such other penalties as may be prescribed for a violation of these Rules and Regulations, whenever the General Manager finds that a discharge of waste has been taking place in violation of any prohibitions or limitations prescribed herein or pretreatment standards promulgated in accordance herewith, he may require the user to submit for his approval best management practice plans (BMPs) wherever necessary to

implement the District's pretreatment program (e.g. plans ensuring industrial users conduct necessary routine maintenance, cleaning operations, chemical storage practices, segregation of wastes for reclamation, reduction of contaminated runoff, etc.). Any failure to comply with such BMPs shall likewise be deemed a violation of this article.

7.6.2 **Enforcement Remedies.** The District may, at its discretion, utilize any one, combination, or all enforcement remedies provided in Section 7.6 in response to any violation of a permit or these Rules and Regulations.

7.6.3 **Probation Order**

(1) In the event that it is determined that a user has discharged in violation of any provision of these Rules and Regulations, or the terms, conditions and limitations of its discharge permit, or has not made payment of all amounts owed to the District for user charges, non-compliance fees, or any other fees, the General Manager may issue a Probation Order, whereby the user must comply with all directives, conditions, and requirements therein within the time prescribed.

(2) The Probation Order may contain terms and conditions including, but not limited to, installation of pretreatment equipment and facilities, submittal of drawings or technical reports, payment of fees, limits on rate and time of discharge, or other provisions to ensure compliance with these Rules and Regulations.

(3) If at any time while a Probation Order is in effect, a user discharges wastewater to the District's sewerage facilities which is not in compliance with the Probation Order, the terms, conditions, or the limitations specified in the user's discharge permit, or with any provision of these Rules and Regulations, then the user shall pay fees to the District as specified in Exhibit B, Schedule of Rates and Charges, and the user may be assessed all other costs incurred during the sampling, including labor, equipment, materials, and overhead. The user may also be subject to permit suspension pursuant to Section 7.6.2.4 of these Rules and Regulations.

(4) A Probation Order issued by the General Manager shall be in effect for a period not to exceed ninety (90) days. Upon satisfactory compliance with the terms of the Probation Order and expiration thereof, any fees to be assessed due to subsequent non-compliance by user shall be in accordance with these Rules and Regulations, re-established at the rate set forth in Exhibit B, Schedule of Rates and Charges. All enforcement actions thereafter shall be based on applicable provisions of these Rules and Regulations.

7.6.4 **Enforcement Compliance Schedule Agreement (ECSA)**

(1) Upon determination that a permittee is in non-compliance with the terms, conditions or limitations specified in its permit or any provision of

these Rules and Regulations, and needs to construct and/or acquire and install equipment related to pretreatment, the General Manager may require the permittee to enter into an ECSA, which will, upon the effective date of the ECSA, amend the permittee's permit. The ECSA shall contain the terms and conditions by which a permittee must operate during its term and shall provide specific dates for achieving compliance with each term and condition for construction, acquisition, and installation of required equipment related to pretreatment.

(2) An ECSA shall have a maximum term of one hundred-eighty (180) days, and upon showing of good cause, including but not limited to reasonable progress under the terms of the ECSA, it may be extended by the General Manager for an additional period not to exceed one hundred-eighty (180) days. No further extensions shall be granted except on approval of the Board of Directors.

(3) The ECSA may contain terms and conditions including but not limited to requirements for self-monitoring, installation of pretreatment equipment and facilities, submittal of drawings or reports, operator certification, audit of waste minimization practices, payment of fees, limits on rate and time of discharge, deposit of performance guarantee, or other provisions to ensure compliance with these Rules and Regulations.

(4) An ECSA shall not be approved by the District until such time as all amounts owed to the District, including fees, charges for use, Section 7.5.8 charges, non-compliance fees, deposits, or civil penalties are paid in full, or an agreement for deferred payment secured by acceptable collateral or a third party, is approved by the District. Failure to pay all amounts owed to the District shall be grounds for permit suspension or permit revocation as set forth in Sections 7.6.2.4 and 7.6.2.5.

(5) If, during the term of an ECSA, sampling reveals non-compliance by the permittee with the terms, conditions or limitations specified in the ECSA, the user's permit, or any provision of these Rules and Regulations, the permittee shall pay the fees as specified in Exhibit B, Schedule of Rates and Charges, and may be assessed all other costs incurred during the sampling, including labor, equipment, materials, and overhead.

(6) If compliance is not achieved in accordance with the terms and conditions of an ECSA during its term, the General Manager may issue an order suspending or revoking the discharge permit pursuant to Sections 7.6.2.4 and 7.6.2.5.

(7) If following the expiration of an ECSA, sampling reveals non-compliance by the permittee with the terms, conditions or limitations specified in the permit, or any provisions of these Rules and Regulations, the permittee shall pay an amount based on the fees set forth in Exhibit B, Schedule of Rates and Charges, for each violation.



(8) If the permittee remains in consistent compliance for a two-year period following ECSA expiration, then the fees shall be re-established in accordance with Exhibit B, Schedule of Rates and Charges. All enforcement actions thereafter shall be based on applicable provisions of these Rules and Regulations.

#### 7.6.5 Regulatory Compliance Schedule Agreement (RCSA)

(1) If at any time subsequent to the issuance of a wastewater discharge permit to an industrial user, Federal Categorical Pretreatment Standards are adopted or revised by the EPA, or in the event the District enacts revised discharge limitations, the General Manager, upon determination that an industrial user would not be in compliance with the future limitations, may require the industrial user to enter into a RCSA with the District under terms and conditions that would provide for achieving compliance with all new standards by the industrial user on a specific date. The RCSA shall have a maximum term of two hundred-seventy (270) days.

(2) The RCSA may contain terms and conditions including but not limited to requirements for installation of pretreatment equipment and facilities, submittal of drawings or reports, waste minimization practices or other provisions to ensure compliance with these Rules and Regulations.

(3) During the period said RCSA is in effect, any discharge by the permittee in violation of the RCSA will require payment of non-compliance fees as specified in Exhibit B, Schedule of Rates and Charges.

(4) Upon RCSA expiration, and in the event of non-compliance by the permittee, non-compliance fees shall be established in accordance with Exhibit B, Schedule of Rates and Charges. All enforcement actions thereafter shall be based on applicable provisions of these Rules and Regulations.

#### 7.6.6 Permit Suspension.

(1) **Conditions for Suspension.** The District may suspend any permit when a permittee:

- (a) Fails to comply with the terms and conditions of either an ECSA or RCSA.
- (b) Knowingly provides a false statement, representation, record, report, or other document to the District.
- (c) Refuses to provide records, reports, plans, or other documents required by the District to determine permit terms, conditions, or limitations, discharge compliance, or compliance with these Rules and Regulations.

- (d) Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or sample collection method.
- (e) Fails to report significant changes in operations or wastewater constituents and characteristics.
- (f) Violates a Probation Order.
- (g) Refuses reasonable access to the permittee's premises for the purpose of inspection and monitoring.
- (h) Does not make timely payment of all amounts owed to the District for user charges, non-compliance fees, penalties, deposits, or any other fees and charges.
- (i) Violates any condition or limitation of its discharge permit or any provision of the District's Rules and Regulations.
- (j) Discharges effluent that causes pass through or interference with the District's collection, treatment, or disposal facilities.
- (k) Fails to submit oral notice or written report of bypass occurrence.

(2) When the General Manager has reason to believe that grounds exist for permit suspension, he shall give written notice thereof by certified mail to the permittee setting forth a statement of the facts and grounds deemed to exist, together with the time and place where the charges shall be heard by a Department Head. The hearing date shall not be less than fifteen (15) calendar days nor more than forty-five (45) calendar days after the mailing of such notice.

- (a) At the suspension hearing, the permittee shall have an opportunity to respond to the allegations set forth in the notice by presenting written or oral evidence. The hearing shall be conducted in accordance with procedures established by the General Manager and approved by the District's General Counsel.
- (b) After the conclusion of the hearing, the Department Head shall submit a written report to the General Manager setting forth a brief statement of facts found to be true, a determination of the issues presented, conclusions, and a recommendation.
- (c) Upon receipt of the written report, the General Manager shall make his determination and should he find that grounds exist for suspension of the permit, he shall issue his decision and order in writing within thirty (30) calendar days after the

conclusion of the hearing by the Department Head. The written decision and order of the General Manager shall be sent by certified mail to the permittee or its legal counsel or representative at the permittee's business address.

(3) Upon an order of suspension by the General Manager becoming final, the permittee shall have no right to discharge any industrial wastewater, directly or indirectly to the District's sewerage facilities for the duration of the suspension. All costs for physically terminating and reinstating service shall be paid by the permittee. Any owner or responsible management employee of the permittee shall be bound by the order of suspension. An order of permit suspension issued by the General Manager shall be deemed final upon delivery to the permittee, unless appealed to the Board of Directors pursuant to Section 7.6.2.9.

**7.6.7 Permit Revocation.**

(1) **Conditions for Revocation.** The District may revoke any permit when it is determined that ~~athe~~ permittee:

~~(a)~~ Knowingly provided a false statement, representation, record, report, or other document to the District.

~~(a)(b)~~ Refuses to provide records, reports, plans, or other documents required by the District to determine permit terms, conditions, or other limitations, discharge compliance, or compliance with these Rules and Regulations.

~~(b)(c)~~ Falsifies, tampers with, or knowingly renders ~~sed~~ inaccurate any monitoring device or sample collection method.

~~(e)(d)~~ Failed ~~sd~~ to report significant changes in operations or wastewater constituents and characteristics.

~~(d)(e)~~ Failed ~~sd~~ to comply with the terms and conditions of an ECSA, permit suspension, or probation order.

~~(e)(f)~~ Discharges ~~sd~~ effluent to the District's sewerage facilities while its permit is suspended.

~~(f)(g)~~ Refuses ~~sd~~ reasonable access to the permittee's premises for the purpose of inspection and monitoring.

~~(h)~~ Discharges ~~Did not make timely payment of all amounts owed to the District for user charges, non-compliance fees, penalties, deposits, or any other fees and charges.~~

~~(g)(i)~~ Discharged a batch dump to the District's sewerage facilities.

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~~(h)~~(j) Discharges~~d~~ effluent that causes pass through or interference with the District's collection, treatment, or disposal facilities.

~~(i)~~(k) Failed~~d~~ to submit oral notice or written report of bypass occurrence.

~~(j)~~(l) Violates~~d~~ any condition or limitation of its discharge permit or any provision of the District's Rules and Regulations.

(2) **Notice of Hearing.** When the General Manager has reason to believe that grounds exist for revocation of a permit, he shall give written notice by certified mail thereof to the permittee setting forth a statement of the facts and grounds deemed to exist together with the time and place where the charges shall be heard by a Department Head. The hearing date shall not be less than fifteen (15) calendar days nor more than forty-five (45) calendar days after the mailing of such notice.

(3) **Hearing Procedure.** At the hearing, the permittee shall have an opportunity to respond to the allegations set forth in the notice by presenting written or oral evidence. The revocation hearing shall be conducted in accordance with the procedures established by the General Manager and approved by the District's general counsel.

(4) **Hearing Report.** After the conclusion of the hearing, the Department Head shall submit a written report to the General Manager setting forth a brief statement of facts found to be true, a determination of the issues presented, conclusions, and a recommendation.

(5) **Manager's Determination.** Upon receipt of the written report, the General Manager shall make his determination and should he find that grounds exist for permanent revocation of the permit, he shall issue his decision and order in writing within thirty (30) calendar days after the conclusion of the hearing by the Department Head. The written decision and order of the General Manager shall be sent by certified mail to the permittee or its legal counsel or representative at the permittee's business address.

In the event that the General Manager determines to not revoke the permit he may order other enforcement actions, including, but not limited to, a temporary suspension of the permit, under terms and conditions that he deems appropriate.

Upon an order of revocation by the General Manager becoming final, the permittee shall permanently lose all rights to discharge any industrial wastewater directly or indirectly to the District's sewerage facilities. All costs for physical termination shall be paid by the permittee. Any owner or responsible management employee of the permittee shall be bound by the order of revocation. An order of permit revocation issued by the General Manager shall be deemed final upon delivery to the permittee, unless appealed to the Board of Directors pursuant to Section 7.6.2.9.

Any future application for a permit at a location within the District by any person subject to an order of revocation will be considered by the District after fully reviewing the records of the revoked permit, which records may be the basis for denial of a new permit.

**7.6.8 Emergency Suspension.** The District may, by order of the General Manager without notice or hearing, suspend sewerage service when such suspension is necessary, in order to stop an actual or impending discharge which presents or may present an imminent or substantial endangerment to the health and welfare of persons, or to the environment, or may cause interference with the District's sewerage facilities, or may cause the violation of any State or Federal Law or Regulation. An emergency suspension order is final and not appealable.

**7.6.9 Civil Penalties**

(1) **Imposition By Court.** Any permittee, discharger or other person who violates any provision of Section 7 of these Rules and Regulations, any permit condition, prohibition or effluent limitation, or any order, compliance schedule, suspension or revocation shall be civilly liable in a sum not to exceed twenty-five thousand dollars (\$25,000) a day for each violation. Pursuant to Sections 54739 and 54740 of the California Government Code, the District, upon order of the General Manager, shall petition the Superior Court to impose, assess and recover such penalties or such other penalties as the District may impose, assess and recover under Federal or State law.

(2) **Imposition By Administrative Procedure.** Any permittee, discharger, or other person who violates any provision of Section 7 of these Rules and Regulations, any permit condition, prohibition or effluent limitation, or any order, compliance schedule, suspension or revocation shall be civilly liable in the following amounts, as applicable, imposed by the District pursuant to an administrative complaint: a sum not to exceed two thousand dollars (\$2,000) a day for failing or refusing to furnish technical or monitoring reports, a sum not to exceed three thousand dollars (\$3,000) a day for failing or refusing to comply with any compliance schedule, a sum not to exceed five thousand dollars (\$5,000) a day for each violation for discharges in violation of any waste discharge limitation, permit condition or other requirement issued, reissued or adopted by the District, and a sum not to exceed ten dollars (\$10) per gallon for any discharge in violation of any suspension, cease and desist order or other order, or prohibition issued, reissued or adopted by the District.

(a) The District may proceed under Section 7.6.9(2.7.2) by issuing an administrative complaint to any person who violates any provision of Section 7 of these Rules and Regulations, any permit condition, prohibition or effluent limitation, or any order, compliance schedule, suspension or revocation, alleging the act or failure to act that constitutes the violation, the provisions of law authorizing civil liability

to be imposed and the proposed civil penalty. The administrative complaint shall be served by personal delivery or certified mail on such person and shall inform the person that a hearing shall be conducted, within 60 days following service, before the General Manager. The person may waive the right to a hearing, in which case it shall not be conducted.

- (b) At the hearing, the person shall have an opportunity to respond to the allegations set forth in the administrative complaint by presenting written or oral evidence. The hearing shall be conducted in accordance with the procedures established by the General Manager and approved by the District's general counsel.
- (c) After the conclusion of the hearing, the General Manager shall make his determination and should he find that grounds exist for imposition of a civil penalty, he shall issue his decision and order in writing within thirty (30) calendar days after the conclusion of the hearing. If not appealed, the order shall be final on the 31st day after it is served on the person.
- (d) A person dissatisfied with the decision of the General Manager may appeal to the Board of Directors within thirty (30) days of notice of the General Manager's decision, in accordance with Section 7.6.11-7.6.2.9.
- (e) If after the hearing or appeal, if any, it is found that the person has violated reporting or discharge requirements, the General Manager or Board of Directors may assess a civil penalty against that person.
- (f) In the determination of the amount of the civil penalty, all relevant circumstances may be taken into consideration, including, but not limited to, the extent of harm caused by the violation, the economic benefit derived through any non-compliance, the nature and persistence of the violation, the length of time over which the violation occurs and the corrective action, if any, attempted or taken by the person.
- (g) Payment of civil penalties shall be due within thirty (30) days of the date the order assessing the penalties becomes final. The amount of any civil penalties which have remained delinquent for a period of sixty (60) days from the date they are due shall constitute a lien against the real property of the discharger from which the discharge resulting in the imposition of the penalty originated. The lien shall have no force and effect until recorded with the county recorder and when recorded shall have the force and effect and priority of a

judgment lien and continue for ten (10) years and be renewable in accordance with law.

- (h) Copies of the order shall be served by personal service or by registered mail upon the party served with the administrative complaint and upon other persons who appeared at the hearing and requested a copy of the order.
- (i) Any party aggrieved by a final order issued by the Board of Directors after granting review of the order of the General Manager may obtain review of the order of the Board of Directors in the superior court, by filing in the court a petition for writ of mandate within thirty (30) days following the service of a copy of the decision and order issued by the Board of Directors.

#### 7.6.10 Appeals To The General Manager

(1) Any user, permit applicant, or permittee affected by any decision, action or determination made a Department Head may file a written request for an appeal hearing. The request must be made within fifteen (15) days of mailing of the decision. The request for a hearing shall set forth in detail all facts supporting the appellant's request.

(2) The General Manager shall, within fifteen (15) days of receiving the request for appeal, provide written notice to the user of the hearing date, time, and place. The hearing date shall not be more than thirty (30) days from the mailing of such notice by certified mail to the appellant unless a later date is agreed to by the appellant. If the hearing is not held within said time due to actions or inactions of the appellant, then the original decision shall be deemed final.

(3) At the hearing, the appellant shall have the opportunity to present information supporting its position concerning the staff's decision, action, or determination. The hearing shall be conducted in accordance with procedures established by the General Manager and approved by the District's general counsel.

(4) After the conclusion of the hearing, the General Manager shall prepare a written report setting forth a brief statement of facts found to be true, a determination of the issues presented, and conclusions. The General Manager shall make his determination whether to uphold, modify, or reverse the decision, action, or determination of the Department Head and shall issue his decision and order within thirty (30) calendar days of the hearing. The written decision and order of the General Manager shall be sent by certified mail to the appellant or its legal counsel or representative at the appellant's business address.

(5) The order of the General Manager shall be final in all respects fifteen (15) days after it is mailed to the appellant unless a request for hearing is filed with the Board of Directors pursuant to Section 7.6.2.9.

#### 7.6.11 Appeals To The Board Of Directors

(1) If the General Manager's order is adverse to the user, permit applicant, or permittee, it may prior to the date that the General Manager's order becomes final, file a written request for a hearing by the Board of Directors accompanied by an appeal fee in an amount shown in Exhibit B, Schedule of Rates and Charges. The request for hearing shall set forth in detail all the issues in dispute for which the appellant seeks determination and all facts supporting appellant's request.

(2) No later than sixty (60) days after receipt of the request for hearing, the Board of Directors shall either set the matter for hearing, or deny the request for hearing.

(3) The Board of Directors shall grant all requests for a hearing on appeals concerning administrative civil penalties, ~~(Section 7.6.2.7.2)~~, permit suspension or revocation. Whether to grant or deny the request for a hearing on appeals of other final decisions of the General Manager shall be at the sole discretion of the Board of Directors.

(4) The appeal fee shall be refunded if the Board of Directors denies a hearing or reverses or modifies the order of the General Manager. The fee is not refunded if the Board of Directors denies the appeal.

(5) A hearing shall be held by the Board of Directors within sixty (60) days from the date of determination granting a hearing, unless a later date is agreed to by the permittee and the Board of Directors. If the matter is not heard within the required time, due to actions or inactions of the appellant, the General Manager's order shall be deemed final

(6) The Board Secretary shall within fifteen (15) days of the Board of Directors determination, provide written notice to the appellant by certified mail of the hearing date, time, and place, or the denial. If the hearing is denied, the General Manager's decision shall be final fifteen (15) days after the date such notice is mailed.

(7) At the hearing, the appellant shall have the opportunity to present written or oral evidence supporting its position concerning the original decision, action, or determination, in accordance with adopted Rules of Procedure of the Board of Directors.

(8) After the hearing, the Board of Directors shall make a determination whether to uphold, modify, or reverse the original decision, action, or determination as ordered by the General Manager.



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(9) The decision of the Board of Directors shall be set forth in writing within sixty-five (65) days after the close of the hearing and shall contain a finding of the facts found to be true, the determination of issues presented, and the conclusions. The written decision and order of the Board of Directors shall be sent by certified mail to the appellant or its legal counsel or representative at the appellant's business address.

(10) The order of the Board of Directors shall be final upon its adoption. In the event the Board of Directors fails to reverse or modify the General Manager's order, it shall be deemed affirmed.

- 7.7 COSTS. In addition to the penalties provided herein, the District may recover reasonable attorney's fees, court costs, court reporters' fees and other expenses of litigation by appropriate suit at law against the person found to have violated these rules and regulations, orders of the board or conditions of permits issued hereunder.
- 7.8 OTHER PENALTIES. Any violation of these Rules and Regulations which is also a violation of federal or state laws or regulations is, in addition to any enforcement penalties and proceedings contained in the Rules and Regulations, subject to enforcement penalties and proceedings applicable under such federal or state laws or regulations.
- 7.9 FALSIFYING INFORMATION. Any person who knowingly makes any false statement, representation, record, report, plan or other document filed with the district or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this regulation, shall violate these rules and regulations.
- 7.10 PUBLISHED NOTICE OF NON-COMPLIANCE. The names of industries in significant non-compliance with federal pretreatment standards shall be annually published by the district, in accordance with EPA requirements specified in 40 CFR 403.8(f)(2)(vii), in the largest daily newspaper published in the District service area.
- 7.11 WAIVER OF PROVISIONS. Waivers of federal categorical pretreatment standards and thus the provisions of these rules and regulations are prohibited under any circumstances other than those authorized under section 403, general pretreatment regulations, of the clean water act.

### ~~4.~~ CONFLICT

- 7.12 ~~IN THE EVENT THAT, IF~~ any portion of this section pertaining to industrial waste discharge is inconsistent or in conflict with any other provisions of the district's rules and regulations as to such discharge, the provisions of this section ~~SHALL~~ will take precedence.

### 7.13 FATS, OILS AND GREASE CONTROL

#### 7.13.1 Purpose

IRVINE RANCH WATER DISTRICT

(1) The purpose of this regulation is to facilitate the maximum beneficial public use of the District's sewer services and facilities while preventing blockages of the sewer lines resulting from discharges of FOG to the sewer facilities, and to specify appropriate FOG discharge requirements for Food Service Establishments.

(2) This FOG regulation shall use the general definitions set forth in Section 7.2 and the additional definitions set forth in Section 7.11.2. The provisions of this regulation shall apply to the direct or indirect discharge of all wastewater or waste containing FOG carried to the sewer facilities of the District.

(3) To comply with Federal, State, and local policies and to allow the District to meet applicable standards, this regulation shall govern discharges of all wastewater or waste containing FOG carried to the sewer facilities of the District.

(4) This regulation establishes quantity and quality standards on all wastewater and/or waste discharges containing FOG, which may alone or collectively cause or contribute to FOG accumulation in the sewer facilities causing or potentially causing or contributing to the occurrence of SSOs.

(5) For convenience of reference, the District's regulations concerning discharges containing FOG are set forth in this Section 7.11. Notwithstanding compliance with this Section 7.11, discharges of wastewater or waste containing FOG to the sewer facilities shall also be subject to Section 7 generally and all other applicable requirements of these Rules and Regulations.

7.13.2 **Definitions.** The terms hereinafter set forth shall have the following meanings when used herein or in any permits or orders issued pursuant hereto. Terms used in this Section 7.11 and not defined below shall be as defined in Section 7.2.

~~Best Management Practices shall mean~~**BEST MANAGEMENT PRACTICES means** schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the introduction of FOG to the sewer facilities.

~~California Plumbing Code shall mean~~**CALIFORNIA PLUMBING CODE means** Uniform Plumbing Code.

**CHANGE IN OPERATIONS shall mean**~~means~~ any change in the ownership, food types, or operational procedures that have the potential to increase the amount of FOG generated and/or discharged by Food Service Establishments in an amount that alone or collectively causes or creates a potential for SSOs to occur.

IRVINE RANCH WATER DISTRICT

EFFECTIVE DATE of this FOG Regulation ~~shall mean~~means December 30, 2004.

~~Emulsify shall mean~~EMULSIFY means to disperse (as an oil) in an emulsion or to convert two or more immiscible liquids into an emulsion.

FATS, OILS, AND GREASE (“FOG”) ~~shall mean~~means any substance such as a vegetable or animal product that is used in, or is a byproduct of, the cooking or food preparation process, and that turns or may turn viscous or solidifies with a change in temperature or other conditions.

FOG CONTROL PROGRAM ~~shall mean~~means the program required by and developed pursuant to RWQCB Order No. R8-2002-0014, Section (c)(12)(viii).

FOG CONTROL PROGRAM MANAGER ~~shall mean~~means the individual designated by the General Manager to administer the FOG Control Program. The FOG Control Program Manager is responsible for all determinations of compliance with the program, including approval of discretionary variances and waivers.

FOG WASTEWATER DISCHARGE PERMIT ~~shall mean~~means a permit issued by the District subject to the requirements and conditions established by the District authorizing the permittee or discharger to discharge wastewater into the District’s facilities or into sewer facilities which ultimately discharge into a District facility.

~~Food Service Establishment shall mean~~FOOD SERVICE ESTABLISHMENT means a facility defined in California Uniform Retail Food Service Establishments Law (CURFFL), Health and Safety Code Section 113785, and any commercial entity within the boundaries of the District, operating in a permanently constructed structure such as a room, building, or place, or portion thereof, maintained, used, or operated for the purpose of storing, preparing, serving, or manufacturing, packaging, or otherwise handling food for sale to other entities, or for consumption by the public, its members or employees, and which has any process or device that uses or produces FOG, or grease vapors, steam, fumes, smoke or odors that are required to be removed by a Type I or Type II hood, as defined in CURFFL Section 113785. A limited food preparation establishment is not considered a Food Service Establishment when it is engaged only in reheating, hot holding or assembly of ready to eat food products and as a result, there is no wastewater discharge containing a significant amount of FOG. A limited food preparation establishment does not include any operation that changes the form, flavor, or consistency of food.

~~General Permit Conditions shall mean~~GENERAL PERMIT CONDITIONS means the FOG Control Program General Permit Conditions.

IRVINE RANCH WATER DISTRICT

~~Food Grinder shall mean~~**FOOD GRINDER means** any device installed in the plumbing or sewage system for the purpose of grinding food waste or food preparation by products for the purpose of disposing it in the sewer system.

~~Grease Control Device shall mean~~**GREASE CONTROL DEVICE means** any grease interceptor, grease trap or other mechanism, device, or process, which attaches to, or is applied to, wastewater plumbing fixtures and lines, the purpose of which is to trap or collect or treat FOG prior to it being discharged into the sewer system. “Grease control device” may also include any other proven method to reduce FOG subject to the approval of the District.

**GREASE INTERCEPTOR or INTERCEPTOR shall mean means** a multi-compartment device that is constructed in different sizes and is generally required to be located, according to the California Plumbing Code, underground between a Food Service Establishment and the connection to the sewer system. These devices primarily use gravity to separate FOG from the wastewater as it moves from one compartment to the next. These devices must be cleaned, maintained, and have the FOG removed and disposed of in a proper manner on regular intervals to be effective.

~~Grease Trap shall mean~~**GREASE TRAP means** a grease control device that is used to serve individual fixtures and have limited effect and should only be used in those cases where the use of a grease interceptor or other grease control device is determined to be impossible or impracticable.

Hot Spots shall mean**HOT SPOTS means** Areas in sewer lines that have experienced sanitary sewer overflows or that must be cleaned or maintained frequently to avoid blockages of sewer system.

New Construction shall mean**NEW CONSTRUCTION means** any structure planned or under construction for which a sewer connection permit has not been issued.

Remodeling shall mean**REMODELING means** a physical change or operational change causing generation of the amount of FOG that exceed the current amount of FOG discharge to the sewer system by the Food Service Establishment in an amount that alone or collectively causes or create a potential for SSOs to occur; or exceeding a cost, set forth in the FOG Control Program, to a Food Service Establishment that requires a building permit, and involves any one or combination of the following: (1) Under slab plumbing in the food processing area, (2) an increase in the net public seating area meeting the criteria specified in the FOG Control Program, (3) an increase in the size of the kitchen area meeting the criteria specified in the FOG Control Program, or (4) any change in the size or type of food preparation equipment.

SSO shall mean**means** sewer system overflow.

### 7.13.3 FOG Discharge Limitations, Prohibitions and Requirements – General

- (1) **FOG Discharge Prohibition.** No Food Service establishment shall discharge or cause to be discharged into the sewer system FOG that exceeds a concentration level adopted by the Board or that may accumulate and/or cause or contribute to blockages in the sewer system or at the sewer system lateral which connects the Food Service Establishment to the sewer system.
- (2) **Food Service Establishment Prohibitions.** The following prohibitions shall apply to all Food Service Establishments:
  - (a) Installation of food grinders in the plumbing system of new constructions of Food Service Establishments is prohibited. Furthermore, all food grinders shall be removed from all existing Food Service Establishments within 180 days of the effective date of this FOG regulation, except when expressly allowed by the FOG Control Program Manager.
  - (b) Introduction of any additives into a Food Service Establishment's wastewater system for the purpose of emulsifying FOG is

prohibited, unless a specific written authorization from the FOG Control Program Manager is obtained.

- (c) Disposal of waste cooking oil into drainage pipes is prohibited. All waste cooking oils shall be collected and stored properly in receptacles such as barrels or drums for recycling or other acceptable methods of disposal.
- (d) Discharge of wastewater from dishwashers to any grease trap or grease interceptor is prohibited.
- (e) Discharge of wastewater with temperatures in excess of 140°F to any grease control device, including grease traps and grease interceptors, except as permitted in the FOG Control Program, is prohibited.
- (f) The use of biological additives for grease remediation or as a supplement to interceptor maintenance, without prior authorization from the FOG Control Program Manager, is prohibited.
- (g) Discharge of wastes from toilets, urinals, and other fixtures containing fecal materials to sewer lines intended for grease interceptor service, or vice versa, is prohibited.
- (h) Discharge of any waste including FOG and solid materials removed from the grease control device to the sewer system is prohibited. Grease removed from grease interceptors shall be wastehailed periodically as part of the operation and maintenance requirements for grease interceptors.
- (i) Increasing the use of water or in any other manner attempting to dilute a discharge as a partial or complete substitute for treatment to achieve compliance with this Section 7.11 and the FOG Wastewater Discharge Permit is prohibited.
- (j) Any other prohibited practice identified in the FOG Control Program from time to time, is prohibited.

(3) **FOG Wastewater Discharge Permit Required.** No person shall discharge, or cause to be discharged any wastewater from a Food Service Establishment directly or indirectly into the sewer system without first obtaining a FOG Wastewater Discharge Permit if required by the District pursuant to Section 7.11.6.

(4) **Best Management Practices Required.** Food Services Establishments shall implement Best Management Practices in their operation to minimize the discharge of FOG to the sewer system. Detailed requirements for Best

Management Practices shall be specified in the permit. This may include kitchen practices and employee training that is essential in minimizing FOG discharge.

7.13.4 **FOG Pretreatment.** Food Service Establishments are required to install, operate and maintain approved type and adequately sized grease interceptors necessary to maintain compliance with the objectives of this Section 7.11. Grease interceptors shall be adequate to separate and remove FOG contained in wastewater discharges from Food Service Establishments prior to discharge to the sewer system. Fixtures, equipment, and drain lines located in the food preparation and clean up areas of Food Service Establishments that are sources of FOG discharges shall be connected to the grease interceptor. Compliance shall be established as follows:

- (1) **New Construction of Food Service Establishments.** New construction of Food Service Establishments after the effective date of this FOG regulation shall include and install grease interceptors prior to commencing discharges of wastewater to the sewer system.
- (2) **Existing Food Service Establishments.**
  - (a) For Food Service Establishments existing on the effective date of this FOG regulation, the requirement to install and to properly operate and maintain a grease interceptor may be conditionally stayed, that is, delayed in its implementation by the FOG Control Program Manager for a maximum period of three years from the effective date of this FOG regulation (3-year Amortization Period). Terms and conditions for application of a stay to a Food Service Establishment shall be set forth in the permit. The Board finds that three years is a reasonable amortization period for existing Food Service Establishments that are operating without a grease interceptor.
  - (b) Existing Food Service Establishments that have reasonable potential to adversely impact the sewer system or have sewer laterals connected to hot spots, as determined by the FOG Control Program Manager, shall install grease interceptors within 180 days of the effective date of this FOG regulation.
  - (c) Existing Food Service Establishments undergoing remodeling or a change in operations, or Food Service Establishments that change ownership, shall be required to install a grease interceptor.
- (3) **Variance from Grease Interceptor Requirements.** A variance from the grease interceptor requirements to allow alternative pretreatment technology, that is at least equally effective in controlling the FOG discharge, in lieu of a grease interceptor may be granted to Food Service Establishments demonstrating that it is impossible or impracticable to install, operate or maintain a grease interceptor.

The applicant shall bear the burden of demonstrating that the alternative method of disposal is at least equally effective. The FOG Control Program Manager's determination to grant a variance will be based upon, but not limited to, evaluation of the following conditions:

- (a) There is no adequate space for installation and/or maintenance of a grease interceptor.
- (b) There is no adequate slope for gravity flow between kitchen plumbing fixtures and the grease interceptor and/or between the grease interceptor and the private collection lines or the public sewer.
- (c) The Food Service Establishment can justify that the alternative pretreatment technology is equivalent to or better than a grease interceptor in controlling its FOG discharge. In addition, the Food Service Establishment must be able to demonstrate, after installation of the proposed alternative pretreatment, its effectiveness to control FOG discharge through downstream visual monitoring of the sewer system, for at least three months, at its own expense. A variance may be granted if the results show no visible accumulation of FOG in its lateral and/or tributary downstream sewer lines.

(4) **Conditional Waiver from Installation of Grease Interceptor.** A conditional waiver from installation of a grease interceptor may be granted for Food Service Establishments that have been determined to have negligible FOG discharge and insignificant impact to the sewer system. The FOG Control Program Manager's determination to grant or revoke a conditional waiver shall be based upon, but not limited to, evaluation of the following conditions:

- (a) Quantity of FOG discharge as measured or as indicated by the size of Food Service Establishment based on seating capacity, number of meals served, menu, water usage, amount of on-site consumption of prepared food and other conditions that may reasonably be shown to contribute to FOG discharges.
- (b) Adequacy of implementation of Best Management Practices and compliance history.
- (c) Sewer size, grade, condition based on visual information, FOG deposition in the sewer by the Food Service Establishment, and history of maintenance and sewage spills in the receiving sewer system.
- (d) Changes in operations that significantly affect FOG discharge.



(e) Any other condition deemed reasonably related to the generation of FOG discharges by the FOG Control Program Manager.

(5) Reserved.

(6) **Application for Waiver or Variance of Requirement for Grease Interceptor.** A Food Service Establishment may submit an application for waiver or variance from the grease interceptor requirement to the FOG Control Program Manager. The Food Service Establishment bears the burden of demonstrating, to the FOG Control Program Manager's reasonable satisfaction, that the installation of a grease interceptor is not feasible or applicable. Upon determination by the FOG Control Program Manager that reasons are sufficient to justify a variance or waiver, the permit will be issued or revised to include the variance or waiver and relieve the Food Service Establishment from the requirement. Terms and conditions for issuance of a variance to a Food Service Establishment shall be set forth in the permit. A waiver or variance may be revoked at any time when any of the terms and conditions for its issuance is not satisfied or if the conditions upon which the waiver was based change so that the justification for the waiver no longer exists.

(7) **Grease Interceptor Serving Multiple Food Service Establishments on a Single Parcel.** Property owners of commercial properties or their official designee(s) shall be responsible for the installation and maintenance of the grease interceptor serving multiple Food Service Establishments that are located on a single parcel.

#### 7.13.5 Sewer System Overflows, Public Nuisance, Abatement Orders and Cleanup Costs

(1) Notwithstanding the three-year amortization period established in Section 7.11.4.2, Food Service Establishments found to have contributed to a sewer blockage, SSOs or any sewer system interferences resulting from the discharge of wastewater or waste containing FOG, shall be ordered to install and maintain a grease interceptor, and may be subject to a plan to abate the nuisance and prevent any future health hazards created by sewer line failures and blockages, SSOs or any other sewer system interferences. SSOs may cause or threaten to cause injury to public health, safety, and welfare of life and property and are hereby declared public nuisances. Furthermore, sewer lateral failures and SSOs caused by Food Service Establishments alone or collectively, are the responsibility of the private property owner or Food Service Establishment, and individual(s) as a responsible officer or owner of the Food Service Establishment.

(2) Sewer blockage, SSOs, obstruction, interference, damage, or any other impairment to the District's sewer facilities or to the operation of those facilities, and any discharge of a waste which causes or contributes to the District's violating its discharge requirements established by any Regulatory Agency or

incurring additional expenses or suffering losses or damage to the facilities, shall be subject to Section 7.5.8.

### 7.13.6 FOG Wastewater Discharge Permits for Food Service Establishments

#### (1) FOG Wastewater Discharge Permit Required

- (a) If required by the District under criteria established in the FOG Control Program, Food Service Establishments proposing to discharge or currently discharging wastewater containing FOG into the District's sewer system shall obtain a FOG Wastewater Discharge Permit from the District. This requirement shall be effective 180 days from the effective date of this FOG regulation.
- (b) FOG Wastewater Discharge Permits shall be expressly subject to all provisions of this Section 7.11 and all other regulations, charges for use, and fees established by the District. The conditions of FOG Wastewater Discharge Permits shall be enforced by the District in accordance with this Section 7.11 and applicable State and Federal Regulations.
- (c) If applicable, Class I and Class II dischargers may have requirements established under Section 7.11.6 incorporated in their permits, in which event the Class I or Class II Permit shall also serve as a FOG Wastewater Discharge Permit.

#### (2) FOG Wastewater Discharge Permit Application.

- (a) Any person required to obtain a FOG Wastewater Discharge Permit shall complete and file with the District prior to commencing discharges, an application on a form prescribed by the District. Applicants for FOG Wastewater Discharge Permits shall complete an application form available at the District's office. The District's FOG Control Program General Permit Conditions shall be obtained from the District office or on the District's website at , and reviewed by the Applicant prior to the submittal of plans. The applicable FOG Wastewater Discharge Permit fees as set forth in Exhibit B, Schedule of Rates and Charges, shall accompany the application. The General Permit Conditions must also be met.
- (b) The applicant shall submit two (2) copies of all drawings for review. All drawings shall include the following:
  - (1) North arrow.
  - (2) Scale size.
  - (3) User name and address.
  - (4) Drawing name and drawing number.

- (5) Date drawn or revised.
- (6) Name of drafter and person approving drawing.
- (c) Applicant will be required to submit site plans, floor plans, mechanical and plumbing plans, and details to show all sewer locations and connections, FOG control device, grease interceptor or other pretreatment equipment and appurtenances by size, location, and elevation for evaluation. Applicant may be required to submit a schematic drawing of the grease control device, grease interceptor or other pretreatment equipment, piping and instrumentation diagram, and wastewater characterization report. District review of plan submittals will include, among other requirements, the prohibitions specified in Section 7.11.3.2 and the requirements specified in Section 7.11.6.8 and Section 7.11.6.9. The review of the plans and procedures shall in no way relieve Applicant of the responsibility of modifying the facilities or procedures in the future, as necessary to produce an acceptable discharge, and to meet the requirements of this Section 7.11 or any requirements of other Regulatory Agencies.

(3) **FOG Wastewater Discharge Permit.** A FOG Wastewater Discharge Permit may contain any of the following conditions or limits:

- (a) Limits on discharge of FOG and other priority pollutants.
- (b) Requirements for proper operation and maintenance of grease interceptors and other grease control devices.
- (c) Grease interceptor maintenance frequency and schedule.
- (d) Requirements for implementation of best management practices and installation of adequate grease interceptor and/or grease control device.
- (e) Requirements for maintaining and reporting status of best management practices.
- (f) Requirements for maintaining and submitting logs and records, including wastehauling records and waste manifests.
- (g) Requirements to self-monitor.
- (h) Requirements for the permittee to construct, operate and maintain, at its own expense, FOG control device and sampling facilities.
- (i) Additional requirements as otherwise determined to be reasonably appropriate by the FOG Control Program Manager to protect the District's system or as specified by other Regulatory Agencies.

- (j) Other terms and conditions, which may be reasonably applicable to ensure compliance with this Section 7.11.

(4) **FOG Wastewater Discharge Permit Fee.** The FOG Wastewater Discharge Permit fee shall be paid by the applicant in the amount set forth in Exhibit B, Schedule of Rates and Charges. Payment of permit fees must be received by the District prior to issuance of either a new permit or a renewed permit. A permittee shall also pay any delinquent invoices for sewer, service, fines or penalties in full prior to permit renewal.

(5) **Duration; Modification of Terms and Conditions; Renewal.**

(a) The duration of permits shall be in accordance with Section 7.4.4. The terms and conditions of an issued permit are subject to modification and change during the life of the permit in accordance with Section 7.4.4, as limitations or requirements are modified and changed, or based on determination by the FOG Control Program Manager that such modification is appropriate to further the objectives of this Section 7.11.

(b) Permits are subject to the requirements concerning renewal and modification set forth in Section 7.4.6. The Permittee may request a modification to the terms and conditions of an issued permit. The request shall be in writing stating the requested change, and the reasons for the change. The FOG Control Program Manager shall review the request, make a determination on the request, and respond in writing.

(6) **Exemption for Limited Food Preparation Establishments.** A limited food preparation establishment (as defined in the definition of Food Service Establishment), is not considered a Food Service Establishment and is exempt from obtaining a FOG Wastewater Discharge Permit.

(7) **Non-Transferability of Permits.** FOG Wastewater Discharge Permits are restricted as to transferability, in accordance with Section 7.4.5.

(8) **Pretreatment - Grease Interceptor Requirements**

(a) In accordance with Section 7.4.7 and 7.4.8, all Food Service Establishments shall provide wastewater acceptable to the District, under the requirements and standards established herein, before discharging it to any public sewer. Any Food Service Establishment required to pretreat shall install, operate, and maintain an approved type and adequately sized grease interceptor necessary to maintain compliance with the objectives of this Section 7.11.

- (b) Grease interceptor sizing and installation shall conform to the current edition of the Uniform Plumbing Code. Grease interceptors shall be constructed and located in accordance with the requirements and criteria set forth in the FOG Control Program
- (c) Grease Interceptors shall be maintained in efficient operating condition in accordance with the practices, requirements and restrictions set forth in the FOG Control Program and with a maintenance frequency approved by the FOG Control Program Manager pursuant to said Program.
- (d) Food Service Establishments with grease interceptors may be required to submit data and information necessary to establish the maintenance frequency grease interceptors.

(9) **Grease Trap Requirements**

- (a) Food Service Establishments may be required to install grease traps in the waste line leading from drains, sink, and other fixtures or equipment where grease may be introduced into the sewer system in quantities that can cause blockage.
- (b) Sizing and installation of grease traps shall conform to the current edition of the California Plumbing Code and with applicable requirements and criteria set forth in the FOG Control Program.
- (c) Grease traps shall be maintained in efficient operating condition in accordance with the practices, requirements and restrictions set forth in the FOG Control Program and with a maintenance frequency approved by the FOG Control Program Manager pursuant to said Program.

(10) **Monitoring Facilities Requirements.** To ensure proper operation and maintenance of the grease control device or grease interceptor and compliance with this Section 7.11, in accordance with Section 7.4.13, the District may require the Food Service Establishments to construct and maintain in proper operating condition at the Food Service Establishment's sole expense, flow monitoring, constituent monitoring and/or sampling facilities, and to submit waste analysis plans, contingency plans, and meet other necessary requirements.

(11) **Best Management Practices.** All Food Service Establishments shall implement best management practices in accordance with the requirements and guidelines established by the District and set forth in its FOG Control Program in an effort to minimize the discharge of FOG to the sewer system

**7.13.7 Monitoring, Reporting, Inspection and Sampling**

(1) **Monitoring for Compliance with Permit Conditions and Reporting Requirements**

- (a) The FOG Control Program Manager may require periodic reporting of the status of implementation of Best Management Practices, in accordance with the FOG Control Program.
- (b) The FOG Control Program Manager may require visual monitoring at the sole expense of the Permittee to observe the actual conditions of the Food Service Establishment's sewer lateral and sewer lines downstream.
- (c) The FOG Control Program Manager may require reports for self monitoring of wastewater constituents and FOG characteristics of the Permittee needed for determining compliance with any conditions or requirements as specified in the FOG Wastewater Discharge Permit or this Section 7.11. Monitoring reports of the analyses of wastewater constituents and FOG characteristics shall be in a manner and form approved by the FOG Control Program Manager and shall be submitted upon request of the FOG Control Program Manager. Failure by the Permittee to perform any required monitoring, or to submit monitoring reports required by the FOG Control Program Manager shall constitute a violation of this Section 7.11 and be cause for the District to initiate all necessary tasks and analyses to determine the wastewater constituents and FOG characteristics for compliance with any conditions and requirements specified in the FOG Wastewater Discharge Permit or in this Section 7.11. The Permittee shall be responsible for any and all expenses of the District in undertaking such monitoring analyses and preparation of reports.
- (d) Other reports may be required such as compliance schedule progress reports, FOG control monitoring reports, and any other reports deemed reasonably appropriate by the FOG Control Program Manager to ensure compliance with this Section 7.11.

(2) **Record Keeping Requirements.**

- (a) The Permittee shall be required to keep all manifests, receipts and invoices of all cleaning, maintenance, grease removal of/from the grease control device, disposal carrier and disposal site location for not less than two years. The Permittee shall, upon request, make the manifests, receipts and invoices available to any District representative, or inspector. These records may include:

- (1) A logbook of grease interceptor, grease trap or grease control device cleaning and maintenance practices. The logbook must be available during any inspection by a District representative or inspector. Failure to locate the logbook during an inspection, whether misplaced or lost, will result in the issuance of a replacement logbook by the District and require the Permittee to pay the logbook replacement fee in the amount set forth in Exhibit B, Schedule of Rates and Charges, for each violation. The replacement fee will be billed to the Permittee at the time of the replacement.
- (2) A record of Best Management Practices being implemented including employee training.
- (3) Copies of records and manifests of wastehauling interceptor contents.
- (4) Records of sampling data and sludge height monitoring for FOG and solids accumulation in the grease interceptors.
- (5) Any other information deemed appropriate by the FOG Control Program Manager to ensure compliance with this Section 7.11.

(3) **Falsifying Information or Tampering with Process.** It shall be unlawful to make any false statement, representation, record, report, plan or other document that is filed with the District, or to tamper with or knowingly render inoperable any grease control device, monitoring device or method or access point required under this Section 7.11.

(4) **Inspection and Sampling.**

- (a) The wastewater discharges of Food Service Establishments are subject to inspection and sampling in accordance with the requirements of Section 7.4.14 to ascertain whether the intent of this Section 7.11 is being met and the Permittee is complying with all requirements. District access to the Food Service Establishment premises and records for such purposes shall include grease control devices or interceptor, and manifests, receipts and invoices relating to the cleaning, maintenance and inspection of the grease control devices or interceptor.
- (b) In order for the FOG Control Program Manager to determine the wastewater characteristics of the discharger for purposes of determining the annual use charge and for compliance with permit requirements, the Permittee shall make available for inspection and copying by the District all notices, monitoring reports, waste manifests, and records including, but not limited to, those related

to wastewater generation and wastewater disposal, without restriction but subject to the confidentiality provision set forth in this Section 7.11. All such records shall be subject to inspection and shall be kept by the Permittee in accordance with Section 7.4.15.

(5) **Notification of Spill**

- (a) In the event a discharger is unable to comply with any permit condition due to a breakdown of equipment, accidents, or human error or the discharger has reasonable opportunity to know that his/her/its discharge will exceed the discharge provisions of the FOG Wastewater Discharge Permit or this Section 7.11, the discharger shall immediately notify the District by telephone at the number specified in the Permit. If the material discharged to the sewer has the potential to cause or result in sewer blockages or SSOs, the discharger shall immediately notify the local Health Department, City or County, and the District.
- (b) Confirmation of this notification shall be made in writing to the FOG Control Program Manager at the address specified in the Permit no later than five (5) working days from the date of the incident. The written notification shall state the date of the incident, the reasons for the discharge or spill, what steps were taken to immediately correct the problem, and what steps are being taken to prevent the problem from recurring.
- (c) Such notification shall not relieve the Permittee of any expense, loss, damage or other liability which may be incurred as a result of damage or loss to the District or any other damage or loss to person or property; nor shall such notification relieve the Permittee of any fees or other liability which may be imposed by this Section 7.11 or other applicable law.

7.13.8 **Enforcement.** Enforcement of the provisions of this Section 7.11 and the provisions of any FOG Wastewater Discharge Permit shall be governed by Section 7.6, and for such purpose the District may utilize any one, combination or all enforcement remedies provided in Section 7.6 to the extent determined by the District to be applicable to a violation under this Section 7.11. For this purpose, “Department Head” as used in Section 7.6 ~~shall mean~~ means the FOG Control Program Manager. In addition to the non-compliance fees specified under Section 7.6, the Permittee shall be subject to fees for FOG Program non-compliance as specified in Exhibit B, Schedule of Rates and Charges.

7.13.9 **California Building Standards Law.** Pursuant to the provisions of the California Building Standards Law, California Health and Safety Code §§ 18941.5, 17958, 17958.5 and 17958.7, the Board hereby finds that variations of this Section 7.11



from the State Building Standards and Housing Laws, more particularly the California Plumbing Code are necessary because of climatic, geological or topographical conditions of property in the District's jurisdiction, and as more specifically described below:

(1) Sections 7.11.4 and 7.11.6 modify the authority and discretion of the "Administrative Authority" of Section 1014.1 of the 2001 California Plumbing Code by requiring all Food Service Establishments to install and operate a grease control device, which may be a grease interceptor or grease trap, if no other device, mechanism, or process is found to successfully trap or collect or treat FOG prior to its being discharged into the sewer system.

(2) Section 7.11.6 modifies the general maintenance requirements for grease interceptors of Section 1014.6 of the 2001 California Plumbing Code and establishes more stringent maintenance requirements.

(3) With respect to the foregoing differences, (1) and (2), the District finds that the District's topography and geography and the District's proximity to the Pacific Ocean coupled with the general waste discharge requirements imposed by the RWQCB require the strict compliance with grease control device regulations to prevent sewer system overflows that threaten the health and safety of the public within the immediate vicinity of the overflow and downstream to the local beaches.

(4) Additional amendments and deletions to the California Plumbing Code are found to be administrative or procedural and are found to be reasonable and necessary to safeguard life and property within the District.

(5) A copy of this Section 7.11 shall be filed with the California Building Standards Commission and the California Department of Housing and Community Development by the Secretary of the Board as required by State law (Health & Safety Code Section 17958.7).

SECTION 8: MONITORING AND INSPECTION

8.1 WATER AND SEWER SYSTEMS

The Manager or his authorized representative shall have the right to enter upon the customer's premises during reasonable hours for the purpose of inspecting the customer's water and sewer systems and to insure compliance with these Rules and Regulations including the provision that self-regenerating water softeners shall not be connected to the sewer facilities of the District and the provision that all cross-connections be properly protected.

8.2 RECYCLED WATER SYSTEMS

The Manager or authorized representatives of the District shall monitor and inspect the entire recycled water system including both onsite and offsite facilities. The District shall conduct monitoring programs, maintain a record as deemed necessary, and provide reports as requested by regulatory agencies including the California Regional Water Quality Control Board. The Manager or authorized representatives of the District, in carrying out these functions, shall have the right to enter upon the customer's premises during reasonable hours for the purpose of inspecting onsite recycled water facilities and areas of recycled water use and to ensure compliance with these Rules and Regulations, including the provision that runoff be controlled and limited and the provision that cross-connections between potable water facilities and recycled water facilities not exist.

For sites receiving recycled water, the permit holder shall be responsible for providing access to and cooperation with the District's Inspector or designee so that the District's Inspector or designee can perform a periodic cross-connection test, site evaluations and backflow prevention device test. This evaluation shall include pressure testing of the system(s) as well as a visual check of the entire system to verify that no cross-connections or unapproved exist. The permit holder will be responsible for correcting any work which violates the District regulations at their sole expense including any costs associated with repair and re-testing the backflow prevention device should the backflow prevention device fail to pass the required test. Additionally, at such times that the permit holder changes, the District's Inspector or designee will perform a and evaluation and test to verify compliance with these Rules and Regulations.

8.3 NATURAL TREATMENT SYSTEMS

Natural treatment systems that are designed and constructed by the developer shall be monitored as specified in the Procedures Guide and the NTS Design Guidelines. If, during the periods specified in the Procedures Guide and the NTS Design Guidelines, monitoring results indicate that the system is not operating as designed, the developer will provide the necessary improvements.

SECTION 9: CONNECTION FEES

9.1 GENERAL

- 9.1.1 Connection fees applicable to all property to be served ~~shall~~will be established from time to time by the Board and set forth in Exhibit B ~~to these Rules and Regulations. Such.~~ The property to be served ~~shall~~must be legally described in the application for service.
- 9.1.2 If, subsequent to the issuance of the initial permit, there is a change in owner, applicant, tenant, customer, class of use, or consumption, then the District may determine that additional connection fees are required. These additional charges ~~shall~~will be computed on the basis of the resulting increase in service capacity and flow~~;~~ or~~;~~ on any reclassification of user type.
- 9.1.3 Whenever a change necessitates the payment of further charges to the District, the District may compare the actual use occurring on the property ~~(~~(based on readings taken from the water meter~~s)~~s) with the capacity estimated to be required for existing or probable future consumption to determine whether a different use permit is required. Determination by the District in this regard shall be made in a manner and following the procedures specified for revoking a permit as set forth in Section 14 of these Rules and Regulations. Such additional amount shall be payable on the effective date of such decision specified in Section 14 and shall be delinquent thirty (30) consecutive calendar days thereafter.
- 9.1.4 Any delinquent amount shall be the responsibility of all persons, entities, or concerns who are the applicant, owner, or customer who signed the application for service or any successor thereof. Any such amount may be recovered directly from any of the foregoing by means of proceedings initiated in the proper municipal or superior court of the State of California. In addition to recovering such amount by means of judicial determination or proceeding, the District may, to the extent now or subsequently permitted by law, cause such amounts to be collected by the County Tax Collector, together with any general or special taxes or similar charges on the property to which this service has been provided, and as described in the appropriate application for service. In either event, the applicant, owner, or customer and all persons signing the application shall be liable in addition to such amount individually and collectively for all costs incurred in collecting such additional amounts to the District, as determined in the manner herein provided, including a reasonable amount for attorney<sup>12</sup>'s fees. Also, the District may, at its discretion, terminate water, sewer, recycled water and/or natural treatment system service in the manner provided for in these Rules and Regulations if such amounts are not paid on the date in the manner herein provided.
- 9.1.5 Land which has been designated to remain undeveloped by a governmental agency exercising land use authority and which will not receive water, sewer or recycled water service (open space) ~~shall~~will be excluded from acreage in the

computation of density for residential connection fees and from gross acreage of any parcel in the computation of commercial-industrial connection fees.

9.2 INTERPRETATION OF CONNECTION FEES

9.2.1 **Manager's Determination.** If the factual situations presented in an application by an applicant, owner, or customer do not fall within the classifications set forth in Exhibit "B" ~~to these Rules and Regulations~~, the Manager shall interpret them to establish a reasonable classification and fee. In making ~~such interpretations that~~ interpretation, the Manager shall be guided by the policy of the District set forth herein.

9.2.2 **Appeal.** Any applicant, owner, or customer that does not concur in ~~the Manager's determination of the Manager, he~~ under Section 9.2.1 may ~~request appeal~~ that such be considered by determination to the Board. ~~Any such request shall~~ The appeal must be in writing and ~~shall~~ must set forth detail and facts supporting the differences between the request of applicant, owner, or customer and the ~~Manager's determination made by the Manager. No such application shall be considered unless there is.~~ The appeal must include a specific and detailed request for action proposed by an applicant, owner, or customer setting forth the exact amount of fees that the applicant, owner or customer believes should be established and ~~shall~~ must include supporting information. Preferably, such supporting information should be prepared and submitted by a Registered Civil Engineer, experienced in the construction, operation, management, and financing of municipal water and/or sewage facilities.

9.2.3 **Special Agreement.** If ~~approved by~~ the Board, ~~such decision shall grants the applicant, owner, or customer's appeal, then that connection fee charge will~~ be implemented by a special agreement between ~~such~~ the applicant, owner, or customer and the District, including adequate guarantees and assurances of further or additional payment at such time as the proposed use of the property described in the application for such action by the Board is modified, changed, or amended, or the extent of the use of the applicant, owner, or customer exceeds that represented to District. The decision of the District in all instances shall be final, subject to administrative or judicial review, except as otherwise provided by law.

**SECTION 10: WATER AND RECYCLED WATER SERVICE LINE CHARGES,  
LOWER LATERAL CHARGES AND  
NATURAL TREATMENT SYSTEM CHARGES**

10.1 WATER AND RECYCLED WATER SERVICE LINE CHARGES

- 10.1.1 **Installation Charges.** The District shall ~~makeimpose~~ charges for the installation of and perpetual maintenance of all service lines, water and recycled water meters, and appurtenances thereto; all of which ~~facilities~~ are the property of the District. ~~These service line charges,~~ including the water connection fees, must be paid before work will be performed. Any required backflow prevention devices on potable water services and flow or pressure control devices ~~shall~~**must** be provided by the applicant, owner, or customer at his expense.
- 10.1.2 **Charge for Meter Only. If** the applicant provides (at no cost to the District) the water or recycled water service line and appurtenances ~~thereto,~~ **then** the District shall ~~makeimpose~~ a charge for the installation of the water or recycled water meter only, ~~which is to.~~ **The meter will** remain the property of the District. ~~Said~~ **The meter** charge, in addition to all other usual and regular charges of the District, including any ~~specified~~ connection fee, as set forth in Exhibit B, must be paid before work will be performed.
- 10.1.3 **Fire Suppression Facilities Charges.** The District shall ~~makeimpose~~ charges for the installation of and perpetual maintenance of all service lines for on-site fire hydrants or automatic fire sprinkler systems, including a check valve on potable water services of a type approved by the National Board of Fire Underwriters, equipped with a bypass meter, but not including the downstream control valve, if ~~such is~~ required by the customer, all to remain the property of the District. Said charges, in addition to all other usual and regular charges of the District, including any specified connection fee, as set forth in Exhibit B, must be paid before work will be performed.
- 10.1.4 **Extraordinary Work.** Whenever an installation is required by an applicant that is not covered by the schedule of charges established from time to time by the Board and set forth in Exhibit B to these Rules and Regulations, such work will be done with charges based upon an estimate of costs made by the District. If a water or recycled water service line exceeds 50 feet in length, or for any other valid reason it cannot be installed for the amount stated in the appropriate schedule of charges set forth in Exhibit B owing to the peculiarity of the proposed service, the District reserves the right to make said installation. A deposit will be required to cover estimated costs prior to the performance of any work. Upon completion of the service installation, the deposit will be adjusted based on actual costs. If actual costs differ the from the deposit amount, the applicant, owner, or customer shall be invoiced by the District for the excess of the actual cost over the deposited amount, or refunded the difference if less than the deposit.

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10.1.5 **Relocation.** Whenever water or recycled water service lines, meters, fire hydrants, or other appurtenances are requested to be moved by the applicant for any reason whatsoever, a deposit will be required to cover estimated costs prior to the performance of any work. Upon completion of the service relocation, the deposit will be adjusted based on actual costs. If actual costs differ from the deposit amount, the applicant, owner, or customer shall be invoiced by the District for the excess of the actual cost over the deposited amount, or refunded the difference if less than the deposit.

10.1.6 **Temporary Service Connection.** A temporary service connection may be installed for use over a period of time not exceeding six (6) months. For each such connection, an application shall be filed in accordance with the provisions of Section 4.2 of these Rules and Regulations. Rates to be charged for water used from such connection shall be in accordance with <sup>the</sup>Temporary Construction Service” contained in Exhibit B. The user of a temporary recycled water service shall designate an “Onsite Recycled Water Supervisor” in accordance with the requirements of Section 6.2.2 ~~herein~~.

### 10.2 LOWER LATERAL CHARGE

10.2.1 **Installation Charge.** The District will impose a charge for the installation of a lower lateral and connection to the customer’s upper lateral. Said charges, in addition to all other usual and regular charges of the District, including the sewer connection fee, must be paid before the work is performed. Such work will be done with charges based upon an estimate of costs made by the District. Any required backwater valves and appurtenances ~~shall~~must be provided by the applicant, owner, or customer at his expense.

10.2.2 **Relocation.** Whenever lower laterals, manholes, or other appurtenances are requested to be moved by an applicant for any reason whatsoever, the charges shall be made on the basis of an estimate of costs by the District. The charges herein required are in addition to all other charges required by the District for sewer service and are payable pursuant to arrangements approved by the Board. A deposit will be required to cover estimated costs prior to the performance of any work. Upon completion of the service relocation, the deposit will be adjusted for actual costs. If actual costs differ from the deposited amount, the applicant, owner, or customer shall be invoiced by the District for the excess of the actual cost over the deposited amount, or refunded the difference if less than the deposited amount.

### 10.3 NATURAL TREATMENT SYSTEM CHARGES

The District ~~shall~~will impose charges for modifications to natural treatment systems requested by the developer after the system has been constructed. ~~Said Those~~ charges, in addition to all other usual and regular charges of the District, including any specified connection fee, ~~shall~~will be as determined by the District and must be paid to the District before work will be performed.

SECTION 11: SECURITY DEPOSIT

As permitted by law, the District may require of an applicant, owner, or customer such a deposit, if deemed necessary by reason or estimated future water, sewer, and recycled water billings or if there is an instance or instances of monthly delinquency. ~~Such~~The security deposit amount ~~shall~~will not be less than the estimated cost of water, sewer, and recycled water service for a one month-period or such other amount as determined by the Manager or Board. ~~Deposits may be returned after one (1) year at the request of the applicant, owner, or customer; providing that all bills rendered during the succeeding twelve (12) month period have been paid within fifteen (15) days of presentation. A deposit determined by the District will be required for all construction water meters. Upon termination of service, deposit amounts not previously returned shall be applied to the final utility bill and any remaining amount refunded to the applicant, owner or customer.~~

The District may return deposits after one year at the request of the applicant, owner, or customer, but only if all bills rendered during the twelve-month period prior to the request were paid within 21 days after presentation.

A deposit determined by the District will be required for all construction water meters.

Upon termination of service, deposit amounts not previously returned will be applied to the final utility bill and any remaining amount refunded to the applicant, owner, or customer.

SECTION 12: SERVICE CHARGES

12.1 ESTABLISHMENT OF RATES

Rates to be charged and collected and the terms, provisions, and conditions to be effective respecting such rates for water, sewer, recycled water and natural treatment system service supplied by the District to customers within the District shall be as fixed and established by the Board from time to time and set forth in Exhibit B to these Rules and Regulations, which charges shall have no effect on any existing or subsequent reimbursement agreements. This provision is in addition to and not by way of derogation of any other remedies or procedures available to the District pursuant to any law or regulation or by any of the provisions of these Rules and Regulations.

12.2 CHANGE OF SERVICE CHARGE

The Board reserves the right to change the schedule of water, sewer, recycled water and natural treatment system service charges and other charges at any time.

12.3 SERVICE CHARGE BILLING

Water, sewer, recycled water and natural treatment system service charges will be rendered as part of the District water service bill at intervals of one month or multiples thereof. The District ~~reserves the right to~~ may estimate bills, based on prior consumption or other reasonable calculation in the absence of historical consumption data, and will back-bill the customer all service and other charges as set forth in Exhibit B.

12.4 METERING

For the purpose of computing charges, each meter on the customer's premises will be considered separately, and readings of two or more meters will not be combined as equivalent to measurement through one meter except in those instances in which, by reason of special operating conditions, the District substitutes two or more meters of a smaller size for a single larger meter on the same service connection. In this special case, the size of service connection shall be substituted for the size of the meter in the application of the rate schedule, and shall be the basis for computing charges.

12.5 TIME AND MANNER OF PAYMENT

12.5.1 All bills and charges for water, sewer, recycled water and natural treatment system service hereunder ~~shall be~~ due and payable upon presentation and ~~shall~~ become delinquent twenty-five (25) days ~~thereafter. See~~ later. Bills and charges ~~shall be~~ deemed to have been presented upon having been sent electronically or deposited in the United States mail, postage paid, and addressed to the applicant, owner, or customer reflected in the records of the District. Failure to receive the bill will not release the customer from payment obligation nor will it entitle the customer to a billing discount or exempt the customer from late fees or service disconnection for non-payment. Electronic billing and automatic payment



are available to the customer on request and subject to compliance with all terms and conditions for enrollment in and use of such programs.

12.5.2 If payment is not received within twenty-five (25) days after presentation of the bill, a late charge will be levied on any unpaid balance and, following such notice and proceedings as may be required by law, the water and/or recycled water service may be discontinued. Water and/or recycled water service shall not again be supplied until all delinquent bills, plus a restoration charge, which is established by the Board have been paid; if the turn-on is requested to be made outside regular working hours, an increased restoration charge shall be paid before service is restored. Payment shall be made electronically, in person or by mail at the office of the District or, at the option of the District, to its authorized collectors.

12.5.3 Discontinuance of service by reason of a delinquent bill shall not automatically constitute revocation of permit. However, such delinquency may be considered as sufficient reason for a revocation of permit in accordance with the provisions of these Rules and Regulations.

12.6 VARIANCE FROM RESIDENTIAL RATE STRUCTURE  
~~ALLOCATIONS~~BUDGETS; NONRESIDENTIAL ACREAGE AND BASE INDEX REVISIONS

12.6.1 Residential Variance - Procedure

- (1) Variance request forms ~~will~~must be ~~obtained from and~~ submitted to the Customer Service Department.
- (2) Variance requests will be processed by the Customer Service Department.
- (3) At the discretion of the District, the requesting customer may be required to have a water audit, which will be conducted by the District at no charge prior to review of the request.
- (4) Staff will notify a customer in writing if their variance request is denied.
- (5) Documents submitted by any customer as part of the variance procedure are reviewed and returned to the customer if requested. If the customer does not request the documentation back, it will be destroyed to protect the customer's privacy, except for information retained by the District to document variances or as otherwise required by law.

12.6.2 Residential Variance – Determination

- (1) Grounds for a variance are:
  - (a) number of people residing in a dwelling unit

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- (b) medical needs
- (c) licensed care facilities
- (d) fire control zones (or other regulatory requirements)
- (e) landscape area
- (f) livestock/horses
- (g) common area washing machines
- (h) other, as determined on a case by case basis

(2) Proof acceptable to the District will be required of each ground(s) for a requested variance. The variance request form provides examples of acceptable proof.

(3) Limitations

- (a) An approved variance will become effective on the date the request for variance was submitted to the District.
- (b) An approved variance will be valid for a period specified by the District (~~one year or less~~), and must ~~be re-submitted~~ re-confirmed ~~the basis for the variance~~ on or before the expiration date to remain in effect.

(4) Calculation of the increased ~~allocations~~ budgets for approved variances will be made by the District pursuant to Exhibit B (Rates and Charges)

### 12.6.3 ~~Nonresidential Acreage and~~ **Base Index** and Sewer Charge Revisions – Procedure

(1) Acreage (landscape) revision requests will be made by submitting an acre-change request to the Water Efficiency Department.

(2) Base index (water budget) and sewer charge (~~commercial, industrial and public authority usage~~) revision requests for commercial industrial and public authority customers will be made by submitting a request for account evaluation to the ~~Customer Service Department~~ District.

(3) At the discretion of the District, the requesting customer may be required to have a water audit, which will be conducted by the District at no charge prior to review of the request.

(4) Staff will notify a customer or their agent in writing (including email) if their request is denied.

(5) Documents submitted by any customer as part of the account evaluation procedure are reviewed and returned to the customer if requested. If the customer or agent does not request the documentation back, it will be destroyed to protect the customer's privacy, except for information retained by the District to document the acreage ~~or~~ base index or sewer service charge revision or as otherwise required by law.

#### 12.6.4 **Nonresidential Acreage ~~and~~, Base Index and Sewer Charge Revisions – Determination**

##### ~~1. Commercial/Industrial/Public Authority – Grounds~~

~~(a) Relevant factors will include expansion of productive capacity, existing conservation practices that can be shown to have reduced water usage, severe economic hardship, and other factors determined on a case by case basis.~~

(2) **Landscape Acreage – Grounds.** It is the obligation of the customer to provide to the District acceptable documentation of the actual area served by each metered connection. Acceptable documentation is an irrigation plan or a controller chart (site map with irrigation zone boundaries clearly marked and square footage per zone called out) signed by a California licensed landscape architect or Irrigation Association certified irrigation designer (CID).

##### (3) Commercial/Industrial/Public Authority – Grounds.

(a) **Base Index.** Relevant factors will include expansion of productive capacity, existing water efficiency or conservation practices that can be shown to have reduced water usage, severe economic hardship, and other factors determined on a case by case basis.

(b) **Sewer Charges.** Relevant factors will include evaporation, product water, irrigation, or other uses that do not discharge to the sewer, and dual plumbed connections that discharge to a shared sewer line.

##### (3)(4) Limitations

- (a) An approved acreage or base index increase will become effective on the date the request was submitted to the District.
- (b) An approved acreage increase need not be resubmitted and will remain valid unless a further acreage-change is made
- (c) An approved base index increase will be valid until the account is closed or a new nonresidential tenant applies for service. When a new account is opened, the nonresidential customer will be billed

at the ~~conservation~~ **“Base rate Rate”** for an initial period of six months. The District will then establish a base index for the customer based on the customer’s usage for the initial six month period and may conduct on-site surveys to ensure water efficient business and irrigation practices are in place prior to beginning to bill the customer in accordance with the applicable rate structure. In the event a new tenant accepts responsibility for an existing account and the account is not closed, the existing base index for the account will remain in effect unless and until the District, on its own review or at the tenant’s request, modifies the existing base index or establishes a new base index by implementing a six-month base index reestablishment period as described in the preceding sentence.

~~(4)(5)~~ **Calculation.** Calculation of the increased acreage ~~or~~ base index, ~~or sewer charges~~ will be made by the District pursuant to Exhibit B (Rates and Charges)

## 12.7 ADJUSTMENT OF CHARGES

12.7.1 **Billing Errors.** In the event of discovery of an error in the computation of charges, crossed meters, unbilled meter or other error, a retroactive adjustment of the charges will be made by means of a credit or additional charge to the next bill, to the extent the District determines it has information from which the correct amount can be ascertained.

12.7.2 **Variance Adjustment – Residential.** If a variance is approved as provided in Section 12.6.2, a retroactive adjustment of the charges to the customer may be made for no more than three months prior to the variance effective date if the District determines a retroactive adjustment is warranted in accordance with the variance request and the proof submitted by the customer.

12.7.3 **Increase of Nonresidential Landscape or Base Index.** If a nonresidential customer’s base index or landscape acreage is increased as provided in Section 12.6.4, a retroactive adjustment of the charges may be made for no more than six months prior to the effective date of the increase if the District determines a retroactive adjustment is warranted in accordance with the increase request and the proof submitted by the customer.

12.7.4 **Residential Landscape Adjustments.** The District will authorize a retroactive adjustment of no more than three months for the purpose of establishing new landscape if the District determines a retroactive adjustment is warranted in accordance with the proof submitted by the customer. Training shall be completed if required under Section 12.7.8.

12.7.5 **Leak Repair Adjustments – Grounds.**

(1) The IRWD ~~allocation budget~~-based ~~conservation~~ tiered rate structure is intended to serve as a warning sign to alert customers to possible water waste,

such as a leak, by charging over-~~allocation~~budget at the “Inefficient” and “Wasteful” tiers. When an adjustment is made for a repaired leak, the excess units of water attributed to the leak and billed in the “Inefficient”, “ or “Wasteful” tiers are re-billed at the “Base Rate”. When a customer has a leak repaired, and usage after the repair is within the customer’s ~~allocation~~budget, the District will authorize an adjustment, for residential customers, of no more than two bills affected by the leak. The District may, at its discretion, authorize additional bill adjustments on a case by case basis for customers who encounter circumstances that cause delays to a leak repair.

(2) The customer is required to contact the District within two months of completing the repair of the leak in order to receive a leak adjustment. Training shall be completed if required under Section 12.7.8.

**12.7.6 Nonresidential Landscape Adjustments.** To be eligible for adjustment, an over-~~allocation~~budget charge on a single bill must exceed the minimum amount specified in the Landscape Irrigation Adjustment Form (~~“LIAF”~~) instructions available at [www.irwd.com](http://www.irwd.com).

(1) Mainline breaks and leaks are eligible for adjustment.

(2) Other non-residential landscape adjustments shall be made on a case-by-case basis at the District’s discretion, based on the request and supporting documentation submitted by the customer.

(3) Adjustment requests shall be submitted on an IRWD LIAF which is available online at   , in accordance with the LIAF instructions. Training shall be completed if required under Section 12.7.8.

**12.7.7 Courtesy Adjustments – Residential and Nonresidential Customers.** An adjustment of charges not otherwise provided for in this Section 12.7 may be authorized by the District as a courtesy adjustment for special circumstances determined on a case-by case basis. A courtesy adjustment may include up to, but no more than six months of charges, and no more than one courtesy adjustment will be authorized within a 12-month period.

**12.7.8 Training Requirement for Adjustments.** For billing adjustments made under 12.7.4, 12.7.5 and 12.7.6, the District, at its discretion, may require the customer to complete a free water use efficiency training session offered or provided by the District, in order to receive the billing adjustment.

SECTION 13: SEVERABILITY

If any section, subsection, clause, or phrase of these Rules and Regulations is for any reason held to be invalid or unconstitutional, ~~such that~~ decision ~~shall~~will not affect the remaining portions of these Rules and Regulations. The Board declares that it would have passed said Rules and Regulations by section, subsection, sentence, clause, or phrase thereof.

**SECTION 14: ENFORCEMENT AND PENALTIES**

14.1 GENERAL

~~14.1.1~~ ~~Any person, firm, corporation, association, or agency found to be violating any~~ **Violation.** ~~It is unlawful to violate any~~ provision of these Rules and Regulations ~~or the terms a permit issued by the District.~~

~~14.1.1~~ **14.1.2 Notice of Violation.** ~~The District shall notify any person found to~~ violating any of these Rules and conditions of Regulations, any permit issued by the ~~applicant's, owner's, or customer's service agreement, permit, or any and~~ District, or any applicable Federal, State, or local statutes, regulations, ordinances, or other requirement ~~shall be served by the District with. The~~ written notice ~~stating of violation will state~~ the nature of the violation and provide a reasonable time ~~limit for the satisfactory correction thereof. to correct that~~ violation. The offender ~~shall~~ must, within the ~~period of time stated in such~~ the notice, permanently cease all violations. This provision is in addition to and not by way of derogation of any other remedies or procedures available to the District by law, regulation, or pursuant to any of the provisions of these Rules and Regulations including, but not limited to, Section 7 and Section 15.

~~14.1.2~~ **14.1.3 Misdemeanor; Fines.** Pursuant to Water Code Section 35424 ~~of the~~ Water Code of the State of California, any violation of these Rules and Regulations is a misdemeanor, the violation of which shall, upon conviction ~~thereof~~, be subject to a fine of not less than \$25.00 nor more than \$200.00. Pursuant to Water Code Section 377, any violation of Section 15 is a misdemeanor punishable by imprisonment in the County Jail for not more than 30 days or by fine of not more than \$1,000, and a violator may also be held civilly liable in an amount not to exceed \$10,000.

~~14.1.3~~ **14.1.4 Revocation.** Failure to permanently cease all violations within the time stated ~~shall in the Notice of Violation will~~ result in revocation of the permit by the District and termination of water, sewer, recycled water and/or natural treatment system service as provided in Sections 14.2 and 14.3. Violations regarding any one service may result, at the sole discretion of the Board or Manager, in termination of any combination of or all water, sewer, recycled water and natural treatment system service.

14.2 INTERIM REVOCATION

In cases where the serious nature of the violations described above require immediate action, the Board or Manager may, in the sole discretion of the Board or Manager, immediately revoke the permit on an interim basis and thereupon cease water, sewer, recycled water and/or natural treatment system service, subject to a timely decision on permanent revocation of permit pursuant to a public hearing as provided herein. In cases of sewer service termination, there shall

be no discharge of any type by an applicant, owner, or customer into the District's sewer facilities.

### 14.3 PERMANENT REVOCATION

14.3.1 **Notice; Public Hearing.** Permanent revocation of a permit shall occur only subsequent to a public hearing held in the manner hereinafter provided. The applicant, owner, or customer shall be given written notice ten (10) calendar days prior to a hearing on the possible permanent revocation of any permit by the District. The notice shall specify the grounds of the proposed revocation of any such permit in reasonable detail. It may but need not describe suggested corrective action acceptable to the District. Notice may be delivered personally to the applicant, owner, or customer or it may be given by depositing such in the United States mail with postage prepaid, addressed to the applicant, owner, or customer either at the address for the applicant, owner, or customer as reflected on the last equalized assessment roll of the County of Orange as defined in the Revenue and Taxation Code of the State of California. ~~Any such action to permanently revoke the permit shall be effective~~

14.3.2 **Effectiveness of Revocation.** ~~Any action to permanently revoke the permit shall be effective~~ ten (10) calendar days after notice of the Board's decision ~~and. The District shall be either personally delivered to notify~~ the applicant, owner, or customer ~~placed in the by~~ United States mail, postage prepaid, addressed to the applicant, owner, or customer.

**Surcharge.** ~~In the manner herein above specified.~~

~~14.3.2~~ 14.3.3 ~~In the alternative to such action revocation,~~ the District may establish a ~~surcharge~~ fine or penalty amount on the continuation of water, sewer, recycled water and/or natural treatment system service by the District until such time as the applicant, owner, or customer has taken action to comply with all of the herein above described requirements for obtaining service from the District in its reasonable discretion. Any request to reestablish service subsequent to the revocation of a permit and the termination of water, sewer, recycled water and/or natural treatment system service shall be in the manner prescribed for initially obtaining service from the District, which may include the collection of a security deposit. However, in addition, the District may, in its discretion, require that an agreement and financial security conditioned upon compliance with the District's Rules and Regulations be provided in an amount, manner, and for a period of time as determined by the Board.

14.3.4 **Application.** The foregoing provisions of these Rules and Regulations ~~are a requirement of any permit, and any application for service and permit therefore shall be subject~~ apply to such provisions ~~all permits.~~



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~~14.3.3~~14.3.5 **Waiver/Modification**. The Board, if it deems such to be in the best interest of the District, may on an interim basis or otherwise waive or modify any of the foregoing.

SECTION 15: WATER CONSERVATION AND  
WATER SUPPLY SHORTAGE PROGRAM AND REGULATIONS

15.1 GENERAL

15.1.1 **Title.** This section will be known as the Irvine Ranch Water District Water Conservation and Water Supply Shortage Program.

15.1.2 **Findings.**

(1) A reliable minimum supply of water is essential to the public health, safety and welfare of the people and economy of the southern California region.

(2) Southern California is a semi-arid region ~~and is largely dependent upon imported water supplies.~~ A growing population, climate change, environmental concerns and other factors in other parts of the State and western United States make the region ~~highly~~ susceptible to water supply reliability issues.

(3) Careful water management that includes active water ~~efficiency and~~ conservation measures, not only in times of drought but at all times, is essential to ensure a reliable ~~minimum~~ supply of water to meet current and future water supply needs.

(4) Article X, Section 2, of the California Constitution declares that the general welfare requires that water resources be put to beneficial use, that waste or unreasonable use or unreasonable method of use of water be prevented and that conservation of water be fully exercised with a view to the reasonable and beneficial use thereof.

(5) California Water Code section 375 authorizes a water supplier to adopt and enforce a comprehensive water conservation program to reduce water consumption and conserve supplies.

(6) The adoption and enforcement of a water conservation and supply shortage program is necessary to manage the District's water supply ~~in the short and long term and~~ to avoid or minimize the effects of a supply shortage within the District. Such a program is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare.

(7) Recycled water is produced and supplied by the District to conserve potable water. Recycled water, like potable water, must be used efficiently and is therefore included in this Program.

## IRVINE RANCH WATER DISTRICT

15.1.3 **Application.** The provisions of this section ~~shall~~ apply to all persons using water in any area of ~~this~~ District in which the District provides retail water service, regardless of whether any person using water ~~shall have~~ has a permit or contract for ~~such~~ service with the District, and ~~shall apply~~ applies to all potable and recycled water supplied by the District.

15.1.4 **Water Shortage Contingency Plan.** The District has adopted a Water Shortage Contingency Plan ~~;~~ pursuant to Water Code Section 10632. The Water Shortage Contingency Plan, as amended from time to time, describes the restrictions and other response measures that can be implemented by the Board in declaring a water shortage level and provides policy considerations, criteria and other guidance for the selection and implementation of these measures.

## 15.2 DECLARATION OF PURPOSE AND INTENT

15.2.1 The purpose of this section is to establish a water conservation and supply shortage program that will reduce water consumption within the District through conservation, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, and maximize the efficient use of water within the District to avoid and minimize the effect and hardship of water shortage to the greatest extent possible.

15.2.2 This section establishes permanent water use efficiency standards intended to alter behavior related to water use efficiency for non-shortage conditions and further establishes ~~four~~ six levels of water supply shortage response actions to be implemented during times of declared water shortage or declared water shortage emergency, with measures designed to achieve progressively greater levels of conservation in response to worsening shortage or emergency conditions and decreasing supplies.

15.2.3 This section is intended to complement and be used in tandem with the ~~allocation~~ budget-based tiered pricing structure adopted by the District in 1991 and implemented under Section 12.1 of these Rules and Regulations on an ongoing basis as part of the District's rates and charges. The ~~allocation~~ budget-based ~~tiered~~ pricing structure encourages use within ~~allocation~~ a water budget through a significantly tiered commodity pricing system, and discourages wasteful use. The response measures for the levels of water supply shortage include a set of measures, referred to as "demand management" measures, that can be implemented through the ~~allocation~~ budget-based ~~tiered~~ pricing structure. Any modifications to the pricing structure must be consistent with the provisions of Proposition 218.

## 15.3 EXEMPTIONS

## IRVINE RANCH WATER DISTRICT

15.3.1 ~~Persons~~The General Manager may ~~be exempted~~permit an exemption from ~~application of~~ the permanent restrictions set forth in 15.4 or restrictions implemented pursuant to the Water Shortage Contingency Plan during a shortage level under 15.5, ~~if the General Manager of the District or his designee issues a permit allowing such use, and if such permit issuance is based on upon~~ a finding that enforcement of the applicable restriction would either (1) cause an unnecessary and undue hardship to the applicant or the public, or (2) would cause or threaten an emergency condition affecting the health, sanitation, fire protection, or safety of the applicant or the public.

15.3.2 The General Manager of the District or his designee may require the use of ~~such any~~ water conservation devices or practices as he deems appropriate as a condition of the exemption permit. He shall promulgate a list of approved devices.

15.3.3 Section 12.6~~12.6~~ sets forth the procedures to apply for variances from water ~~allocations~~budgets under the ~~allocation~~budget-based tiered pricing structure.

### 15.4 GENERAL PROHIBITIONS AND ONGOING MEASURES

15.4.1 **Prohibitions.** The following prohibitions are in effect at all times, regardless of whether any declared shortage condition is in effect.

(1) **Gutter Flooding** - No person shall cause or permit any water furnished to any property within the District to run or to escape from any hose, pipe, valve, faucet, sprinkler, or irrigation device into any gutter or otherwise to escape from the property if such running or escaping can reasonably be prevented.

(2) **Leaks** - No person shall permit leaks of water that he has the authority to eliminate.

(3) **Washing Hard Surface Areas** - Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards.

(4) **Waste** - No person shall cause or permit water under his control to be wasted. ~~Wasteful usage includes, but is~~

~~(5) **Washing of Motor Vehicle** – No person shall wash a motor vehicle with a hose not limited to, the uses listed in Section 1.1 of Exhibit 1 to the Memorandum fitted with a shut-off nozzle.~~

~~(6) **Use of Understanding Regarding Urban Potable Water Conservation in a Fountain** – No person shall use potable water in California, dated September 16, 2011, as amended from time to time, a fountain or the counterpart other decorative feature, except where the water~~

is recirculated, or recirculation would cause a public health safety or sanitary hazard.

(7) **Application of said list contained in Potable Water to Outdoor Landscapes** – No person shall apply potable water to outdoor landscapes during and within 48 hours of measureable rainfall.

(4)(8) **Irrigation of Public Street Medians** – No person shall use potable water to irrigate ornamental turf on public street medians during a declared shortage or pursuant to any ~~successor document~~ regulation adopted by the State Water Resources Control Board

(9) **Single Pass Cooling** – No person shall operate a single pass cooling system.

(10) **Commercial Car Washes** –

(a) All new commercial car washes must be equipped with and operate recirculating systems.

(b) Existing car washes with recirculating systems must maintain and operate the recirculation system.

15.4.2 **Demand Management.** When a declared shortage condition is not in effect, basic allocationswater budgets established by the District under the allocationwater budget-based tiered pricing structure will be limited to the amount that is reasonable for the customer's needs and property characteristics, and will exclude wasteful use. Reductions may be applied to basic allocationsbudgets to establish a reasonable amount during a declared shortage condition, as specified herein.

## 15.5 IRWD WATER SUPPLY SHORTAGE LEVELS

15.5.1 **General.** The District's Water Shortage Contingency Plan provides representative measures that may be implemented during water shortage resulting from drought conditions or system interruptions. The measures may be applied individually or in combination and may vary according to the severity and duration of the shortage.

15.5.2 **Shortage Levels.** The following are the levels of shortage which may be declared by the Board in the manner prescribed by applicable provisions of the California Water Code, the approximate ranges of conditions the levels represent and the reductions to be achieved:

(1) **Level One (Shortage Warning):** Up to 10% shortage. Measures selected would be designed to achieve the following voluntary actions:

IRVINE RANCH WATER DISTRICT

- Increase public awareness of the water supply situation and conservation opportunities

- ~~1.~~• Reduce over-irrigation
- ~~2.~~• Reduce over-~~allocation~~budget use
- ~~3.~~• Encourage diligent repair of water leaks

(2) Level Two (Significant Shortage Condition):~~10-25~~ 11-20% shortage. Measures selected would be designed to incorporate the objectives listed under Level One, and achieve the following further reduction in use:

- ~~1.~~ Reduce irrigation by a percentage to be specified in the shortage declaration

- ~~1.~~• Discourage filling of fountains, pools and water features and other discretionary uses

- Potential adjustments to outdoor water budgets to target discretionary uses for residential and landscape customers to be specified in the shortage declaration
- Establish water waste reporting hotline
- Expand conservation programs and projects, including workshops

(3) Level Three (Severe Shortage): ~~25-40~~21-30% shortage. Measures selected would be designed to incorporate the objectives listed under Level Two, and achieve the following further reduction in use:

- ~~1.~~ Further reduce irrigation by a percentage to be specified in the shortage declaration

- ~~1. Further reduce or eliminate discretionary uses~~
  - ~~2. Reduce commercial, industrial and institutional use by a percentage to be specified in the shortage declaration~~
  - ~~3. Eliminate specified municipal uses such as street cleaning, hydrant flushing and water-based recreation~~
- Implement a public outreach campaign to increase public awareness
  - Enhance incentives for water saving devices and programs
  - Targeted outreach to high use non-residential customers
  - Potential further reductions to outdoor water budgets to a level that sustains only drought-tolerant landscaping

(4) Level Four (Crisis/Severe Shortage): More than 31%- 40% shortage. Measures selected would be designed to incorporate the objectives listed under Level Three, and achieve the following further reduction in use:

- ~~1. Further reduce or eliminate discretionary uses~~
- Implement direct install programs to retrofit inefficient devices and landscape equipment
- Reductions to water budgets for commercial, industrial and public authority customers, while minimizing economic impacts
- Elimination of specific municipal uses such as non-required hydrant flushing, street cleaning and water-based recreation

(5) Level Five (Crisis Shortage): 41%- 50% shortage. Measures selected would be designed to incorporate the objectives listed under Level Four, and achieve the following further reduction in use:

- Implement pay to save incentive programs for industrial customers
  - Potential adjustments to residential and landscape water budgets to the elimination of all non-recycled water outdoor uses
- ~~1. Cease all non-recycled water outdoor water uses for landscape and agriculture, subject to reserved rights relating to local wells~~

(6) Level Six (Crisis Shortage): More than 50% shortage. Measures selected would be designed to incorporate the objectives listed under Level Five, and achieve the following further reduction in use:

- Potential adjustments to water budgets to target all uses not required for health and safety
- Use of flow restrictors on severely over-budget accounts that are non-responsive to outreach
- Possible discontinuation of non-health and safety services in order to achieve the necessary demand reductions
- Other mandatory restrictions and enforcement, as necessary

15.5.3 Generally, in all Levels, it is anticipated that the District will use voluntary customer response measures and demand management measures implemented under Section 12 through the adjustments in the allocationbudget-based pricing structure. Any adjustments to the pricing structure would require conformance to the requirements of Proposition 218. Response measures during Levels ~~Three~~Five and ~~Four~~Six are anticipated to also include restrictions or prohibitions, but this will be determined by the District in its discretion at time of implementation. To achieve the reductions indicated above under the various levels, the conservation measures that may be implemented by the shortage declaration are listed below, shown with the levels in which they are anticipated to be used. Reference is made to the Water Shortage Contingency Plan for a more detailed discussion of response measures and the manner in which they may be used in the various shortage levels. At the time of declaring a level of shortage conditions, the Board in its discretion will determine the particular response measures that will be implemented. The list below is intended to be illustrative and not exclusive, and does not preclude the implementation of measures in a different level from the level(s) shown or the implementation of other measures in lieu of or in addition to those described below or in the Water Shortage Contingency Plan:

- ~~1.~~• Enhanced public awareness campaign (all Levels)
- ~~2.~~• Intensified use of surveys/assistance for customers in highest allocationbudget tiers (all Levels)
- ~~3.~~• Reduction of basic water allocationsbudgets (all Levels)
- ~~4.~~• Adjustment of pricing tier thresholds, shifting usage into higher tiers (Levels Two, Three, ~~Four~~, ~~Five~~ and ~~Four~~Six)
- ~~1.~~• Increase of rates for pricing tiers, including adjustments to recover Metropolitan's penalty rates for purchases of imported water (Levels ~~Three~~ and ~~Four~~)
- ~~5.~~• Restriction of uses (Level Four)
- ~~6.~~• Prohibition of uses (Levels ~~Four~~, ~~Five~~ and ~~Six~~)

The demand management measures included in the list above will be implemented through changes in the District's allocationbudget-based tiered pricing structure designed to strengthen the pricing signal and achieve desired water savings in the declared shortage level, including changes in the allocationbudget based water budgets of customers or customer classes (residential, landscape, commercial, etc.), changes in the usage volumes subject to the pricing tiers, and changes in the applicable commodity rates for the tiers. These changes will be



implemented under Section 12 through the adoption of a revised Exhibit B setting forth the District's rates and charges.

The general prohibitions specified in Section 15.4 ~~shall~~ apply to the use of potable (domestic), untreated and recycled water. The application of shortage level response measures or restrictions may vary as to type of water service. In the implementation of measures or restrictions on potable water service through the declaration of a shortage level, the District will determine and set forth how and to what extent, if any, such measures or restrictions, or different measures or restrictions, will be applied to non-potable water services furnished by the District.

## 15.6 REPORTING AND ENFORCEMENT

15.6.1 **Measures implemented through ~~allocation~~budget-based tiered pricing structure.** As described in Section 15.2, the District's ~~allocation~~budget-based tiered pricing structure complements and is used in an integral manner within the water conservation and water supply shortage program. As part of the program, the pricing structure performs both reporting and enforcement functions: (1) the billing of water usage within the various pricing tiers serves as an effective reporting mechanism to identify customers who are overusing water or may be using water in discouraged or prohibited manners, and tells the District and the District's customer what amounts of conservation are being achieved and where high usage should be the focus of additional effort; and (2) the effectiveness of the ~~allocation~~budget-based tiered pricing structure means that the rate structure and adjustments to it can achieve the same result as, and be used by the District in lieu or partially in lieu of, restrictions and enforcement measures in times of declared shortage conditions. As a result the response measures in Section 15.5 include demand management measures to be implemented through the ~~allocation~~budget-based tiered pricing structure, which is enforced through the District's billing procedures.

### 15.6.2 Enforcement of Restrictions

(1) This Section 15 and Section 4 are part of the District's water conservation program and are adopted pursuant to Water Code Section 376. Subject to appeal to the Board of Directors, the General Manager may take any measures authorized under Water Code Section 377 to hold a person civilly liable for violation of the District's water conservation program.

(+)(2) Prior to enforcement of the restrictions pursuant to Section 15.4 (General Prohibitions) and 15.5, (Shortage Restrictions), any person who is suspected of violating the restrictions hereby imposed shall be given a preliminary notice in writing of such violation, with the description of violation set forth in such preliminary notice. Such person shall have 24 hours to correct such violation, or terminate the use. If the violation is not corrected or the use not terminated, the General Manager ~~of the District or his designee may forthwith either may~~ immediately: ~~(a) disconnect service,~~

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(a) disconnect service.

(b) install flow-restricting devices restricting non-health and safety related water service, or

(c) order issued a second preliminary notice.

~~(2)(3)~~ (Service disconnected or restricted pursuant to 1(a) or 1(b) above ~~shall~~will be restored only upon payment of the turn-on and other charges fixed by the Board of Directors as provided in these Rules and Regulations~~;~~.)

~~(3)(4)~~ Any other sanctions or penalties that the District is presently authorized to impose or that the District may at some future time be authorized to impose may be imposed to enforce this prohibition of water wastage.

~~(4)(5)~~ From and after the publication or posting of any ordinance or resolution implementing any restrictions or mandatory measures under the Water Shortage Contingency Plan, violations thereof shall be misdemeanors punishable by imprisonment in the County Jail for not more than 30 days or by fine of not more than \$1,000, or both, or as otherwise provided by law or such resolution or ordinance.

SECTION 16: WATER WELLS

16.1 PURPOSE

~~1. GENERAL~~

16.1.1 The District has an important interest, along with other appropriate regulatory agencies, in monitoring the groundwater basin located within its boundaries to obtain information as to its quantity, quality and other characteristics on an historical and ongoing basis. Many wells have been constructed and operated within the District for agricultural purposes by private users. From time to time, due to increasing urbanization, some of these wells are no longer needed as production wells.

16.1.2 The purpose of this section is to regulate the construction and reconstruction of all existing and future water wells, to provide for the destruction or other use of abandoned wells, and to provide for the initiation and completion of corrective measures relative to wells within the District, to accomplish the following:

- (1) To protect the quality of the groundwater within the District;
- (2) To protect the health, safety, and welfare of the residents of the District;
- (3) To protect the capability of the District to produce and distribute water for the use, benefit and protection of the residents of the District;
- (4) To avoid premature destruction of wells that can be converted to monitoring or production use.

16.2 DEFINITIONS

16.2.1 “**Destruction**” of a well means the complete filling and sealing of the well in accordance with the procedures outlined in the standards incorporated into this Section.

16.2.2 “**Well**” means any excavation constructed by any method for the purpose of extracting water from or injecting water into the underground, for providing cathodic protection or electrical grounding of equipment, for making tests or observations of underground conditions, or for any other similar purpose. Wells shall include, but shall not be limited to, community water supply wells, individual domestic wells, industrial wells, agricultural wells, cathodic protection wells, electrical grounding wells, test and exploratory holes, observation wells, saltwater barrier wells, and other wells whose regulation is necessary to fulfill the purpose of this chapter as determined by the Manager. Wells ~~shall~~do not include:

- (1) Oil and gas wells, geothermal wells, or other wells constructed under the jurisdiction of the State Department of Conservation, except any such wells converted to use as water wells;
- (2) Wells used for the purpose of dewatering excavations during construction, monitoring high groundwater during construction, monitoring or ascertaining the existence of groundwater contamination, or stabilizing hillsides or earth embankments; or
- (3) Wells less than 50 feet in depth or 6 inches in diameter.
- (4) Other wells whose regulation is not necessary to fulfill the purpose of this chapter as determined by the Manager.

16.2.3 A well ~~shall~~will be presumed to be “abandoned” when it has not been used for its intended purpose for a period of one year.

### 16.3 PROHIBITED ACTS — PERMITS REQUIRED

16.3.1 No person, firm, or private or public corporation or agency shall construct or reconstruct any well within the boundaries of the District unless such construction or reconstruction is carried out pursuant to and in conformance with a written permit issued for that purpose by the Manager as provided in this Section.

16.3.2 No owner or operator of an existing well shall allow it to remain in an unused condition except in accordance with Section 16.4. An used well determined to be abandoned shall be destroyed pursuant to and in conformity with the requirements of the District as set forth in this Section unless the Manager determines that the District desires to acquire and equip the well for monitoring or production purposes.

### 16.4 UNUSED WELLS — DETERMINATION OF NONABANDONMENT

16.4.1 If a well has not been used for any of the purposes set forth in the definition of “well” for a period of one year, such well shall be presumed to have been abandoned, and the burden of proof shall thereupon be upon the owner or operator of the well to establish to the satisfaction of the Manager that the well has not been abandoned and that the owner and operator intends to continue to use the well for the intended purposes. The Manager shall require a written declaration under penalty of perjury concerning intended future use to be filed by the owner or operator of the well before the Manager determines that the well has not been abandoned. Application for the renewal of a determination of nonabandonment shall be required to be presented to the Manager by the owner or operator at the beginning of each calendar year. Such renewal applications shall be accompanied by a new written declaration filed under penalty of perjury. Test holes and exploratory holes shall be considered abandoned twenty-four hours after construction work has been completed unless otherwise determined by the Manager.

16.4.2 In the event the Manager determines that a well is indeed abandoned, unless the Manager determines that the District desires to acquire and equip the well for monitoring or production purposes, the well shall be destroyed within thirty days in accordance with the provisions of this chapter. However, the owner shall be given written notice of this determination by the Manager. The notice shall specify the reasons for this decision and shall notify the owner of his right to request a hearing before the Board of Directors within ten days.

16.5 PERMITS

16.5.1 Applications for permits to construct, reconstruct, or destroy any well shall be made to the Manager and shall contain or provide such information as he shall require.

16.5.2 Each application shall be accompanied by a fee which shall be established by the Board of Directors. A permit shall remain in effect for one year from the date of issuance.

16.5.3 Permits may be issued subject to any condition or requirement found by the Manager to be necessary to accomplish the purposes of this chapter.

16.5.4 A permit may be canceled or the conditions amended by the Manager if he determines that to proceed with the work would result in a violation of the terms of the permit or of this Section.

16.5.5 In the event that a permit is denied or canceled, the applicant or permit holder shall be given written notice by the Manager, which notice shall specify the reasons for his action, and shall notify the applicant or permit holder of his right to request a hearing before the Board of Directors within ten days.

16.6 COMPLETION OF WORK — NOTICE TO MANAGER — INSPECTION

The permittee shall notify the Manager in writing upon completion of the work performed under the permit, and no work shall be deemed to have been completed until such written notification has been received. A final inspection of the work shall be made by the Manager, and no permittee shall be deemed to have complied with the provisions of this chapter of his permit until such inspection has been performed and the work approved by the Manager.

16.7 NOTICE UPON DETERMINATION OF THREAT TO WATER QUALITY, HEALTH OR SAFETY

In the event the Manager determines that a well threatens to impair the quality of the groundwater or otherwise jeopardize the health or safety of the public, he shall send written notice to the owner and shall post a copy of the notice on the property. The notice shall state the specific facts relative to the condition, the corrective measures deemed necessary, and the date on or before which such measure shall be completed. The owner shall also be notified of his right to request a hearing before the Board of Directors within thirty days from the date such notice is issued.

16.8 IMMEDIATE ABATEMENT OF THREAT TO WATER QUALITY, HEALTH OR SAFETY

If the Manager finds that immediate action is necessary to prevent impairment of the groundwater or a threat to the health or safety of the public he may correct the condition without giving notice. The District may charge the cost of the corrective measure to the owner. However, within twenty-four hours after initiating such corrective measure, the Manager shall notify the owner of the time, date and place at which a hearing shall be held by the Board of Directors relating thereto; which date shall be not less than ten nor more than thirty days after the date of such notification.

16.9 BOARD OF DIRECTORS HEARING

16.9.1 At the time fixed for a hearing before the Board of Directors concerning an abandoned well, a permit, or a threat to water quality, health or safety, as provided for in this chapter, the Board of Directors shall hear and consider all relevant testimony and evidence offered by the property owner and by any other interested person.

16.9.2 If the Board of Directors determines that an unused well was incorrectly classified as abandoned or that a permit was improperly denied or canceled, it shall direct the Manager to reclassify the well or to issue or reinstate the permit.

16.9.3 If the Board of Directors finds that a threat to water quality, health or safety, as determined by the Manager, does exist, then it shall direct the Manager to take any necessary action to protect the groundwater or the health and safety of the public unless the situation is corrected by the owner on or before a date to be specified by the Board of Directors. The cost of such corrective measures by the Manager shall be charged to the owner or operator.

16.9.4 In instances where the Manager has corrected a condition under the immediate correction provision of Section 16.8, the Board of Directors shall ascertain and review the pertinent facts concerning the correction. If the Board of Directors determines that the Manager's actions were justified, then it shall direct that the cost be charged to the owner or operator.

16.10 STANDARDS FOR CONSTRUCTION, RECONSTRUCTION OR DESTRUCTION

Standards for the construction, reconstruction, or destruction of wells shall be the standards recommended in the State Department of Water Resources Bulletin No. 74, Chapter II, and future amendments thereto. Standards for the construction, reconstruction, or destruction of cathodic protection wells shall be the standards recommended in the State Department of Water Resources Bulletin No. 74-1, and future amendments thereto.

16.11 VIOLATION — PENALTY

Any violation or failure to comply with any of the provisions of this Section shall be handled as provided in herein and shall also be subject to Section 14 as applicable.

16.12 AGREEMENTS

The District may enter into agreements with property owners concerning the drilling or abandonment of wells and/or other matters covered in this Section, and providing for alternate or modified methods of meeting certain of the requirements contained herein. In such cases, the agreement(s) will govern as to the applicability of the affected requirements, in the area(s) subject to such agreements.

16.13 NO LIABILITY ASSUMED

Notwithstanding the provisions of this Section permitting or requiring the District or Manager to issue permits, make determinations and/or take corrective measures relative to construction, reconstruction abandonment and destruction of wells and quality of groundwater, the District assumes no liability to the property owners or operators of wells or any third parties, for the making of or failure to make any such determination, or the taking of or failure to take any such measure, or the issuing of or failure to issue any such permit.

SECTION 17: DISTRICT NATURAL TREATMENT SYSTEM FACILITIES

17.1 GENERAL

The District, in cooperation with the County of Orange and various local cities, is developing a network of constructed water quality wetlands and bioretention cells designed to treat urban runoff within the drainage watersheds that are completely or partially within the District boundaries. These constructed water quality wetlands and bioretention cells are also known as natural treatment systems (NTS).

Developers shall provide for the design, construction and establishment of one or more natural treatment systems per the Procedures Guide, the District's Natural Treatment System Master Plan, the NTS Design Guidelines and these Rules and Regulations to treat urban runoff from their proposed development and reduce pollutants to the levels set by the regulating agencies. If permissible, and at the District's discretion, these natural treatment systems may be located within first flush stormwater retention basins provided by the developer to comply with other regulatory requirements. If, during the period specified in the Procedures Guide and the NTS Design Guidelines, the natural treatment system's level of treatment provided does not meet other regulatory requirements the District, at its discretion, may act on behalf of the County and various local Cities to direct the developer to make corrective improvements to the natural treatment system to meet the aforementioned regulatory requirements.

The operation, maintenance and water quality monitoring of the natural treatment system will be governed by agreements between the District and the County or City, as applicable. The responsibility for regulation and enforcement of surface water runoff discharges shall remain with the County and Cities.

17.2 URBAN RUNOFF DISCHARGE PERMITS

The County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana and San Diego Regions of the Regional Water Quality Control Board (~~RWQCB~~) are required, under the terms of their National Pollutant Elimination Discharge System (~~NPDES~~) Permit, to control and manage the discharge of pollutants from urban runoff. The definition and enforcement of permitted discharges into the natural treatment system will be the responsibility of the County of Orange and the permittees under the NPDES permit.

17.3 FEES AND CHARGES FOR USE

The applicant for Natural Treatment System service shall pay the fees as and operational charges set forth in the rates and charges. ~~The fees and operational charges are as set forth in attached as Exhibit B and the respective portions thereof, which set forth applicable rates and charges of, as may be amended from time to time by~~ the District. ~~Exhibit B hereto~~



~~and the rates and charges provided for therein are by this reference incorporated herein and may be changed by the District~~

#### 17.4 MONITORING AND MAINTENANCE

The District shall monitor and maintain the natural treatment system, as specified in the Procedures Guide and the NTS Design Guidelines, to ensure that the system is operating as designed. The District reserves the right to make modifications to the natural treatment system, based on the monitoring results, to increase the water quality treatment effectiveness of the system.

The District's monitoring and maintenance shall be limited to the water quality functions of the natural treatment system operation and, and the District assumes no responsibility or liability for flood control functions of natural treatment systems or sites. The District, at its discretion, may provide water quality monitoring for the combined natural treatment system and first flush stormwater retention facilities.

#### 17.5 CONFLICT

In the event that any portion of this Section pertaining to discharges to the natural treatment system is inconsistent with any other provisions of the Rules and Regulations as to ~~such that~~ discharge, the provisions of this Section ~~shall~~will take precedence.

**Water Improvement District Boundaries**

Exhibit A-2  
Sewer Improvement District Boundaries

**Exhibit A-3**  
**Cities and Villages within the Irvine Ranch Water District**

Exhibit B  
Rates and Charges

**EXHIBIT C to the Rules and Regulations**  
**IRVINE RANCH WATER DISTRICT**  
**MAXIMUM ALLOWABLE LOCAL LIMITS\***

¶  
¶  
¶  
¶

Constituent	Concentration Limit in Milligrams/Liter (mg/L)
1,4-Dioxane	1.0
Ammonia <sup>(1)</sup>	Mass
Arsenic	21.004
BOD <sup>(1)</sup>	Mass
Cadmium	1.000.25
Chromium (Total)	20.0-2.00
Copper	3.00
Lead	2.001.5
Mercury	0.03
Molybdenum	2.3
Nickel	10.003.2
Selenium	0.14
Silver	5.002.2
Zinc	10.009.2
Cyanide (Total)	5.002.4
Cyanide (Amenable)	1.00
pH (S.U.)	6.0—12.0
Polychlorinated Biphenyls	0.01
Pesticides →	0.01
Total Toxic Organics	0.58
Sulfide (Total)	5.00
Sulfide (Dissolved) →	0.50
Oil and grease of mineral or petroleum origin	100.00

¶

\* Users subject to Federal Categorical Pretreatment Standards may be required to meet more stringent limits.

¶

<sup>(1)</sup> BOD and ammonia mass discharged will be tracked by OCSD and Users

¶

## Exhibit "B"

### RESOLUTION NO. 2018-

#### RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA RESCINDING RESOLUTION NO. 2015-23 AND ESTABLISHING REVISED RULES AND REGULATIONS OF THE IRVINE RANCH WATER DISTRICT FOR WATER, SEWER, RECYCLED WATER, AND NATURAL TREATMENT SYSTEM SERVICE AND EXHIBIT A THERETO

WHEREAS, Irvine Ranch Water District (IRWD) is a California Water District organized and existing under the California Water District Law, and all of the lands within the boundaries of said District are located in the County of Orange, State of California; and

WHEREAS, Section 35423 of the California Water Code empowers the District to establish, print and distribute equitable Rules and Regulations for the distribution of water; and

WHEREAS, the District is also empowered to exercise or use any of the powers contained in the California Water District Law in carrying out its powers and purposes to furnish sewer service and natural treatment system service, under Sections 35506 and 35539.14, respectively, of said Water Code; and

WHEREAS, California Water Code Section 375 authorizes a water supplier to adopt and enforce a comprehensive water conservation program to reduce water consumption and conserve supplies; and

WHEREAS, by adoption of Resolution No. 2015-23 on August 24, 2015, the Board of Directors last adopted revised Rules and Regulations for Water, Sewer, Recycled Water, and Natural Treatment System Service; and

WHEREAS, from time to time, the District reviews and proposes changes to its Rules and Regulations. The proposed changes have been made to update definitions and promote consistent and conforming nomenclature throughout the document. In addition, changes have been made to specific sections as follows:

Section 4: Clarifies the service application process and provides definitions for Diversion and Tampering. Provides penalties for diversion or tampering activities and identifies penalties for unpermitted use of fire hydrants;

Section 14: Provides enforcement and penalties for violation of the rules;

Section 15: Updates watering prohibitions that are in effect at all times. Updates the IRWD Water Supply Shortage Levels based on the related update to the District's Water Shortage Contingency Plan approved by the Board on May 29, 2018; and

Exhibit C: Updates certain local discharge limits.

WHEREAS, the Board of Directors of IRWD find it to be in the best interest of the District to revise and update said Rules and Regulations.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of IRWD as follows:

Section 1. That Resolution No. 2015-23 be and hereby is rescinded in its entirety.

Section 2. That the Rules and Regulations of the Irvine Ranch Water District for Water, Sewer, Recycled Water, and Natural Treatment System Service, inclusive of Exhibit A and Exhibit C thereto but not inclusive of Exhibit B thereto, as more specifically set forth in EXHIBIT "A" to this Resolution, attached hereto and by this reference made a part hereof, be and hereby are approved and adopted.

Section 3. That the provisions of this Resolution shall become effective upon adoption.

Section 4. That said Rules and Regulations, including Exhibit A and Exhibit C attached thereto, shall be certified by the Secretary of this District and the Secretary is hereby ordered and directed to publish a summary of the amendments to said Rules and Regulations, together with the internet address and the physical location where the complete text of the amended Rules and Regulations may be viewed, once a week for two weeks in a newspaper of general circulation published in Orange County, California, pursuant to the provisions of Section 35424 of the California Water Code.

ADOPTED, SIGNED and APPROVED this 29<sup>th</sup> day of May, 2018.


\_\_\_\_\_  
President, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

\_\_\_\_\_  
Secretary, IRVINE RANCH WATER DISTRICT  
and of the Board of Directors thereof

APPROVED AS TO FORM:  
LEWIS BRISBOIS  
Legal Counsel - IRWD

By \_\_\_\_\_



May 29, 2018  
Prepared by: T. Bonkowski/M. Cortez  
Submitted by: K. Burton (KLB)  
Approved by: Paul A. Cook 

## ACTION CALENDAR

### VAULT LID REPLACEMENT CONSTRUCTION AWARD

#### SUMMARY:

The Vault Lid Replacement project will replace 23 vault lids, one vault ladder, and one vault section at various locations within the District's service area. Staff recommends that the Board:

- Authorize a budget increase in the amount of \$439,000, from \$397,700 to \$836,700, for Project 06121, and in the amount of \$146,000, from \$195,300 to \$341,300, for Project 06123;
- Acknowledge the material clerical error made in the computation of T.E. Roberts, Inc.'s bid, accept T.E. Roberts' formal written request to withdraw its bid, and return the bid bond to T.E. Roberts; and
- Authorize the General Manager to execute a construction contract with Schuler Constructors, Inc. in the amount of \$932,960 for the Vault Lid Replacement project.

#### BACKGROUND:

The District owns and operates numerous facilities (e.g., meters and valves) located in underground vaults at various locations within its service area. After years of service and normal operational wear, a vault's components, including lids and vault ladders, require replacement to maintain structural integrity and provide safe accessibility. Staff has identified 23 vaults that require replacement of components. A location map of the vaults is shown in Exhibit "A".

#### Construction Award:

Staff completed the design for this project in March 2018 and the project was advertised for construction to a select list of 16 contractors. Three contractors attended the pre-bid meeting in April 2018 and the bid opening was held on May 2, 2018 with bids received from Pacific Hydrotech Corporation, T.E. Roberts, Inc., and Schuler Constructors, Inc. T.E. Roberts was the apparent low bidder with a bid amount of \$798,000. The remaining bids ranged from \$932,960 to \$1,109,700.

On May 7, 2018, T.E. Roberts submitted a formal written request to withdraw its bid, which is attached as Exhibit "B", citing an error made by its vault lid supplier that would have resulted in a \$291,000 increase in its bid, from \$798,000 to \$1,089,000. Staff conferred with legal counsel, and legal counsel confirmed that under Public Contract Code § 5100, et seq., if a bidder discovers a mistake in its bid submitted to a state or local public entity, it may obtain relief and withdraw the bid either with the consent of the awarding entity or by an action to recover the bid bond in court. The mistake must be material and resulting from a typographical, arithmetical, or other clerical error, as opposed to an error in judgement or carelessness in inspecting the site of

the work or in reading the plans and specifications. Additionally, the bidder must provide written notice of the mistake within five business days after the opening of the bid, explaining the mistake in detail.

T.E. Roberts' formal written request, which cites a \$291,000 miscalculation in its bid price, complies with the Public Contract Code requirements for requesting withdrawal of its bid. Pursuant to the Public Contract Code, the District can either acknowledge the mistake, return the bid bond, and prepare a report documenting the bases for that decision, or contest the bidder's statement and call on the bid bond. By claiming the mistake, T.E. Roberts is prohibited from further participating in the bidding process for this project, and the District may award the contract to the next lowest responsive bidder.

Staff and legal counsel have reviewed T.E. Roberts' written request to withdraw its bid and concur that a material clerical error was made in the preparation of its bid. As afforded by the Public Contract Code, staff recommends that the Board acknowledge the material clerical error made in the computation of its bid, accept T.E. Roberts' formal written request to withdraw its bid, and return the bid bond to T.E. Roberts. Staff will prepare a report documenting the bases for the withdrawal and the District's acceptance, pursuant to the Public Contract Code.

The next lowest bidder is Schuler Constructors, Inc., who submitted a bid in the amount of \$932,960. Staff reviewed Schuler Constructors' bid and has determined that it is responsive. Staff recommends that the Board authorize the General Manager to award a construction contract to Schuler Constructors, in the amount of \$932,960. The bid summary is attached as Exhibit "C".

FISCAL IMPACTS:

Projects 06121 and 06123 are included in the FY 2018-19 Capital Budget. Budget increases are required to fund the project's construction as shown in the table below. Projects 06121 and 06123 will be funded from the potable and recycled water Replacement Funds.

Project No.	Current Budget	Addition <Reduction>	Total Budget
06121	\$397,700	\$439,000	\$ 836,700
06123	\$195,300	\$146,000	\$ 341,300
Total	\$593,000	\$585,000	\$1,178,000

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, 15301. Section 15301 provides exemption for minor alterations of existing structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption for the project was filed with the County of Orange on November 30, 2017.

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD AUTHORIZE A BUDGET INCREASE IN THE AMOUNT OF \$439,000, FROM \$397,700 TO \$836,700, FOR PROJECT 06121, AND IN THE AMOUNT OF \$146,000, FROM \$195,300 TO \$341,300, FOR PROJECT 06123; ACKNOWLEDGE THE MATERIAL CLERICAL ERROR MADE IN THE COMPUTATION OF T.E. ROBERTS, INC.'S BID, ACCEPT T.E. ROBERTS, INC.'S FORMAL WRITTEN REQUEST TO WITHDRAW ITS BID, AND RETURN THE BID BOND TO T.E. ROBERTS, INC.; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH SCHULER CONSTRUCTORS, INC. IN THE AMOUNT OF \$932,960 FOR THE VAULT LID REPLACEMENT, PROJECTS 06121 AND 06123.

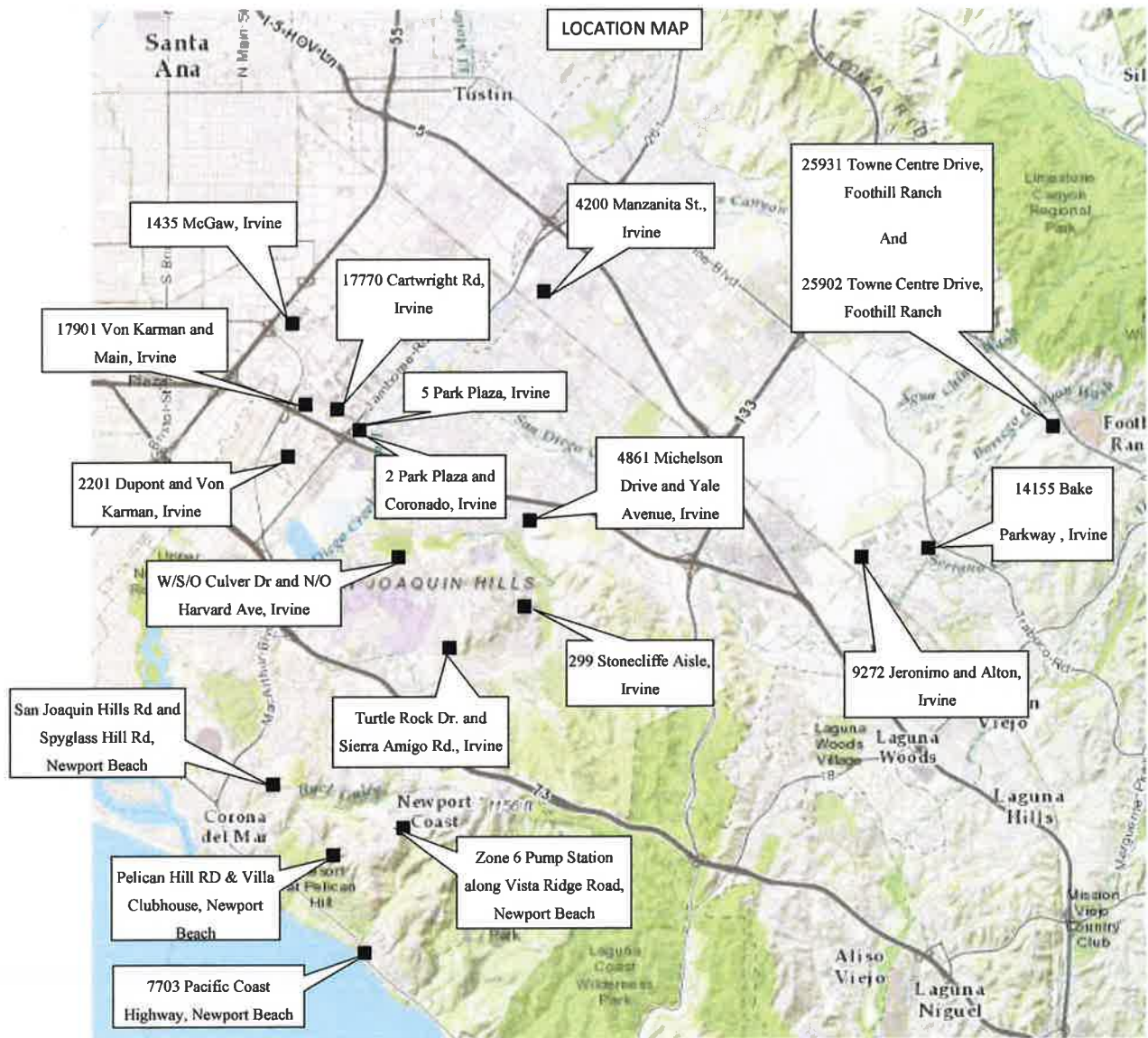
LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – T.E. Roberts, Inc. Written Request to Withdraw Bid

Exhibit "C" – Bid Summary

# EXHIBIT "A"





## EXHIBIT "B"

May 7, 2018

Mr. Jeff Smyth  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

Dear Mr. Smyth,

I am writing in response to our bid submitted on May 2, 2018 for your Vault Lid Replacement Project. Per Public Contract Code 5103 we would like to withdraw our bid for this project due to a mistake that did not involve an error in judgment or to carelessness in inspecting the site of the work, or in reading the plans or specifications.

We listed Old Castle Precast as our vault lid supplier based on a quote we received from them on May 1, 2018. Old Castle Precast missed a detail that resulted in an increase of \$291,123.98 to their proposal. Old Castle Precast left a voice message for our Junior Estimator regarding this revision. Our Junior Estimator did not retrieve this voice message until nearly 5:00 p.m. on May 2, 2018, well after the bid was delivered. After an extensive email search we have confirmed we did not receive notification of a quote revision from Old Castle Precast prior to submitting our bid.

It is due to the fact that we did not receive the revised quote from Old Castle Precast prior to bid opening that we are respectfully requesting to withdraw our bid.

Sincerely,

Timothy Roberts  
President

Irvine Ranch Water District Bid Summary  
 For  
 Vault Lids Replacement  
 PR 06121 and 06123, Code 7035

**EXHIBIT "C"**

Item No.	Description			Engineer's Estimate		1 T.E. Roberts, Inc. Orange, CA		2 Schuler Constructors, Inc. Riverside, CA 92507		3 Pacific Hydrotech Corporation Perris, CA	
		Qty	Unit	Unit	Total	Unit	Total	Unit	Total	Unit	Total
				Price	Amount	Price	Amount	Price	Amount	Price	Amount
1	Mobilization, demobilization, and cleanup (Not to exceed 5%)	1	LS	\$10,000.00	\$10,000.00	\$39,500.00	\$39,500.00	\$20,000.00	\$20,000.00	\$50,000.00	\$50,000.00
2	Remove and replace vault lid at 5 Park Plaza, Irvine, CA	1	LS	\$35,000.00	\$35,000.00	\$32,000.00	\$32,000.00	\$68,000.00	\$68,000.00	\$38,300.00	\$38,300.00
3	Remove and replace two (2) vault lids at 2 Park Plaza, Irvine, CA	1	LS	\$35,000.00	\$35,000.00	\$40,000.00	\$40,000.00	\$34,000.00	\$34,000.00	\$34,400.00	\$34,400.00
4	Remove and replace vault lid at 17901 Von Karman Avenue, Irvine, CA	1	LS	\$25,000.00	\$25,000.00	\$65,000.00	\$65,000.00	\$73,000.00	\$73,000.00	\$107,800.00	\$107,800.00
5	Remove and replace vault lid and sidewalk at 2201 Dupont Drive, Irvine, CA	1	LS	\$35,000.00	\$35,000.00	\$20,000.00	\$20,000.00	\$25,000.00	\$25,000.00	\$39,600.00	\$39,600.00
6	Remove and replace four (4) vault lids and concrete repair at Zone 6 Pump Station, 21474 Vista Ridge Road, Newport Beach, CA	1	LS	\$50,000.00	\$50,000.00	\$70,000.00	\$70,000.00	\$36,000.00	\$36,000.00	\$45,300.00	\$45,300.00
7	Remove and replace vault lid and sidewalk at Pelican Hill Road across from Villa Clubhouse in Newport Beach, CA	1	LS	\$30,000.00	\$30,000.00	\$25,000.00	\$25,000.00	\$27,000.00	\$27,000.00	\$35,800.00	\$35,800.00
8	Remove and replace vault lid at 4200 Manzanita Street, Irvine, CA	1	LS	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$31,900.00	\$31,900.00
9	Remove and replace meter vault section and vault lid at 299 Stonecliffe Aisle, Irvine, CA	1	LS	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$25,000.00	\$25,000.00	\$46,900.00	\$46,900.00
10	Remove and replace vault lid at 9272 Jeronimo Road, Irvine, CA	1	LS	\$30,000.00	\$30,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$51,200.00	\$51,200.00
11	Remove and replace vault lid and sidewalk, 300 feet North of Culver Drive and Harvard Ave in Irvine, CA	1	LS	\$40,000.00	\$40,000.00	\$40,000.00	\$40,000.00	\$48,000.00	\$48,000.00	\$79,800.00	\$79,800.00
12	Remove and replace vault lid at 25931 Towne Centre Drive, Foothill Ranch, CA	1	LS	\$30,000.00	\$30,000.00	\$23,000.00	\$23,000.00	\$22,000.00	\$22,000.00	\$33,500.00	\$33,500.00
13	Remove and replace vault lid, sidewalk, and ladder at 17770 Cartwright Road, Irvine, CA	1	LS	\$30,000.00	\$30,000.00	\$27,000.00	\$27,000.00	\$23,000.00	\$23,000.00	\$36,000.00	\$36,000.00
14	Remove and replace vault lid at 7703 Pacific Coast Highway, Newport Beach, CA	1	LS	\$20,000.00	\$20,000.00	\$70,000.00	\$70,000.00	\$63,000.00	\$63,000.00	\$120,400.00	\$120,400.00
15	Remove and replace vault lid at 25902 Towne Centre Drive, Foothill Ranch, CA	1	LS	\$30,000.00	\$30,000.00	\$18,000.00	\$18,000.00	\$21,000.00	\$21,000.00	\$31,500.00	\$31,500.00
16	Remove and replace vault lid at 1435 McGaw, Irvine, CA	1	LS	\$30,000.00	\$30,000.00	\$23,000.00	\$23,000.00	\$23,000.00	\$23,000.00	\$33,000.00	\$33,000.00
17	Remove and replace vault lid and sidewalk at San Joaquin Hills Road and Spyglass Hill Road in Newport Beach, CA	1	LS	\$40,000.00	\$40,000.00	\$155,000.00	\$155,000.00	\$124,000.00	\$124,000.00	\$190,600.00	\$190,600.00
18	Remove and replace vault lid at 4861 Michelson Drive, Irvine, CA	1	LS	\$20,000.00	\$20,000.00	\$19,000.00	\$19,000.00	\$22,000.00	\$22,000.00	\$24,800.00	\$24,800.00

Irvine Ranch Water District Bid Summary  
 For  
 Vault Lids Replacement  
 PR 06121 and 06123, Code 7035

Item No.	Description			Engineer's Estimate		1 T.E. Roberts, Inc. Orange, CA		2 Schuler Constructors, Inc. Riverside, CA 92507		3 Pacific Hydrotech Corporation Perris, CA	
		Qty	Unit	Unit	Total	Unit	Total	Unit	Total	Unit	Total
				Price	Amount	Price	Amount	Price	Amount	Price	Amount
19	Remove and replace vault lid at Turtle Rock Drive and Sierra Amigo Road in Irvine, CA	1	LS	\$20,000.00	\$20,000.00	\$23,000.00	\$23,000.00	\$25,000.00	\$25,000.00	\$38,800.00	\$38,800.00
20	Remove and replace vault lid at 14155 Bake Parkway, Irvine, CA	1	LS	\$35,000.00	\$35,000.00	\$24,000.00	\$24,000.00	\$21,000.00	\$21,000.00	\$30,100.00	\$30,100.00
21	Final Record Drawings	1	LS	\$5,000.00	\$5,000.00	\$9,500.00	\$9,500.00	\$500.00	\$500.00	\$10,000.00	\$10,000.00
Subtotal, Base Bid Items and Additive/Deductive Bid Items					\$600,000.00		\$798,000.00		\$745,500.00		\$1,109,700.00
Adjustment (+ or -)					\$0.00		\$0.00		\$187,460.00		
<b>TOTAL AMOUNT OF BID</b>					\$600,000.00		<b>\$798,000.00</b>		<b>\$932,960.00</b>		<b>\$1,109,700.00</b>
<b>NOTES:</b>				<b>Item</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>	
2 - Schuler Constructors, Inc.'s Bid Total Submitted was \$965,260.00 - Bid Total was modified due to mathematical error between Subtotal, Addition Amount, and Bid Total calculation.				Vault Lids		Oldcastle Precast		Oldcastle Precast Hatches - USF		Jensen Precast	
						<b>Subcontractors:</b>		<b>Subcontractors:</b>		<b>Subcontractors:</b>	
						None		None		None	

May 29, 2018

Prepared by: J. McGehee/R. Mori

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *PAC*

## ACTION CALENDAR

### EASTWOOD RECYCLED WATER PUMP STATIONS CONSULTANT SELECTION AND CONSTRUCTION AWARD

#### SUMMARY:

The Eastwood Recycled Water Pump Stations project includes the construction of new Zone A to B and Zone A to C pump stations and includes provisions to accommodate the future construction of the Zone A to Syphon Reservoir and Syphon Reservoir to Zone C pump stations. Staff recommends that the Board:

- Authorize the General Manager to execute a Professional Services Agreement, in the amount of \$295,000, with AECOM for engineering support services during construction, and
- Waive bid irregularities and authorize the General Manager to execute a construction contract with Pacific Hydrotech Corporation, in the amount of \$12,220,600, for the Eastwood Recycled Water Pump Stations.

#### BACKGROUND:

The Eastwood Recycled Water Pump Stations project will be constructed in two phases. The first phase will meet near-term and future demands and includes construction of the Zone A to B Booster Pump Station (BPS) and the Zone A to C BPS. The Zone A to B BPS will meet the growth in demands to Zone B and ultimately replace the existing Northwood Zone B BPS. The Zone A to C BPS will meet the growth in demands to Zone C and ultimately replace the existing Orchard Hills Zone A to C BPS that is currently being converted to Zone C+ service as part of the Irvine Lake Pipeline North Conversion. The second phase will meet ultimate demands, which include consideration for the future Syphon Reservoir Improvements project, and will include construction of the Zone A to Syphon Reservoir BPS and the Syphon Reservoir to Zone C BPS. The project is located within the Eastwood Village development at the corner of Jeffrey and Irvine Boulevard as shown on the location map attached as Exhibit "A".

The project includes construction of the entire pump station building, all site improvements, and all buried infrastructure necessary to place both the first and second phase BPSs into service. Eight of the total 14 pumps will be equipped as part of the project, and the remaining pumps and electrical equipment will be equipped in the future near the completion of the Syphon Reservoir Improvements project.

#### Consultant Selection:

AECOM performed all elements of the pre-design and design phases for the project, including geotechnical, civil, mechanical, structural, noise modeling, architectural, electrical, and instrumentation. Staff requested AECOM to submit a proposal for engineering support services during construction. The proposal, which is attached as Exhibit "B", includes scope for submittal



Action Calendar: Eastwood Recycled Water Pump Stations Consultant Selection and Construction Award

May 29, 2018

Page 2

reviews, responses to contractor requests for information, site visits, record drawing preparation, energy control procedure development, post-construction noise monitoring, and construction coordination and general engineering support throughout the construction of the project.

Staff reviewed AECOM's scope of work and fee and confirmed that they are commensurate with the level of effort needed to support the construction of the project. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with AECOM, in the amount of \$295,000, for engineering support services during construction.

Construction Award:

The project was advertised for construction bids on April 11, 2018 to a select list of twelve contractors including ARB, Inc., Archer Western Contractors, Cushman Contracting, Gateway Pacific Contractors, GSE Construction Company, Inc., Olsson Construction, Pacific Hydrotech Corporation, Pascal & Ludwig Constructors, R.C. Foster Corporation, Stanek Constructors, Inc., Steve P. Rados, Inc., and W.M. Lyles, Inc.

The bid opening was held May 17, 2018 with bids received from Gateway Pacific Contractors, Pacific Hydrotech Corporation, and Pascal & Ludwig Constructors. Pacific Hydrotech Corporation is the apparent low bidder with a bid amount of \$12,220,600. The remaining bids were \$13,212,740 and \$14,052,000. The engineer's estimate, prepared by AECOM, was \$13,555,000. The bid summary is attached as Exhibit "C".

After review of the bid documents, staff determined that two of the bids contained irregularities in the Statements by Bidder Section A, Items and Manufacturers. This section requires the bidders to list a single manufacturer for each identified equipment item that the bidder intends to furnish. Pacific Hydrotech Corporation's bid contained two bid irregularities including listing two manufacturers for pump motors and listing the PLC manufacturer, Modicon, instead of listing the manufacturer of the control panel. Gateway Pacific Contractor's bid contained one bid irregularity, which was the listing of the PLC manufacturer, Modicon, instead of listing the manufacturer of the control panel. Staff conferred with legal counsel, and legal counsel concurred that there is a sufficient basis for a factual finding by the Board that the irregularities in the bids are inconsequential and cannot have given the apparent low bidder a significant competitive advantage over the other bidders.

Staff reviewed Pacific Hydrotech Corporation's bid and has determined that it is responsive. Staff recommends that the Board authorize the General Manager to award a construction contract to Pacific Hydrotech Corporation in the amount of \$12,220,600.

FISCAL IMPACTS:

Projects 04388 (Zone A to Syphon Reservoir BPS), 04400 (Zone A to Zone C BPS), and 04457 (Zone A to Zone B BPS) for the Eastwood Recycled Water Pump Stations are included in the FY 2018-19 Capital Budget. Project 04388 will fund 17% of the project through regional recycled water funds. Project 04400 will fund 58% of the project through development funds. Project

04457 will fund 25% of the project through a combination of development and replacement funds. The existing budgets are sufficient to fund the recommendations presented herein.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration was filed with the County of Orange on October 24, 2017. Pursuant to State Guideline § 15073, the Initial Study/Mitigated Negative Declaration (IS/MND) was made available for public review for a period of 30 days from October 24, 2017 through November 22, 2017. The IS/MND was adopted by IRWD Board of Directors at its January 22, 2018 meeting. A Notice of Determination was filed with the Orange County Clerk/Recorder and the CA State Clearinghouse on January 23, 2018.

COMMITTEE STATUS:

The consultant selection recommendation was reviewed by the Engineering and Operations Committee on April 17, 2018. Construction Awards are not routinely taken to Committee prior to submittal to the Board.

RECOMMENDATION:

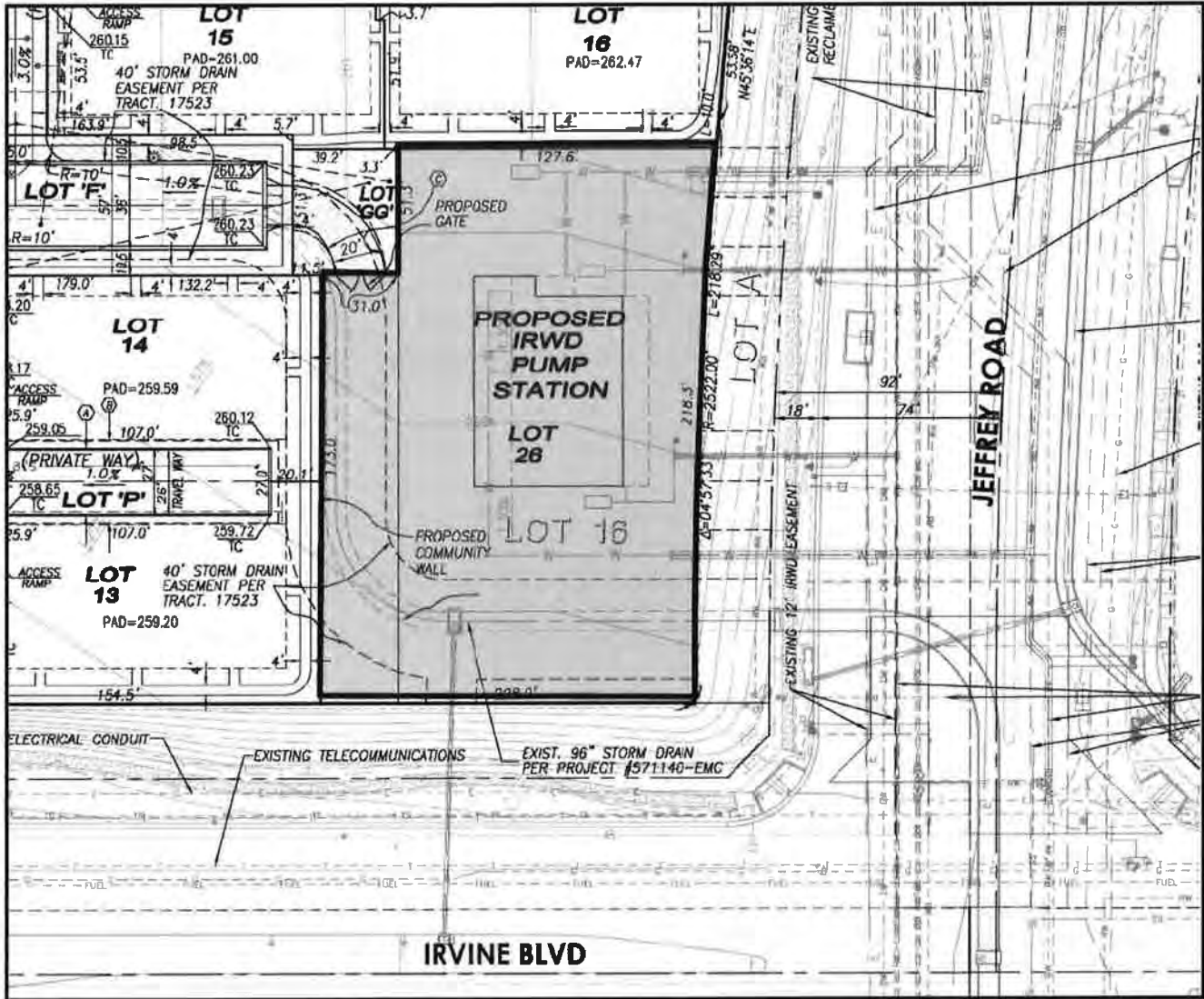
THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH AECOM, IN THE AMOUNT OF \$295,000, FOR ENGINEERING SUPPORT SERVICES DURING CONSTRUCTION, AND WAIVE BID IRREGULARITIES AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH PACIFIC HYDROTECH CORPORATION IN THE AMOUNT OF \$12,220,600, FOR THE EASTWOOD RECYCLED WATER PUMP STATIONS, PROJECTS 04388, 04400 AND 04457.

LIST OF EXHIBITS:

- Exhibit "A" – Location Map
- Exhibit "B" – AECOM Proposal for Engineering Support Services during Construction
- Exhibit "C" – Bid Summary

EXHIBIT "A"  
LOCATION MAP

EASTWOOD RECYCLED WATER PUMP STATIONS  
ZONE A TO B AND ZONE A TO C





## EXHIBIT "B"

AECOM  
999 Town & Country Rd  
Orange, CA 92868  
www.aecom.com

714-567-2400 tel  
714-567-2441 fax

April 3, 2018

Mr. Joseph McGehee, PE  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

Subject: Proposal for Construction Phase Services—Eastwood Recycled Water Pump Stations, Zone A to B and Zone A to C, PR 4400 & 4457

Dear Mr. McGehee:

This letter provides our scope of work and fee estimate for the construction phase services of the above referenced project. A summary of the consulting services that will be provided by AECOM and a spreadsheet with a breakdown of labor hours and direct costs is provided herein.

### SCOPE OF SERVICES

The scope of services for the construction phase includes the items listed below. AECOM's anticipated level of service during the construction phase is detailed below. The scope of work for AECOM's Acoustical Consulting Group has been provided under a separate task as requested.

#### ***Task 1—Construction Phase Services for Civil, Mechanical, Plumbing, Structural, Architectural, HVAC, Electrical, and Instrumentation Disciplines***

- A. Project Meetings. The AECOM design team will attend/conduct thirty-five (35) progress meetings of two hours each during the course of the construction and provide agendas and meeting minutes within five (5) working days of the meeting. Our discipline leads will be available to attend these meetings at the District office or via web/teleconference, as requested.
- B. Contractor's Request for Information (RFI). Discipline leads will respond to forty (40) Contractor's RFIs. AECOM will maintain a log of RFIs using the IRWD standard submittal log. AECOM will return responses to the District in a timely fashion per the contract requirements. We will expedite RFI responses on critical path items when requested by the District or Contractor.
- C. Minor Plan Revisions. We have budgeted for one hundred (100) hours of staff time for minor plan revisions to the construction drawings. During the construction phase, we will submit electronic and/or hard copy plan revisions to the District, as requested.
- D. Site Visits. We have budgeted for ten (10) site visits of two hours each during construction. We will prepare field memorandums to summarize our visits when key findings or recommendations need to be shared with the District and/or Contractor.



Mr. Joseph McGehee  
Irvine Ranch Water District  
Re: Construction Support Services Proposal  
April 3, 2018  
Page 2

- E. Energy Control Procedures (ECP) and Asset Management. AECOM will prepare ECP's in accordance with California Occupational Safety and Health (Cal/OSHA) requirements for all equipment that may have potential energy. We will also complete IRWD's Asset Management spreadsheet to inventory all of the new equipment for the project. We will submit a draft set of ECPs and Asset Management spreadsheet and finalize these documents after receipt of District review comments. Documents will be submitted in electronic and hard copy format, as requested.
- F. Shop Drawing Reviews. We have budgeted for the review of two hundred (200) shop drawing submittals, including any required resubmittals. Submittals will be reviewed for completeness and conformity with the contract documents. AECOM will provide comments on the IRWD shop drawing transmittal form and on the submittal PDF file electronically using Adobe Acrobat Professional. AECOM will maintain a log of submittals using the District' standard submittal log. AECOM will return submittal review transmittals and comments to the District in a timely fashion per the contract requirements and will expedite reviews on critical items, particularly on products with long lead times.
- G. Record Drawings. We will prepare record drawings on 22-inch by 34-inch mylars at construction completion, using the Contractor's and IRWD Inspector's red lines. AECOM will prepare final record drawings mylars, reissued signed mylars (as needed), AutoCAD electronic files on CD, and one color PDF file of the entire construction plan set on CD and deliver the record drawing package to IRWD.
- H. Additional Construction Coordination. We will perform additional construction coordination services that are not captured in the tasks listed above. These services will include, but not be limited to: phone calls, emails, technical memorandums, field questions, exhibit preparation, Contractor change order evaluations, and engineering calculations.

***Task 2—Construction Phase Services for Acoustical Consulting Group***

- A. Post-Construction Monitoring. At up to two (2) nearest noise-sensitive receivers (NSR) in the vicinity of the Project site and up to two (2) onsite positions, we will conduct unattended long-term ("LT", a 24-hour minimum period) sound pressure level (Lp) monitoring. We will also conduct a quantity of investigator-attended short-term ("ST", typically 2-20 minutes each) Lp measurements, at AECOM discretion, to help characterize the outdoor ambient sound environment onsite and in the Project vicinity and document the associated environmental conditions (e.g., weather, observed or perceived audible sound sources or activities, etc.). Please see Assumptions for detailed parameters of this anticipated field effort. After successful collection and analysis of Lp data and onsite observations, we will submit a concise draft technical memorandum presenting summarized results and findings. Upon receipt of District comments on the draft memorandum, we will prepare response to the District comments and submit a final post-construction noise monitoring memorandum.



Mr. Joseph McGehee  
Irvine Ranch Water District  
Re: Construction Support Services Proposal  
April 3, 2018  
Page 3

- B. Remotely Participate in Project Meetings. We will have an AECOM acoustician available to remotely participate (via telephone and/or Webex) in up to six (6) 2-hour meetings with the client and fellow AECOM staff (based in Orange, California).
- C. Contractor's Request for Information (RFI). We will support response for up to six (6) noise, vibration, or acoustics-related RFIs from the construction contractors.
- D. Attend Site Visits. We will have up to two (2) AECOM acousticians attend up to two (2) Project onsite visits of up to two (2) hours in duration each.
- E. Shop Drawing and Re-submittal Reviews. We will support up to ten (10) noise, vibration, or acoustics-related shop drawing and/or re-submittal reviews.
- F. Additional Construction Coordination. Pertaining to noise, vibration, or acoustics-related matters, AECOM will perform additional construction coordination services that are not captured in the tasks listed above. These services will include, but not be limited to: phone calls, emails, technical memorandums, field questions, exhibit preparation, contractor change order evaluations, and engineering calculations.

#### **ASSUMPTIONS**

1. For purposes of budgeting and conduct of the post-construction monitoring, the following parameters apply:
  - i. A single field survey will involve up to two (2) continuous days, including AECOM investigator travel to and from the Project site (Irvine, CA) on up to two (2) separate occasions (instrument deployment and retrieval).
  - ii. Up to two (2) One (1) AECOM field investigators would be expected to complete the LT monitoring and ST measurements.
  - iii. The two offsite LT positions would likely be, to the extent practical, NSR that are nearest to the Project in multiple cardinal directions. Project onsite locations, also to be coordinated and approved by IRWD, are likely to include property line (PL) positions.
  - iv. LT monitoring positions would need to be accessible during at least some portion of night-time hours (10 p.m. to 7 a.m.) so as to allow AECOM field investigators the ability to check instrument deployment function.
  - v. Execution of the fieldwork would proceed at AECOM investigator discretion, factoring in safety and suitability of climate and other environmental conditions.
  - vi. AECOM is not responsible for field survey sound level measurement delays due to weather (i.e., sustained winds greater than 10 mph or precipitation), operational restrictions or other factors outside of its control. Additional days in the field would accrue labor costs and expenses consistent with applicable rates.

Mr. Joseph McGehee  
Irvine Ranch Water District  
Re: Construction Support Services Proposal  
April 3, 2018  
Page 4

- vii. To economize investigator travel costs and help reserve needed instrumentation, AECOM will need field survey schedule confirmation and IRWD approval to proceed at least one (1) week prior to the expected first day of fieldwork.
2. Additional field survey work, the creation of new predictive analysis models, and other services not listed in the above Scope of Work are not included. These tasks can be estimated upon request and submitted to the District for consideration and approval.

**FEE ESTIMATE**

We propose to provide the scope of services outlined above for a fee of \$295,000. A breakdown of labor hours and costs is attached in Table 1.

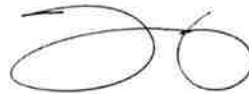
We greatly appreciate the opportunity to submit a proposal for these services and look forward to continuing to partner with the District on this project. If you have any questions, please contact Bryan Paine at 714-689-7191 (or Bryan.Paine@aecom.com).

Sincerely,

AECOM Technical Services, Inc.



Bryan Paine, PE,  
Project Manager



Joseph Long, PE  
Engineering Manager, Vice President

Attachments: Table 1-Estimate Labor Hours and Fees



**Estimated Cost Breakdown of Total Fee**  
 Irvine Ranch Water District  
 Eastwood Recycled Water Pump Station Station Project - Construction Phase Services  
 April 3, 2018

Task No.	Task Description	Labor Category with Billing Rate							TOTAL HOURS	TOTAL LABOR	Direct Costs / Materials <sup>1</sup>	TOTAL
		PIC / Senior Principal Engineer	Principal Engineer-Architect	Project Manager / Senior Engineer	Project Engineer-Architect	Staff Engineer Architect	CAD Designer	Admin / Clerical				
		\$250	\$210	\$170	\$140	\$110	\$100	\$80				
<b>Task 1--Construction Phase Services for Civil, Mechanical, Plumbing, Structural, Architectural, HVAC, Electrical, and Instrumentation Disciplines</b>												
A.	Project Meetings (35 Meetings)	20	35	70	35	35			195	\$33,000	\$500	\$33,500
B.	Contractor's RFIs (40 RFIs)	2	4	20	40	40	40	2	148	\$18,920	\$200	\$19,120
C.	Minor Plan Revisions (100 Hours)	4	8	12	12	18	40	8	100	\$12,880	\$500	\$13,380
D.	Site Visits (10 Visits)	10	10	20	20	20			80	\$13,000	\$200	\$13,200
E.	Energy Control Procedures and Asset Management	2	16	16	22	40		10	106	\$14,960	\$40	\$15,000
F.	Shop Drawing Reviews (200 Shop Drawings, including Resubmittals)	20	80	160	160	80		6	506	\$80,740	\$60	\$80,800
G.	Record Drawings	2	2	4	8	16	48	2	82	\$9,460	\$540	\$10,000
H.	Additional Construction Coordination	20	60	120	120	160	148	30	658	\$89,900	\$100	\$90,000
<b>TASK 1 SUBTOTAL</b>		<b>80</b>	<b>215</b>	<b>422</b>	<b>417</b>	<b>407</b>	<b>276</b>	<b>58</b>	<b>1,875</b>	<b>\$272,880</b>	<b>\$2,140</b>	<b>\$275,000</b>
<b>Task 2--Construction Phase Services for Acoustical Consulting Group</b>												
A.	Post-Construction Monitoring		2	7		27		4	40	\$4,940	\$600	\$5,540
B.	Remotely Participate in Project Meetings (6 Meetings)			6		6			12	\$1,680		\$1,680
C.	Contractor's RFIs (6 RFIs)		2	6		9			17	\$2,430		\$2,430
D.	Site Visits (2 Visits)			12		12			24	\$3,360	\$400	\$3,760
E.	Shop Drawing Reviews (10 Shop Drawings, including Resubmittals)		2	6		9			17	\$2,430		\$2,430
F.	Additional Construction Coordination		2	12		15			29	\$4,110	\$50	\$4,160
<b>TASK 2 SUBTOTAL</b>			<b>8</b>	<b>48</b>		<b>78</b>		<b>4</b>	<b>139</b>	<b>\$18,950</b>	<b>\$1,050</b>	<b>\$20,000</b>
<b>TOTAL</b>		<b>80</b>	<b>223</b>	<b>471</b>	<b>417</b>	<b>485</b>	<b>276</b>	<b>62</b>	<b>2,014</b>	<b>\$291,810</b>	<b>\$3,190</b>	<b>\$295,000</b>

**Notes & Assumptions:**

1) Direct Costs / Materials include costs such as mileage to meetings/site, courier fees, document reproduction, and noise monitoring equipment



## EXHIBIT "C"

Bid Opening: May 17, 2018 @ 2:00 p.m

EASTWOOD RECYCLED WATER PUMP STATIONS ZONE A TO B AND ZONE A TO C  
AND  
IRVINE LAKE PIPELINE ZONE C TO B CONVERSION AND BOTTOM DRAIN MODIFICATIONS  
Project Numbers 04400 and 04457

Entered By: L Gates

				1		2		3					
		Engineer's Estimate		Pacific Hydrotech Corporation Perris, CA		Gateway Pacific Contractors Sacramento, CA		Pascal & Ludwig Constructors Ontario, CA					
Item No	Description	Unit	Total	Unit	Total	Unit	Total	Unit	Total				
		Qty	Price	Amount	Price	Amount	Price	Amount	Price	Amount			
<b>Base Bid Items</b>													
1	Furnish all labor, materials, equipment, services and appurtenant work, except for Items 2 through 8 below, for the construction of the Eastwood Recycled Water Pump Stations Zone A to B and Zone A to C and the Irvine Lake Pipeline Zone C to B Conversion and Bottom Drain Modifications Project	1	\$12,800,000.00	\$12,800,000.00	1	\$11,375,200.00	\$11,375,200.00	1	\$11,992,740.00	\$11,992,740.00	1	\$12,450,000.00	\$12,450,000.00
2	Mobilization, Demobilization, and Cleanup (not to exceed 4% of contract price)	1	\$500,000.00	\$500,000.00	1	\$450,000.00	\$450,000.00	1	\$500,000.00	\$500,000.00	1	\$261,000.00	\$261,000.00
3	Payment and Performance Bonds, and Insurance	1	\$150,000.00	\$150,000.00	1	\$170,000.00	\$170,000.00	1	\$250,000.00	\$250,000.00	1	\$335,000.00	\$335,000.00
4	Erosion Control Measures	1	\$10,000.00	\$10,000.00	1	\$25,400.00	\$25,400.00	1	\$5,000.00	\$5,000.00	1	\$19,000.00	\$19,000.00
5	Trench Sheeting, Shoring, and Bracing	1	\$20,000.00	\$20,000.00	1	\$119,000.00	\$119,000.00	1	\$400,000.00	\$400,000.00	1	\$830,000.00	\$830,000.00
6	Start-up, Testing, and Training	1	\$30,000.00	\$30,000.00	1	\$36,000.00	\$36,000.00	1	\$20,000.00	\$20,000.00	1	\$112,000.00	\$112,000.00
7	Operations and Maintenance Manuals	1	\$20,000.00	\$20,000.00	1	\$20,000.00	\$20,000.00	1	\$20,000.00	\$20,000.00	1	\$20,000.00	\$20,000.00
8	Prepare and Maintain Record Drawings	1	\$25,000.00	\$25,000.00	1	\$25,000.00	\$25,000.00	1	\$25,000.00	\$25,000.00	1	\$25,000.00	\$25,000.00
<b>SUBTOTAL, Base Bid Items</b>				<b>\$13,555,000.00</b>		<b>\$12,220,600.00</b>		<b>\$13,212,740.00</b>		<b>\$14,052,000.00</b>			
Adjustment (+ or -)				\$0.00									
<b>TOTAL AMOUNT OF BID</b>				<b>\$13,555,000.00</b>		<b>\$12,220,600.00</b>		<b>\$13,212,740.00</b>		<b>\$14,052,000.00</b>			
<b>NOTES:</b>		<b>Items</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>		<b>Manufacturers:</b>					
			Vertical Turbine Pumps		Sulzer		Sulzer		Sulzer				
			Pump Motors		Siemens/GE		US Motors		Siemens/GE				
			Magnetic Flow Meters		ABB		ABB		ABB				
			Butterfly Valves		Pratt		Pratt		Pratt				
			Check Valves		Pratt		Val-Matic		APCO				
			Pressure Reducing Valves		CLA-VAL		CLA-VAL		CLA-VAL				
			Steel Pipe		Southland Pipe Corp		Southland Pipe Corp		Levco				
			Motor Control Center / Starters		Allen Bradley		Allen Bradley		Allen Bradley				
			Control Panel with PLCs		Modicon		Modicon		George T. Hall				
			Switchgear		IEM		IEM		IEM				
			Surge Tanks		Pulsco		Pulsco		Pulsco				
			Compressors		Gardner Denver		Gardner Denver		Gardner Denver				
			Acoustic Panels		All Pro		All Pro		Insul-Quilts Inc				
					<b>Subcontractors:</b>		<b>Subcontractors:</b>		<b>Subcontractors:</b>				
					Coating - Murphy Industrial Coatings, Inc.		Coating - Murphy Industrial Coatings, Inc.		Paint - Murphy Industrial Coatings, Inc				
					Roof - Golden State Roofing (Kiss Enterprises)		Built-up Roofing - Golden State Roofing (Kiss Enterprises)		Roofing - Golden State Roofing (Kiss Enterprises)				
					Acoustic Panels - C E Pickup Company, Inc (Pacific Sound Control)		Sound Control - C E Pickup Company, Inc (Pacific Sound Control)		Acoustic - C E Pickup Company, Inc (Pacific Sound Control)				
					Structural Steel - Remco Machining & Fabrication, Inc		Metal Roofing - United Contractors		Structural Steel - Remco Machining & Fabrication, Inc				
					Rebar - Harris Rebar		Rebar - Commercial Metals Company		Rebar - Harris Rebar				
					AC Paving - Hardy and Harper, Inc		Paving - Hardy and Harper, Inc		Paver - Hardy and Harper, Inc				
					Electrical - Johnson-Peltier Electric, Inc		Electrical - Johnson-Peltier Electric, Inc		Electrical - Halevon Electric, Inc				
					HVAC - Christian Brothers Mechanical Services, Inc		HVAC - Christian Brothers Mechanical Services, Inc		HVAC - Christian Brothers Mechanical Services, Inc				
							Masonry - Southern Counties Quality Masonry, Inc		Masonry - Winegardner Masonry, Inc				

May 29, 2018

Prepared by: W. Stewart/S. Malloy

Submitted by: K. Burton *KL B*

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

## ACTION CALENDAR

**MICHELSON WATER RECYCLING PLANT  
BIOSOLIDS AND ENERGY RECOVERY FACILITIES  
CONTRACT CHANGE ORDER NO. 80 AND  
AMENDMENT NO. 2 TO AGREEMENT WITH ORANGE COUNTY SANITATION  
DISTRICT FOR INTERIM SOLIDS HANDLING**

### SUMMARY:

Filanc/Balfour Beatty (FBB) is constructing the Michelson Water Recycling Plant (MWRP) Biosolids and Energy Recovery Facilities (Biosolids Project). Contract Change Order (CCO) No. 80 includes costs for several electrical and mechanical items. Staff recommends that the Board approve CCO No. 80 in the amount of \$313,076.14 with FBB. In addition, staff negotiated a three-year time extension of the Orange County Sanitation District (OCSD) lease for Transfer of Wastewater Solids Residuals due to the Biosolids construction extending beyond December 2018.

Staff recommends that the Board:

- Approve CCO No. 80 in the amount of \$313,076.14 with FBB for the Biosolids Project, and
- Authorize the General Manager to execute Amendment No. 2 to the Agreement for Transfer of Wastewater Solids Residuals with OCSD, subject to non-substantive changes.

### BACKGROUND:

Construction of the Biosolids Project was awarded to FBB in March 2013 in the amount of \$163,465,940. The Biosolids Project will provide biosolids digestion, dewatering, energy production, and on-site sludge drying. The project includes excavation for subsurface structures; installation of foundation piles; three egg-shaped digesters; a state-of-the-art odor control system; a biogas conditioning system and power generation using microturbines; a fats, oil and grease (FOG) receiving station; and new utility services. These facilities are being constructed on the land north of IRWD's Operations Center, maintenance shops, water quality laboratory, and warehouse.

### CCO No. 80:

Staff negotiated with FBB and agrees to the labor and material costs contained in CCO No. 80 in the amount of \$313,076.14. CCO No. 80 includes the following items:

- *Modifications to Motor Control Centers (MCCs) in the amount of \$99,547.17* – Changes in the motor sizes of several mechanical equipment require modifications to the four motor control centers - MCC-4100, MC-4101, MCC-4102, and MCC-4103. The

mechanical equipment includes the centrifuge discharge cake conveyors, duct and propeller fans, lubricating pumps, centrate transfer pumps, microturbine pumps, centrate sludge pumps, microturbine heat recovery pumps, acid phase recirculation pump, FOG heating water pump, methane phase secondary heat pump, odor control fan, acid phase secondary heat pumps, primary heating water transfer pumps, and digested sludge holding tank pumps. A portion of this change request is an allowance. FBB will track the actual hours expended, and a subsequent change request will reconcile the difference in work effort. This item is for the labor and material to make the modifications to the MCCs.

- *Separate Air Compressor System Electrical Panel for Waste Gas Burner in the amount of \$50,723.04* – Based on the recommendation of the waste gas burner manufacturer, it was decided that a separate electrical panel for the air compressor system would be added. This item is for the labor and material to install the separate air compressor system electrical panel along with the associated SCADA programming.
- *Additional Power Monitoring Equipment for Self-Generation Incentive Program in the amount of \$34,887.16* – IRWD has applied for a rebate offered through the Self-Generation Incentive Program (SGIP), a program offered by both Southern California Edison and SoCalGas. IRWD is eligible for a \$2.32 million rebate. To comply with the SGIP incentive program, additional power monitoring is necessary. Additional SCADA programming is also required for the additional power monitoring. This item is for the labor and material to make the additions.
- *Electrical Modifications for the Gas Compressor Detector and Enclosure Fire Alarm Panel in the amount of \$13,215.42* – For increased operational safety staff decided to connect the gas compressor detector to the MWRP Biosolids' plant-wide fire protection and signaling alarm system. This item is for the labor and material to make the necessary changes.
- *Additional Power Circuits for the Solids Handling Building Roll-Up Doors in the amount of \$24,446.58* – During submittal review it was discovered that power circuits for nine roll-up doors in the Solids Handling Building were missing. This item is for the labor and material to install the additional power circuits.
- *Modifications to Digested Sludge Line in the amount of \$17,023.42* – To avoid a conflict between a 10-inch digested sludge line and the platform support system near Methane Digester No. 1, the digested sludge line was modified with the addition of several bends. This item is for the labor and material to make the necessary changes.
- *Relocation of Local Control Panel in the Solids Handling Building in the amount of \$34,619.35* – Because of space constraints, a local control panel was relocated from the second floor of the Solids Handling Building to the ground floor of the Solids Handling Building. This item is for the labor and materials to relocate the control panel.

- *Additional Manual Valves and Components for the Heat Dryer System in the amount of \$38,614* – During submittal review it was determined that additional manual valves for the heat dryer system were required. These valves were not included in the scope of work for either FBB or the heat dryer supplier. The manual valves are for better operation and control. This item is for the materials to add the manual valves and components. The heat dryer supplier is responsible for the labor to install the valves.

Staff recommends that the Board approve CCO No. 80 in the amount of \$313,076.14, which is attached as Exhibit “A”. The construction change order summary is attached as Exhibit “B”. The following is a summary of the change order categories:

Category	Total Amount	% of Original Contract
A - District Convenience/Initiation - Project Related	\$ 3,414,699.14	2.09%
B - Differing Site Conditions	\$12,758,603.93	7.81%
C - Design Oversight	\$ 3,458,131.27	2.12%
D - District Convenience/Initiation - Non-Project Related	\$ -	0.00%
E - Contractor Convenience/Initiation	\$ 98,302.54	0.06%
F - Contractor Requested Inspection Overtime	\$ (262,020.00)	-0.16%
<b>TOTAL (All Items A - F)</b>	<b>\$19,467,717.18</b>	<b>11.91%</b>

*Amendment No. 2 to Agreement with OCSD for Interim Solids Handling:*

IRWD has an agreement for the Transfer of Wastewater Solids Residuals to OCSD whereby IRWD leases solids processing capacity from OCSD. The original agreement signed on April 28, 2010, extends until December 31, 2016. In May 2016, the Board approved Amendment No. 1 with OCSD for a two-year extension. No other terms in the original agreement were changed. The current construction completion is estimated to be beyond December 2018. Staff has negotiated Amendment No. 2 with OCSD for an additional three-year extension. The OCSD Board approved Amendment No. 2 on May 23, 2018. Staff recommends that the Board authorize the General Manager to execute Amendment No. 2 with OCSD, subject to non-substantive changes. Amendment No. 2 is attached as Exhibit “C”.

**FISCAL IMPACTS:**

The MWRP Biosolids and Energy Recovery Facilities Project 04286 is included in the FY 2018-19 Capital Budget. The existing budget is sufficient to fund the change order.

**ENVIRONMENTAL COMPLIANCE:**

The MWRP Biosolids and Energy Recovery Facilities is subject to the California Environmental Quality Act (CEQA) and in conformance with the California Code of Regulations Title 14, Chapter 3, Article 7, a Supplemental Environmental Impact Report (SEIR), SCH # 2011031091, was certified by IRWD at its October 22, 2012 meeting. The City of Irvine Planning

Action Calendar: Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities  
Contract Change Order No. 80 and Amendment No. 2 to Agreement with Orange County  
Sanitation District for Interim Solids Handling  
May 29, 2018  
Page 4

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 15, 2018.

RECOMMENDATION:

THAT THE BOARD APPROVE CONTRACT CHANGE ORDER NO. 80 IN THE AMOUNT  
OF \$313,076.14 WITH FILANC/BALFOUR BEATTY FOR SEVERAL ELECTRICAL AND  
MECHANICAL ITEMS FOR THE MICHELSON WATER RECYCLING PLANT  
BIOSOLIDS AND ENERGY RECOVERY FACILITIES, PROJECT 04286, AND  
AUTHORIZE THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 2 TO THE  
AGREEMENT FOR TRANSFER OF WASTEWATER SOLIDS RESIDUALS WITH  
ORANGE COUNTY SANITATION DISTRICT, SUBJECT TO NON-SUBSTANTIVE  
CHANGES.

LIST OF EXHIBITS:

Exhibit "A" – Contract Change Order No. 80 with FBB

Exhibit "B" – Construction Change Order Summary

Exhibit "C" – Amendment No. 2 to the Agreement for Transfer of Wastewater Solids Residuals

**CONTRACT CHANGE ORDER**

**EXHIBIT "A"**



**Irvine Ranch Water District**

15600 Sand Canyon Avenue  
 P.O. Box 57000  
 Irvine, CA 92619-7000  
 (949) 453-5300

C.O. No. 80

Final

Project No. 04286

MWRP Biosolids and Energy Recovery Facilities

Project Title

Date: 05/02/2018

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Modifications to MCC-4100, MCC-4101 and MCC-4102 (CR-384) PR 04286 Task 5.30	\$36,158.66	\$0.00	See Notes
2. Modifications to MCC-4102 and MCC-4103 (CR-384D) PR 04286 Task 5.30	\$63,388.51	\$0.00	See Notes
3. Separate Air Compressor System Electrical Panel for Waste Gas Burner (CR-484B) PR 04286 Task 5.3	\$50,723.04	\$0.00	See Notes
4. Additional Power Monitoring Equipment for Self-Generation Incentive Program (CR-577) PR 04286 Task 5.30	\$34,887.16	\$0.00	See Notes
5. Electrical Modifications for the Gas Compressor Detector and Enclosure Fire Alarm Panel (CR-629) PR 04286 Task 5.30	\$13,215.42	\$0.00	See Notes
6. Additional Power Circuits for the Solids Handling Building Roll-Up Doors (CR-631) PR 04286 Task 5.30	\$24,446.58	\$0.00	See Notes
7. Modifications to Digested Sludge Line (CR-648) PR 04286 Task 5.31	\$17,023.42	\$0.00	See Notes
8. Relocation of Local Control Panel in the Solids Handling Building (CR-676) PR 04286 Task 5.30	\$34,619.35	\$0.00	See Notes
9. Additional Manual Valves and Components for Heat Dryer System (CR-683) PR 04286 Task 5.31	\$38,614.00	\$0.00	See Notes
<b>TOTAL</b>	\$313,076.14	\$0.00	0

**Notes:**

- For all items noted above, the Contractor reserves the right to compensable and/or excusable time extensions provided that time impacts to the Project's critical path are demonstrated to be beyond the Contractor's control.
- Contractor reserves any and all rights it has and otherwise does not waive or release any claims it may have for additional compensation related to impact, including but not limited to the cumulative effect of the number, nature, or extent of any changes or design clarifications.
- The project completion date of October 31, 2017 per CCO No. 45 is **unchanged by this Change Order.**

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

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

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=	\$313,076.14	0
2. ORIGINAL CONTRACT AMOUNT	=	\$163,465,940.00	1,278
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	\$19,154,641.04	368
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	\$182,620,581.04	1,646
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$182,933,675.76	1,646

We hereby agree to make the above change subject to the terms of this change order for the sum of: \_\_\_\_\_  
 ----- Three Hundred Thirteen Thousand Seventy-Six and 14/100 -----Dollars

Date		Contractor <u>Filanc/Balfour-Beatty</u>		By: <u>Harry Cosmos, President</u>	
SIGNATURE		DATE		APPROVAL LEVEL REQUIRED	
_____		_____		Department Director Approval Required <input type="checkbox"/>	
IRWD Engineer or Consulting Engineer		Date		Executive Director Approval Required <input type="checkbox"/>	
_____		_____		General Manager Approval Required <input type="checkbox"/>	
Principal Engineer		Date		Board Approval Required <input checked="" type="checkbox"/>	
_____		_____		_____	
Executive Director of Engineering & Water Quality		Date		_____	
_____		_____		Purchase Order No. _____	
General Manager		Date		_____	
_____		_____		_____	

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

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

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

**EXHIBIT "B"**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C.O. days	Revised Total Contract Days	Revised Completion Date
1	Approved by Exe Director of Engineering and Water Quality Approved on October 24, 2013 1.1 Modifications to Road to Development Area - Delete AC to Triangle, add AB to Michelson (CR-004)	A	IRWD	\$ 20,202.42	\$20,202.42	\$0.00	\$20,202.42	0.01%	\$163,486,142.42	0	0	0	1,278	10/28/2016
2	Approved by Exe Director of Engineering and Water Quality Approved on November 13, 2013 2.1 Street Light Conduit Modifications (CR-007)	B	IRWD	\$ 12,475.08	\$12,475.08	\$20,202.42	\$32,677.50	0.02%	\$163,498,617.50	0	0	0	1,278	10/28/2016
3	Approved by Board of Directors Approved on March 10, 2014 3.1 Bid Quantity Adjustment of Bid Item 8.6 Pre-Drill	B	FBB	\$ 745,503.00	\$745,503.00	\$32,677.50	\$778,180.50	0.48%	\$164,244,120.50	0	0	0	1,278	10/28/2016
4	Approved by Exe Dir of Eng & Water Quality Approved on March 14, 2014 4.1 Installation of Five Additional Groundwater Wells and Monitoring - (CR-006) PR 21146 (4286) Task 3505 4.2 Brace Bay Modifications at the FOG Station - (CR-015) PR 21146 (4286) Task 3505 4.3 Grounding Extension at Nitrogen and Mineral Oil System (CR-025) PR 21146 (4286) Task 3510	A	IRWD	\$11,047.81	\$23,029.22	\$778,180.50	\$801,209.72	0.49%	\$164,267,149.72	0	0	0	1,278	10/28/2016
5	Approved by Exe Dir of Eng & Water Quality Approved on March 14, 2014 5.1 Unidentified Utility - Meter Shop Discharge (CR-008) PR 21146 (4286) Task 3505 5.2 Connection Beam Modifications at Solids Handling Facility (CR-014) PR 21146 (4286) Task 3235 5.3 Increased Grating Thickness at Solids Handling Facility (CR-041) PR 21146 (4286) Task 3505	B	IRWD	\$15,225.75	\$24,851.73	\$801,209.72	\$826,061.45	0.51%	\$164,292,001.45	0	0	0	1,278	10/28/2016
6	Approved by General Manager Approved on March 20, 2014 6.1 Additional Costs to Install Piles to the Design Tip (CR-033) PR 21146 (4286) Task 3505	B	FBB	\$31,815.00	\$31,815.00	\$826,061.45	\$857,876.45	0.52%	\$164,323,816.45	0	0	0	1,278	10/28/2016

- A - District Convenience/Initiation - Project Related
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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
7	Approved by Exe Dir of Eng & Water Quality Approved on April 21, 2014				\$24,725.00	\$857,876.45	\$882,601.45	0.54%	\$164,348,541.45	0	0	0	1,278	10/28/2016
7.1	Meter Shop Discharge Pipe Leak Investigation and Repair (CR-013) PR 21146 (4286) Task 3505	B	IRWD	\$2,542.00						0				
7.2	Additional Reinforcement and Lifting Eyes for Removable Slabs at Solids Handling Building (CR-021) PR 21146 (4286) Task 3505	C	FBB	\$14,059.00						0				
7.3	Increased Grating Thickness at Solids Handling Facility (CR-041) PR 21146 (4286) Task 3505 Additional Conductance Probe Materials for Relay Level Switches for Various Sumps Located at the Microturbine Area PR 21146 (4286) Task 3510	C	FBB	\$8,124.00						0				
8	Approved by General Manager Approved on April 21, 2014				(\$49,990.00)	\$882,601.45	\$832,611.45	0.51%	\$164,298,551.45	0	0	0	1,278	10/28/2016
8.1	Cost Sharing for Project Partnering (CR- Credit for Primavera 7.0 Project Portfolio Management Software (CR-002) PR 21146 (4286) Task 3235	A	IRWD	(\$14,611.00)						0				
8.2	21146 (4286) Task 3235	A	IRWD	(\$2,700.00)						0				
8.3	Deletion of Concrete Pad near Development Area (CR-004A) PR 21146 (4286) Task 3235	A	IRWD	(\$3,865.00)						0				
8.4	Deletion of Ground Test Device (CR-034) PR 21146 (4286) Task 3210	A	IRWD	(\$15,579.00)						0				
8.5	Deletion of Existing T-4 Switchgear Level Indicating Switch (CR-035) PR 21146 (4286) Task 3210	A	IRWD	(\$9,167.00)						0				
8.6	Change to NEMA 4X Panels and Modification to NEMA 4X Bar Graph Display (CR-046) PR 21146 (4286) Task 3210	A	IRWD	(\$4,068.00)						0				
9	Approved by Exe Director of Eng & Water Quality Approved on May 31, 2014				\$24,840.17	\$832,611.45	\$857,451.62	0.52%	\$164,323,391.62	0	0	0	1,278	10/28/2016
9.1	Additional Circuits for Gas Monitors and Re-route of Conduits in Solids Handling Facility (CR-028) PR 21146 (4286) Task 3510	C	FBB	\$1,187.49						0				
9.2	Cantilevered Beam Support Modifications in the Solids Handling Facility (CR-049) PR 21146 (4286) Task 3505	C	FBB	\$4,605.30						0				
9.3	Additional Ethernet Switches (CR-062) PR 21146 (4286) Task 3510	C	IRWD	\$19,047.38						0				
10	Approved by Exe Director of Eng & Water Quality Approved on May 31, 2014				\$21,398.99	\$857,451.62	\$878,850.61	0.54%	\$164,344,790.61	0	0	0	1,278	10/28/2016
10.1	Additional Grace Ports for Various PLCs (CR-030) PR 21146 (4286) Task 3510	C	IRWD	\$8,580.62						0				
10.2	Provide H-20 Rated Hatches at WAS Pump Station and Valve Vault (CR-061) PR 21146 (4286) Task 3505	C	IRWD	\$12,818.37						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filano/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
11	Approved by Exe Director of Eng. & Water Quality Approved on June 4, 2014				\$24,739.76	\$878,850.61	\$902,590.37	0.55%	\$164,369,530.37	#REF!	0	#REF!	#REF!	10/28/2016
11.1	Waste Activated Sludge (WAS) Pump Station Structural Modifications (CR-023) PR 21146 (4286) Task 3505	C	IRWD	\$12,905.49						0				
11.2	Removable Slab Modifications on the Second Floor of Solids Handling Building (CR-064) PR 21146 (4286) Task 3505	C	IRWD	\$11,834.27						0				
12	Approved by Board of Directors Approved on July 21, 2014				\$156,580.22	\$903,590.37	\$1,060,170.59	0.65%	\$164,526,110.59	0	0	0	1,278	10/28/2016
12.1	Final Bid Quantity Adjustment for Bid Item No 5.2 - Undocumented Fill (suitable) - Remedial Grading - Remove and Re-compact a net increase of 8,104.7 CY from 51,700 CY to 59,804.7 CY at \$5/CY PR 21146 (4286) Task 3505	B	N/A	\$40,523.37						0				
12.2	Final Bid Quantity Adjustment for Bid Item No 5.5 - Undocumented Fill (not suitable) - Remedial Grading - Remove and Export Offsite, a net increase of 60 CY, from 1,800 CY to 1,860 CY at \$25/CY PR 21146 (4286) Task 3505	B	N/A	\$1,500.00						0				
12.3	Final Bid Quantity Adjustment for Bid Item No 5.6 - Geotextile Fabric - Remedial Grading, a net decrease of 5,414 SF, from 181,500 SF to 176,086 SF at \$0.40/SF PR 21146 (4286) Task 3505	B	N/A	(\$2,165.60)						0				
12.4	Final Bid Quantity Adjustment for Bid Item No 5.6 - Geotextile Fabric - Remedial Grading, a net decrease of 5,414 SF, from 181,500 SF to 176,086 SF at \$0.40/SF PR 21146 (4286) Task 3505	B	N/A	(\$6,523.33)						0				
12.5	Final Bid Quantity Adjustment for Bid Item No 5.8 - Undocumented Fill - Deep Foundations - Removal, a net increase of 966 CY, from 21,650 CY to 22,616 CY at \$5.50/CY PR 21146 (4286) Task 3505	B	N/A	\$5,313.00						0				
12.6	Final Bid Quantity Adjustment for Bid Item No 5.9 - Alluvium - Remedial Grading - Removal and Export Offsite, a net increase of 2,076 CY, from 28,154 CY to 30,230 CY at \$35/CY PR 21146 (4286) Task 3505	B	N/A	\$72,665.98						0				
12.7	Final Bid Quantity Adjustment for Bid Item No 5.10 - Undocumented Fill Deep Foundations - Compaction of stockpiled materials, a net increase of 3,117 CY, from 11,400 CY to 14,517 CY at \$15/CY PR 21146 (4286) Task 3505	B	N/A	\$46,755.00						0				
12.8	Final Bid Quantity Adjustment for Bid Item No 5.11 - Undocumented Fill - Deep Foundations - Export excess offsite a net decrease of 2,151 CY, from 10,250 CY to 8,099 CY PR 21146 (4286) Task 3505	B	N/A	(\$30,114.00)						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
12.9	Final Bid Quantity Adjustment for Bid Item No 5.12 - Geotextile Fabric - Deep Foundations, a net increase of 9,218 SF, from 51,500 SF to 60,718 SF at \$0.60/SF PR 21146 (4286) Task 3505	B	N/A	\$5,530.80						0				
12.10	Final Bid Quantity Adjustment for Bid Item No 5.13 - Aggregate Base - Deep Foundations, a net increase of 513.2 CY, from 2,860 CY to 3,373.2 CY at \$45/CY PR 21146 (4286) Task 3505	B	N/A	\$23,095.00						0				
13	Approved by Exe Director of Engineering & Water Quality Approved on July 10, 2014				\$10,129.18	\$1,060,170.59	\$1,070,299.77	0.65%	\$164,536,239.77	0	0	0	1,278	10/28/2016
13.1	Modifications to Switchgear 16 (CR-070) PR 21146 (4286) Task 3510	A	FBB	\$10,129.18						0				
14	Approved by General Manager Approved on June 24, 2014				\$44,543.19	\$1,070,299.77	\$1,114,842.96	0.68%	\$164,580,782.96	0	0	0	1,278	10/28/2016
14.1	Slide Gates Clarification Regarding Actuators (CR-039) PR 21146 (4286) Task 3520	A	IRWD	\$44,543.19						0				
15	Approved by General Manager Approval on July 31, 2014				\$45,214.40	\$1,114,842.96	\$1,160,057.36	0.71%	\$164,625,997.36	0	0	0	1,278	10/28/2016
15.1	Provide Masonry Shelf Angle at Digester Control Building (CR-031) PR 21146 (4286) Task 3505	C	FBB	\$27,543.19						0				
15.2	Beam Size Increase for Monorail Runway in Solids Handling Building - (CR-074) PR 21146 (4286) Task 3505	C	FBB	\$1,200.47						0				
15.3	Upsize Odor Control Circulation Pump Motor Disconnects (CR-082) PR 21146 (4286) Task 3510	B	FBB	\$1,184.83						0				
15.4	Additional Deck Support for the Solids Handling Building Roof (CR-044) PR 21146 (4286) Task 3505	C	FBB	\$15,285.91						0				
16	Approved by E&O Committee Approved on August 19, 2014				\$62,037.10	\$1,160,057.36	\$1,222,094.46	0.75%	\$164,688,034.46	0	0	0	1,278	10/28/2016
16.1	Installation of Level 3 Diesel Particulate Filter (DPF) on the Standby Generator - (CR-073) PR 21146 (4286) Task 3520	B	IRWD	\$62,037.10						0				
17	Approved by Board of Directors Approved on August 25, 2014				(\$106,241.99)	\$1,222,094.46	\$1,115,852.47	0.68%	\$164,581,792.47	0	0	0	1,278	10/28/2016
17.1	Modifications to Switchgear 16 (CR-070A) PR 21146 (4286) Task 3510	A	FBB	(\$106,241.99)						0				
18	Approved by Board of Directors Approved on August 25, 2014				\$108,087.55	\$1,115,852.47	\$1,223,940.02	0.75%	\$164,689,880.02	0	0	0	1,278	10/28/2016
18.1	Stormwater Drainage System Modification (CR-017) PR 21146 (4286)	A	IRWD	\$108,087.55						0				

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F - Contractor Requested Inspection Overtime

B - 4

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Original Days				10/28/2016
										Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
19	Approved by Executive Director of Engineering & Water Quality Approved on September 30, 2014				\$72,572.86	\$1,223,940.02	\$1,296,512.88	0.79%	\$164,762,452.88	0	0	0	1,278	10/28/2016
19.1	Modification to Switchgear 16 (CR-070B) PR 21146 (4286) Task 3510	A	IRWD	\$1,125.75						0				
19.2	Alluvium Removal Due to 36-inch Storm Drain Installation (CR-085) PR 21146 (4286) Task 3520	B	N/A	\$14,140.00						0				
19.3	Additional Structural Support for Fats, Oils, and Grease (FOG) Grinders (CR-081) PR 21146 (4286) Task 3505	C	FBB	\$8,323.99						0				
19.4	Portable Lift Truck for 480V ABB Breakers (CR-108) PR 21146 (4286) Task 3510	A	IRWD	\$2,625.12						0				
19.5	Retaining Wall North and West of Biosolids Site (CR-010) PR 21146 (4286) Task 3505	B	IRWD	\$46,358.00						0				
20	Approved by Executive Director of Engineering & Water Quality Approved on November 19, 2014				\$54,485.63	\$1,296,512.88	\$1,350,998.51	0.83%	\$164,816,938.51	0	0	0	1,278	10/28/2016
20.1	Nitrogen Slab Modifications (CR-052) PR 21146 (4286) Task 3505	A	IRWD	\$24,855.80						0				
20.2	Additional Conduits and Circuits for the Access Control Systems for the Solids Handling Building and the Digester Control Building (CR-082) PR 21146	A	IRWD	\$3,412.13						0				
20.3	Digital Power Meters Change for SWGR-14 and SWGR-15 (CR-109) PR 21146 (4286) Task 3510	A	IRWD	\$3,863.22						0				
20.4	Truck Unloading Panel Modifications (CR-115) PR 21146 (4286) Task 3510	A	IRWD	\$12,843.50						0				
20.5	Switchgear SWGR-14 Modifications (CR-116) PR 21146 (4286) Task 3510	A	IRWD	\$9,510.98						0				
21	Approved by General Manager Approved on January 30, 2015				\$98,506.19	\$1,350,998.51	\$1,449,504.70	0.89%	\$164,915,444.70	0	0	0	1,278	10/28/2016
21.1	Additional Anchorage for Methane Digesters (CR-051A) PR 21146 (4286) Task 3520	B	FBB	\$92,367.44						0				
21.2	Additional Input/Outputs Review of Master I/O List (CR-136) PR 21146 (4286) Task 3510	C	FBB	\$6,138.75						0				

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B - 5

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filano/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
22	Approved by Board of Directors Approved on February 9, 2015				\$964,324.51	\$1,449,504.70	\$2,415,829.21	1.48%	\$165,879,769.21	0	0	0	1,278	10/28/2016
22.1	Electrical Conduit Overfill (CR-055) PR 21146 (4286) Task 3510	C	FBB	\$485,250.28						0				
22.2	Heat Dryer Equipment Escalation Costs (CR-057) PR 21146 (4286) Task 3520	B	FBB	\$333,477.50						0				
22.3	Glass-lining Sludge Density Meters (CR-067) PR 21146 (4286) Task 3510	A	IRWD	\$71,010.74						0				
22.4	Switchgear-16 Enclosure (CR-040) PR 21146 (4286) Task 3510	C	FBB	\$56,882.30						0				
22.5	Propane Gas Tank Foundation Demolition (CR-084) PR 21146 (4286) Task 3505	C	IRWD	\$2,004.98						0				
22.6	Credit for travel costs related to inspection of centrifuges in Germany (CR-091) PR 21146 (4286) Task 3520	A	IRWD	(\$5,573.42)						0				
22.7	Deletion of MMC Switchgear-14 Breaker (CR-092) PR 21146 (4286) Task 3510	A	IRWD	(\$5,032.00)						0				
22.8	Increase of Fiber Optic Conduit Size (CR-097) PR 21146 (4286) Task 3510	C	IRWD	\$23,269.61						0				
22.9	Overtime to perform work in the Solids Handling electrical room (CR-103) PR 21146 (4286) Task 3510	A	IRWD	\$1,384.47						0				
22.10	Credit for modification to the Uninterruptible Power System (CR-118) PR 21146 (4286) Task 3510	A	IRWD	(\$9,771.72)						0				
22.11	Addition of Low Voltage Compartment in SCE Switch "C" (CR-160) PR 21146 (4286) Task 3510	A	IRWD	\$2,156.20						0				
22.12	Addition of input/output points relating to sump pumps located at the Solids Handling Building (CR-161) PR 21146 (4286) Task 3510	A	FBB	\$9,265.57						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
23	Approved by General Manager Approved on February 26, 2015				\$97,005.10	\$2,413,829.21	\$2,510,834.31	1.54%	\$165,976,774.31	0	0	0	1,278	10/28/2016
23.1	Additional Steel Reinforcement the Pellet Storage Silos Anchor Bolts (CR-094) PR 21146 (4286) Task 3505	B	FBB	\$5,514.57						0				
23.2	Differential Pressure Transmitter (CR-094) PR 21146 (4286) Task 3510	A	IRWD	\$2,535.33						0				
23.3	Additional Aluminum Trench Grating in Digester Control Building (CR-107) PR 21146 (4286) Task 3520	A	IRWD	\$7,552.11						0				
23.4	Light Weight Concrete for Electrical Conduits Underneath the Solids Handling Building Electrical Room (CR-113) PR 21146 (4286) Task 3510	A	IRWD	\$30,535.94						0				
23.5	Adding Energyjets Weir Plates to Dewatering Centrifuges - (CR-124) PR 21146 (4286) Task 3520	A	IRWD	\$11,139.25						0				
23.6	Provide Angle Supports for the Removable Slabs at the Solids Handling Building - (CR-137) PR 21146 (4286) Task 3520	A	IRWD	\$20,671.61						0				
23.7	Structural Modification at Solids Handling Building - (CR-140) PR 21146 (4286) Task 3520	C	FBB	\$1,109.42						0				
23.8	Increase of Fiber Optic Conduit Size (CR-097) PR 21146 (4286) Task 3510	A	IRWD	\$5,516.43						0				
23.9	Steel Joist Framing Modifications at Digester Control Building (CR-151) PR 21146 (4286) Task 3505	C	FBB	\$2,286.29						0				
23.10	WAS Valve Vault and Piping Modifications (CR-100) PR 21146 (4286) Task 3520	A	IRWD	\$10,144.13						0				
24	Approved by General Manager Approved on March 6, 2015				\$99,122.95	\$2,510,834.31	\$2,609,957.26	1.60%	\$166,075,897.26	0	0	0	1,278	10/28/2016
24.1	Coating of WAS/Primary Sludge Pump Stations & Sludge Wetwells per RFI-0612A (CR-127) PR 21146 (4286) Task 3505	A	FBB	\$99,122.95						0				
25	Approved by Board of Directors Approved on March 23, 2015				\$280,575.97	\$2,609,957.26	\$2,890,533.23	1.77%	\$166,356,473.23	0	0	0	1,278	10/28/2016
25.1	Lightning Protection for the Methane Digesters (CR-121) PR 21146 (4286) Task 3505	C	FBB	\$158,259.68						0				
25.2	Deflagration Quench Tubes outside of the Dryer Room (CR-143) PR 21146 (4286) Task 3505	B	FBB	\$122,316.29						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Original Days: 1,278				Revised Completion Date
										Change Order Days	Previous Change Orders	Cum Total C.O. days	Revised Total Contract Days	
26	Approved by Exe Dir Of Engineering & Water Quality Approved on April 14, 2015				\$74,815.79	\$2,890,533.23	\$2,965,349.02	1.81%	\$166,431,289.02	0	0	0	1,278	10/28/2016
26.1	UPS and Power Fail Alarms per RFI 357 (CR-056) PR 21146 (4286) Task 3510	C	FBB	\$3,646.82						0				
26.2	I/O Points for Methane Digester Sump Pumps per RFI-356 (CR-077) PR 21146 (4286) Task 3510	C	FBB	\$6,489.00						0				
26.3	Loss of Power Alarms to the SCADA Network per RFI-0393B (CR-093) PR	A	FBB	\$20,297.16						0				
26.4	FOG Flushing and Rock Trap Modifications per RFI-0534 (CR-101) PR 21146	A	IRWD	\$18,093.61						0				
26.5	Install Grounding Pig Tails in Solids Handling Building Area Electrical Room per RFI 0594 (CR-105) PR 21146 (4286) Task 3510	A	IRWD	\$1,593.10						0				
26.6	Additional Pushbuttons, Light and Relays for the FOG Receiving Control Panel (CR-114) PR 21146 (4286) Task 3510	A	IRWD	\$6,892.40						0				
26.7	Changes to the HMI Enclosures at the Sludge Receiving Area (CR-133) PR 21146 (4286) Task 3510	A	IRWD	\$7,114.17						0				
26.8	Provide Storage Shelf for Keyboard and Mouse to the HMI Enclosures at the Sludge Receiving Area (CR-135) PR 21146 (4286) Task 3510	A	IRWD	\$1,163.26						0				
26.9	Dewatering Feed Pump Station Guardrail Additions (CR-142) PR 21146 (4286) Task 3520	C	FBB	\$4,204.00						0				
26.10	Additional I/O Points for PLC-4300 (CR-156) PR 21146 (4286) Task 3510	C	FBB	\$3,035.28						0				
26.11	Shoring Revision to Roof Slab of Dewatering Feed Pump Station (CR-189) PR 21146 (4286) Task 3510	B	FBB	\$1,286.99						0				
26.12	Coating of the Sludge Receiving Bins (CR-199) PR 21146 (4286) Task 3520	A	FBB	\$1,000.00						0				
27	Approved by Board of Directors Approved on April 27, 2015				\$107,253.26	\$2,965,349.02	\$3,072,602.28	1.88%	\$166,538,542.28	0	0	0	1,278	10/28/2016
27.1	Modifications to Human-Machine Interface (HMI) for the Microturbine Area (CR-078) PR 21146 (4286) Task 3510	A	IRWD	\$29,744.43						0				
27.2	Modifications to the Piping and Automation Features at Fats, Oils, and Grease (FOG) Facility (CR-129) PR 21146 (4286) Task 3510	A	IRWD	\$35,771.81						0				
27.3	Structural Support to the Monorail at the Dewatering Feed Pump Station (CR-152) PR 21146 (4286) Task 3505	C	FBB	\$13,697.51						0				
27.4	Two Additional Magnetic Flowmeters at Polymer Feed System (CR-158) PR 21146 (4286) Task 3510	A	IRWD	\$9,522.81						0				
27.5	Modifications to PLCs at Sludge Receiving Area (CR-180) PR 21146 (4286) Task 3510	A	IRWD	\$18,516.70						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filane/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
28	Approved by Exe. Dir. Of Eng. & Water Quality Approved on May 15, 2015				\$74,550.35	\$3,072,602.28	\$3,147,152.63	1.93%	\$166,613,092.63	0	0	0	1,278	10/28/2016
28.1	Decanter Control Panel Modifications (CR-215) Task 3520	C	FBB	\$22,451.01						0				
28.2	Additional Structural Support in the Solids Handling Building (CR-075) Task 3505	C	FBB	\$12,028.44						0				
28.3	Additional Sump Pump Drain Line in the Bulk Polymer Storage Area (CR-119) Task 3520	C	FBB	\$1,433.86						0				
28.4	Install Three 5-inch conduits on Southwest Side of the Biosolids Site (CR-120) Task 3510	C	FBB	\$16,033.58						0				
28.5	Provide Power to Several Instruments Located at the Solids Handling Building and Digester Control Building (CR-154) Task 3520	C	FBB	\$3,454.91						0				
28.6	Install Foam Separator Drain at Digester Control Building (CR-167) Task 3520	C	FBB	\$11,013.75						0				
28.7	Install Support for 14-inch Plug Valve at Centrate Treatment Wetwell (CR-197) Task 3520	C	FBB	\$1,715.20						0				
28.8	Trench Modifications at the Sludge Cake Load-Out Area of the Solids Handling Building (CR-123) Task 3505	C	FBB	\$6,419.60						0				
29	Approved by Board of Directors Approved on June 22, 2015				\$225,971.77	\$3,147,152.63	\$3,373,124.40	2.06%	\$166,839,064.40	0	0	0	1,278	10/28/2016
29.1	Foul Air Pipe Supports in the Solids Handling Building Basement (CR-106) PR 21146 (4286) Task 3520	C	FBB	\$119,937.87						0				
29.2	Secondary Circuit Breaker for Transformer T-14 (CR-185) PR 21146 (4286) Task 3510	A	IRWD	\$106,033.90						0				

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**MWRP Biosolids and Energy Recovery Facilities  
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Design Engineer: Black & Veatch

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				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C. O. days	Revised Total Contract Days	Revised Completion Date
30	Approved by Board of Directors Approved on July 27, 2015				(\$47,976.59)	\$3,373,124.40	\$3,325,147.81	2.03%	\$166,791,087.81	0	0	0	1,278	10/28/2016
30.1	Credit for Changing Storm Drain line from Ductile Iron to PVC (CR-042) PR 21146 (4286) Task 3520	A	IRWD		(\$1,890.92)					0				
30.2	Installation of Additional Digester Anchorage (CR-051B) PR21146 (4286) Task 3505	B	FBB		\$118,335.54					0				
30.3	Huber Screens I/O Modifications per RFI-0391 and RFI-0525A (CR-068) PR 21146 (4286) Task 3510	A	IRWD		\$12,579.20					0				
30.4	Credit for FBB's Portion of Partnering (CR-090) PR 21146 (4286) Task	E	FBB		(\$81,948.33)					0				
30.5	Deletion of Waterstops at Methane Digester Complex (CR-102) PR 21146 (4286) Task 3505	A	IRWD		(\$2,505.79)					0				
30.6	Deletion of Bid Item No 18.4 - Computers and Networking Hardware for the Control System (CR-138) PR 21146 (4286) Task 3510	A	IRWD		(\$200,000.00)					0				
30.7	Electrical and Gas Modifications (CR-146) PR 21146 (4286) Task 3510	C	IRWD		\$363,978.41					0				
30.8	Credit for Changing Heat Dryer Wet Material Mixer from A24 Steel to A36 Steel (CR-157) PR 21146 (4286) Task 3520	E	FBB		(\$2,392.66)					0				
30.9	Credit for Travel Cost of On-Site Inspection for Acid Phase Digester (CR-175) PR 21146 (4286) Task 3520	B	IRWD		(\$683.39)					0				
30.10	Heat Dryer I/O Modifications per RFI-0626 (CR-179) PR 21146 (4286) Task 3510	A	IRWD		\$11,191.41					0				
30.11	Decant Trough I/O Modifications per RFI-0979 (CR-202) PR 21146 (4286) Task 3510	A	IRWD		\$9,960.55					0				
30.12	Deletion of Interior Coating of Methane Digesters (CR-188) PR 21146 (4286) Task 3520	A	IRWD		(\$398,571.00)					0				
30.13	Piping Modifications and Addition of Carbon Canisters (CR-218) PR 21146 (4286) Task 3520	A	IRWD		\$88,076.01					0				
30.14	Pickling and Passivation of Sludge Mixers (CR-248) PR 21146 (4286) Task 3520	C	IRWD		\$73,997.23					0				
30.15	IRWD Costs Associated to Repairing the Pile and Installing Couplers (CR-139) PR 21146 (4286) Task 3505	E	FBB		(\$38,102.85)					0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filano/Balfour-Beatty  
Design Engineer: Black & Veatch

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				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
31	Approved by Exe Dir Of Eng. & Water Quality Approved on July 28, 2015				\$74,999.74	\$3,325,147.81	\$3,400,147.55	2.08%	\$166,866,087.55	0	0	0	1,278	10/28/2016
31.1	Provide Circuit and Breaker for Standby Generator in the Microturbine Area (CR-170) PR 21146 (4286) Task 3510	C	FBB	\$4,296.86						0				
31.2	Additional Pipe Support for 14-inch Air Line at the Centrate Facility (CR-226) PR 21146 (4286) Task 3520	C	FBB	\$893.78						0				
31.3	Addition of E-stops (CR-128) PR 21146 (4286) Task 3510	A	FBB	\$57,916.71						0				
31.4	Structural Support of Jib Crane at Dewatering Feed Pump Station Stairwell (CR-243) PR 21146 (4286) Task 3520	C	FBB	\$11,892.39						0				
32	Approved by Exe Dir Of Eng. & Water Quality Approved on August 31, 2015				\$74,682.96	\$3,400,147.55	\$3,474,830.51	2.13%	\$166,940,770.51	0	0	0	1,278	10/28/2016
32.1	Additional Conduits and Circuits for Fire Alarm in the Solids Handling Building	A	IRWD	\$21,637.57						0				
32.2	Additional Davit Bases at Centrate Treatment Facility (CR-111) PR 21146 (4286) Task 3520	A	IRWD	\$1,809.77						0				
32.3	Additional Fire Alarm Panel in Digester Control Building (CR-169) PR 21146 (4286) Task 3510	A	IRWD	\$25,153.79						0				
32.4	Modifications to FOG Sump Pumps Controls (CR-177) PR 21146 (4286) Task 3510	A	IRWD	\$5,690.83						0				
32.5	Additional Truck Load-out Conveyor Input and Output (CR-201) PR 21146 (4286) Task 3510	A	IRWD	\$2,220.12						0				
32.6	Additional Spare Conduits in the Microturbine Area (CR-229) PR 21146 (4286) Task 3510	A	FBB	\$14,602.41						0				
32.7	Conduits for Electrical Disconnect Switch for Roll-Up Doors of the Digester Control Building (CR-230) PR 21146 (4286) Task 3510	A	IRWD	\$3,568.47						0				
33	Approved by Executive Director of Engineering & Water Quality Approved on September 30, 2015				\$58,247.75	\$3,474,830.51	\$3,533,078.26	2.16%	\$166,999,018.26	0	0	0	-	1/0/1900
33.1	Realignment of 8-inch Reclaimed Water Line at Gate 2 (CR-225) PR 21146 (4286) Task 3520	B	FBB	\$24,017.48						0				
33.2	Additional Conduits and Wires for Lighting Circuits to Minimize Voltage Drop (CR-228) PR 21146 (4286) Task 3510	C	IRWD	\$32,399.41						0				
33.3	Cable and Conduit Changes at Solids Handling Building and Dewatering Feed Pump Station (CR-231) PR 21146 (4286) Task 3510	C	IRWD	\$1,830.86						0				

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B - 11

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
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				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
34	Approved by Board of Directors Approved on October 26, 2015				\$164,775.28	\$3,533,078.26	\$3,697,853.54	2.26%	\$167,163,793.54	0	0	0	1,278	10/28/2016
34.1	Credit for Third Submittal Review Through 05/31/2015 (CR-088) PR 21146 (4286) Task 1065	B	IRWD	(\$39,502.50)						0				
34.2	Credit for Overtime Inspection Hours Through 05/31/2015 (CR-089) PR 21146 (4286) Task 3520	F	FBB	(\$80,850.00)						0				
34.3	Credit for Special Inspections for Structural Anchors and Geotechnical Investigation (CR-295) PR 21146 (4286) Task 1065	A	IRWD	(\$27,500.00)						0				
34.4	Change in Knife Gate Valve Manufacturer (CR-187) PR 21146 (4286) Task 3520	E	FBB	\$275,954.90						0				
34.5	Credit for Changes in Low Voltage SWGR-14 Circuit Breaker (CR-163) PR 21146 (4286) Task 3510	A	IRWD	(\$1,978.00)						0				
34.6	Change to Addressable Smoke Detectors (CR-220) PR 21146 (4286) Task 3510	B	IRWD	\$38,650.88						0				
35	Approved by General Manager Approved on November 25, 2015				\$97,980.57	\$3,697,853.54	\$3,795,834.11	2.32%	\$167,261,774.11	0	0	0	1,278	10/28/2016
35.1	Change in Naming Convention for Storm Water Pump Station (Area 1500) SCADA Programming (CR-181) PR 21146 (4286) Task 3510	E	FBB	\$9,027.03						0				
35.2	Valve Status Override Functionality (CR-182) PR 21146 (4286) Task 3510	E	FBB	\$38,999.08						0				
35.3	Control Changes for Primary Sludge and Waste Activated Pump Stations (Area 1900) SCADA Programming (CR-184) PR 21146 (4286) Task 3510	A	IRWD	\$36,772.78						0				
35.4	Motor Protection Relay (CR-239) PR 21146 (4286) Task 3510	A	IRWD	\$13,181.68						0				
36	Approved by General Manager Approved on December 3, 2015				\$86,007.50	\$3,795,834.11	\$3,881,841.61	2.37%	\$167,347,781.61	0	0	0	1,278	10/28/2016
36.1	Light Weight Concrete for Underslab Conduits at Microturbine Area (CR-253) PR 21146 (4286) Task 3510	A	FBB	\$21,117.50						0				
36.2	Outstanding CB&I Items (CR-099A) PR 21146 (4286) Task 3520 - This change order includes: CR-098 (Guard Rail at Biogas Storage Tank); CR-099 (Tube Steel Supports); additional Off-Site Storage Costs; and credit for Use of SS 308 in Lieu of SS 316L Welds	B	FBB	\$64,890.00						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
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Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
37	Approved by Exe Director of Engineering and Water Quality Approved on January 21, 2016				\$47,446.49	\$3,881,841.61	\$3,929,288.10	2.40%	\$167,395,228.10	0	0	0	1,278	10/28/2016
37.1	Additional Pressure Relief Valves in the Digester Control Building Slab (CR-112) PR 21146 (4286) Task 3520	C	IRWD	\$1,065.72						0				
37.2	Change Feeder Circuit Breaker Size in MCC-4102 (CR-165) PR 21146 (4286) Task 3510	C	IRWD	\$4,157.60						0				
37.3	Change Feeder Circuit Breaker Size for the Primary Sludge Pump Variable Frequency Drive (CR-233) PR 21146 (4286) Task 3510	C	IRWD	\$2,430.59						0				
37.4	SCADA Programming Changes Due to Change to Schweitzer Power Quality Additional Labeling of Parallel Conduits and Cables (CR-262) PR 21146 (4286) Task 3510	A	FBB	\$16,814.00						0				
37.5	Change in Sludge Receiving Entrance Beacon Operation CR-263 PR 21146 (4286) Task 3510	A	IRWD	\$5,382.19						0				
37.6	Anodize Aluminum Light Fixture Stanchions/Sun Shades (CR-283) PR 21146 (4286) Task 3510	A	IRWD	\$5,911.61						0				
37.7	Hot Tap 8-Inch ACP Potable Water Line (CR-311) PR 21146 (4286) Task 3520	A	FBB	\$3,274.78						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
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				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
38	Approved by General Manager Approved on February 29, 2016				\$83,345.07	\$3,929,288.10	\$4,012,633.17	2.45%	\$167,478,573.17	0	0	0	1,278	10/28/2016
38.1	Software Control Block Revision for Area 4300 - Dewatering (CR-211) PR 4286 Task 3510	C	FBB	\$18,908.76						0				
38.2	Revised Master List of SCADA Templates (CR-247) PR 4286 Task 3510	C	FBB	\$47,274.54						0				
38.3	Additional Overflow Alarms at Sludge Holding Tanks (CR-280) PR 4286 Task 3510	A	IRWD	\$9,654.54						0				
38.4	Leak Detection at Sulfuric Acid Facility (CR-290) PR 21146 (4286) Task 3510	A	IRWD	\$5,499.97						0				
38.5	Insulation for Acid Phase Gas Piping (CR-218A) PR 21146 (4286) Task 3520	A	IRWD	\$2,007.26						0				
39	Approved by General Manager Approved on March 7, 2016				\$98,006.46	\$4,012,633.17	\$4,110,639.63	2.51%	\$167,576,579.63	0	0	0	1,278	10/28/2016
39.1	SCE Installation - Final Accounting of Work Items Between Negotiated Change Order and Actual Work (CR-146E) PR 4286 Task 3510	B	FBB	\$7,809.51						0				
39.2	Installation of Southern California Gas (SCG) Boxes (CR-146F) PR 4286 Task 3510	A	FBB	\$3,479.81						0				
39.3	Schweitzer SEL-735 Power Monitors for Centrifuge Panels (CR-207) PR 4286 Task 3510	A	IRWD	\$34,274.40						0				
39.4	Hirschmann Ethernet Switches for Centrifuge Panels (CR-208) PR 4286 Task 3510	A	IRWD	\$9,569.15						0				
39.5	Addition of Sample Pump Variable Frequency Drives for Thickening Centrifuges (CR-237) PR 4286 Task 3520	E	IRWD	\$24,496.55						0				
39.6	Upgrade of Exit Signs and Ceiling Lights in the Gas Room of the Digester Control Building to NEC Class 1 Division 1 (CR-313) PR 4286 Task 352	A	IRWD	\$18,377.04						0				
40	Approved by General Manager Approved on April 20, 2016				\$97,287.05	\$4,110,639.63	\$4,207,926.68	2.57%	\$167,673,866.68	0	0	0	1,278	10/28/2016
40.1	Brace Plates in Solids Handling Building (CR-069) PR 4286 Task 3505	C	FBB	\$40,216.76						0				
40.2	Relocation of RIO-50 Panel (CR-186) PR 4286 Task 3510	B	FBB	\$4,818.64						0				
40.3	Addition of Two Doors at the bases of the stairways at Methane Digesters Nos 1 and No. 2 (CR-232) PR 4286 Task 3505	C	FBB	\$52,251.65						0				

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**MWRP Biosolids and Energy Recovery Facilities  
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Design Engineer: Black & Veatch

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				Original Contract Amount: <b>\$163,465,940.00</b>						Original Days: 1,278				10/28/2016
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41	Approved By Board of Directors Approved on May 23, 2016				\$1,103,650.56	\$4,207,926.68	\$5,311,577.24	3.25%	\$168,777,517.24	0	0	0	1,278	10/28/2016
41 1	Additional SCE and SCG Modifications (CR-146A) PR 4286 Task 3510	B	FBB	\$51,238.69						0				
41 2	Additional Potholing Due to SCE and SCG Realignment (CR-146B) PR 4286 Task 3510	B	FBB	\$36,706.57						0				
41 3	Additional Cameras at the Unloading/Loading Area of the Solids Handling Facility (CR-164) PR 4286 Task 3505	A	IRWD	\$61,731.96						0				
41 4	Fire Sprinkler System Modifications – Mechanical (CR-174) PR 4286 Task 3520	B	IRWD	\$154,592.08						0				
41 5	Fire Sprinkler System Modifications – Electrical (CR-166) PR 4286 Task 3510	B	IRWD	\$13,730.06						0				
41 6	Fiber Optic System Modifications (CR-172/CR-306/CR-314) PR 4286 Task 3510	A	IRWD	\$178,879.46						0				
41 7	T-15, T-16, and T-17 Secondary Breakers (CR-185A, CR-185B, and CR-185C) PR 4286 Task 3510	A	IRWD	\$254,941.66						0				
41 8	Cable and Conduit Changes at the Sludge Receiving Area of the Solids Handling Building (CR-203) PR 4286 Task 3510	C	FBB	\$14,338.94						0				
41 9	Concrete Surface Treatment (CR-222) PR 4286 Task 3505	A	IRWD	\$68,714.34						0				
41 1	Heating Water Boiler Control Modifications (CR-246) PR 4286 Task 3510	A	IRWD	\$71,379.00						0				
41 11	SCADA Control Modifications for the Acid Phase Digesters, Methane Digesters, and Sludge Holding Tank (CR-252) PR 4286 Task 3510	A	IRWD	\$50,540.23						0				
41 12	Ambient Gas Analyzer Wiring Modification (CR-264) PR 4286 Task 3510	B	IRWD	\$19,734.51						0				
41 13	Disconnect Switches for Flow Valves in the Solids Handling Building (CR-272) PR 4286 Task 3510	C	IRWD	\$25,550.26						0				
41 14	Centrifuge Pedestal Modifications (CR-301) PR 4286 Task 3505	C	IRWD	\$30,603.14						0				
41 15	SCADA, Instrumentation, and Electrical Modifications (CR-287, CR-294, and CR-322) PR 4286 Task 3510	A	IRWD	\$70,969.66						0				

- A - District Convenience/Initiation - Project Related
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- F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	10/28/2016
42	Approved By Board of Directors Approved on May 23, 2016				(\$199,771.09)	\$5,311,577.24	\$5,111,806.15	3.13%	\$168,577,746.15	0	0	0	1,278	10/28/2016
42.1	Value Engineering of Chemical Pump Systems (CR-054) PR 4286 Task 3520	E	FBB		(\$48,549.90)					0				
42.2	Change in Lightning Protection Installation for Egg-Shaped Digesters (CR-121A) PR 4286 Task 3510	E	FBB		(\$97,141.74)					0				
42.3	Deletion of Seal Water Stations and Seal Water Piping (CR-214) PR 4286 Task 3520	A	IRWD		(\$10,557.28)					0				
42.4	Deletion of Low Pressure Switches for Centrate Pumps (CR-257) PR 4286 Task 3510	A	IRWD		(\$1,748.17)					0				
42.5	Centrifuge Seismic Restraint Design Costs (CR-345) PR 4286 Task 1065	A	IRWD		(\$24,064.00)					0				
42.6	Credit for Overtime Inspection Hours From 6/1/2015 to Through 12/31/2015 (CR-089B) PR 4286 Task 1065	F	FBB		(\$17,710.00)					0				
43	Approved by Exe Director of Engineering and Water Quality Approved on May 31, 2016				\$74,731.69	\$5,111,806.15	\$5,186,537.84	3.17%	\$168,652,477.84	0	0	0	1,278	10/28/2016
43.1	Combustible Gas Detection System (CR-234) PR 21146 (4286) Task 3510	E	FBB		\$18,843.39					0				
43.2	Additional Wires and Cables Between MCC-4102 and PLC-4000 (CR-278) PR 21146 (4286) Task 3510	C	FBB		\$1,775.13					0				
43.3	SCADA Programming Modifications (CR-282) PR 21146 (4286) Task 3510	E	FBB		\$49,679.02					0				
43.4	Change of Waste Gas Burner Feeder Circuit Breaker (CR-344) PR 21146 (4286) Task 3510	B	FBB		\$4,434.15					0				
44	Approved by Exe Director of Engineering and Water Quality Approved on June 29, 2016				\$74,912.99	\$5,186,537.84	\$5,261,450.83	3.22%	\$168,727,390.83	0	0	0	1,278	10/28/2016
44.1	Electrical and Telephone Modifications for Elevators for Solids Handling Building and Digester Control Building (CR-037A) PR 4286 Task 3510	C	FBB		\$38,882.06					0				
44.2	Odor Control Recirculation Pump Selector Switch SCADA Modifications (CR-343) PR 4286 Task 3510	A	IRWD		\$9,294.71					0				
44.3	SCADA Valve Matrix Tables Animation Clarification for Milestone 1 (CR-353) PR 4286 Task 3510	A	IRWD		\$9,195.86					0				
44.4	PLC Status Object Update (CR-234) PR 4286 Task 3510	B	FBB		\$4,783.14					0				
44.5	Elevator Safety Beam in the Digester Control Building (CR-302) PR 4286 Task 3505	C	FBB		\$3,830.95					0				
44.6	Masonry Changes to the North Retaining Wall (CR-365) PR 4286 Task 3505	B	IRWD		\$8,926.27					0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
45	Approved by Board of Directors Approved on July 25, 2016/December 20, 2016 45.1 Recovery Plan PR 4286 Task 3510	B	FBB	\$9,250,000.00	\$9,250,000.00	\$5,261,450.83	\$14,511,450.83	8.88%	\$177,977,390.83	368	0	368	1,646	10/31/2017
46	Approved by General Manager Approved on January 27, 2017 46.1 Additional Masonry Anchor in the Solids Handling Building (CR-200) PR 4286 46.2 Additional Auto Dialer (CR-234A) PR 4286 Task 3510 46.3 Grating and Handrail Modifications at Bulk Polymer Storage Platform (CR-300) PR 4286 Task 3505 46.4 SCADA IP Address Update (CR-309) PR 4286 Task 3510 46.5 Masonry Modifications at Solids Handling Building Stairwell (CR-324) PR 4286 Task 3505 46.6 Change in Valve Operator at the Centrate Treatment Facility (CR-329) PR 4286 Task 3520 46.7 Boot Wash Landing Addition (CR-349) PR 4286 Task 3505 46.8 Updating Valve Analog SCADA Template (CR-354) PR 4286 Task 3510 46.9 Additional Light Fixtures and Lamps (CR-355A) PR 4286 Task 3510 46.10 Addition of Rebate Angle in the FOG Unloading Sump Area (CR-363) PR 4286 Task 3505 46.11 MCC-4103 Hot Water Circulation Pump Breakers Change (CR-366) PR 4286 Task 3510 46.12 MCC-4100/4101 Cake Transfer Pump Breakers Change (CR-370) PR 4286 Task 3510 46.13 MCC-4102 Breaker Change (CR-374) PR 4286 Task 3510 46.14 SCADA Programming Modifications During Benchtest No 1 for Areas 1900 and 2000 (CR-376) PR 4286 Task 3510 46.15 Additional Light Fixture Above Door in Digester Control Building Gas Room (CR-399) PR 4286 Task 3510 46.16 Change in Size of Disconnect Switches for Digested Sludge Mixers (CR-408) PR 4286 Task 3510 46.17 Additional Thickening Feed Grinder Control Panel Circuits (CR-438) PR 4286 Task 3510 46.18 Thickness and Glazing Change for Windows (CR-438) PR 4286 Task 3510	C	IRWD	\$1,457.22	\$94,696.76	\$14,511,450.83	\$14,606,147.59	8.94%	\$178,072,087.59	0	368	368	1,646	10/31/2017
		A	IRWD	\$6,081.90						0				
		A	IRWD	\$5,568.83						0				
		A	IRWD	\$1,227.96						0				
		C	FBB	\$5,939.45						0				
		A	IRWD	\$4,824.29						0				
		C	FBB	\$1,834.60						0				
		A	IRWD	\$692.72						0				
		A	IRWD	\$8,508.46						0				
		A	IRWD	\$763.62						0				
		B	IRWD	\$2,316.03						0				
		B	IRWD	\$23,720.61						0				
		B	IRWD	\$2,316.03						0				
		A	IRWD	\$24,092.32						0				
		A	IRWD	\$1,478.19						0				
		B	FBB	\$1,290.10						0				
		B	IRWD	\$1,286.63						0				
		C	IRWD	\$1,297.80						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Original Days: 1,278				10/28/2016
										Change Order Days	Previous Change Orders	Cum Total C.O. days	Revised Total Contract Days	Revised Completion Date
47	Approved by General Manager Approved on February 28, 2017				\$96,414.36	\$14,606,147.59	\$14,702,561.95	8.99%	\$178,168,501.95	0	368	368	1,646	10/31/2017
47.1	Relocation of Neutralization Tank Drainage Piping PR 4286 Task 3520	B	FBB	\$2,312.08						0				
47.2	Modifications to Digester Control Building Door and Piping Due to Heating Water Expansion Tank Pad Adjustment (CR-221) PR 4286 Task 3505	C	FBB	\$5,500.74						0				
47.3	PLC-3100 Changes (CR-284) PR 4286 Task 3510	C	FBB	\$1,070.38						0				
47.4	Additional Angle Support to Acid Phase Digester Bridges (CR-298) PR 4286 Task 3505	C	FBB	\$4,986.21						0				
47.5	Additional Potable Water Gate Valves (CR-332) PR 4286 Task 3520	A	IRWD	\$3,892.44						0				
47.6	T-4 Kirk Key Interlock Installation (CR-335) PR 4286 Task 3510	B	IRWD	\$6,924.69						0				
47.7	Solids Handling Building Dumpster Room Channel Frames Modifications (CR-338) PR 4286 Task 3505	C	FBB	\$5,093.87						0				
47.8	PCS Server Configuration Clarification (CR-352) PR 4286 Task 3510	A	IRWD	\$6,824.35						0				
47.9	Additional Anchorage Support for Ledgers of the Digester Control Building Roof (CR-361) PR 4286 Task 3505	C	FBB	\$13,794.95						0				
47.10	Change of MCC-4103 Hot Water Circulation Pump Breakers (CR-366B) PR 4286 Task 3510	A	IRWD	\$1,336.13						0				
47.11	Centrate Treatment Facility Pull Boxes Duct Bank Settlement (CR-383) PR 4286 Task 3510	B	FBB	\$3,300.13						0				
47.12	Modifications to the MCC-4100/4101/4102/4103 (CR-405) PR 4286 Task 3510	B	FBB	\$7,418.52						0				
47.13	Cake Storage Hopper Modifications (CR-421) PR 4286 Task 3510	C	FBB	\$2,250.67						0				
47.14	Removing Installed Lighting in the Solids Handling Building (CR-427) PR 4286 Task 3510	A	IRWD	\$8,947.37						0				
47.15	Electrical Changes for Generator MPC (CR-430) PR 4286 Task 3510	A	IRWD	\$10,950.14						0				
47.16	Electrical Modifications to MCC-4100 and 4103 (CR-431) PR 4286 Task 3510	A	FBB	\$4,500.00						0				
47.17	Occupancy Sensors in the Solids Handling Building Shower Areas (CR-444) PR 4286 Task 3510	C	FBB	\$1,601.36						0				
47.18	Digester Gas Pre-Treatment In-Slab Conduit Size Change (CR-454) PR 4286 Task 3510	C	FBB	\$5,710.33						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
48	Approved by Board of Directors Approved on March 13, 2017				\$728,237.74	\$14,702,561.95	\$15,430,799.69	9.44%	\$178,896,739.69	0	368	368	1,646	10/31/2017
48.1	Structural Modifications of the Elevator Shafts (CR-037) PR 4286 Task 3505200) PR 4286 Task 3505	B	FBB	\$58,705.90						0				
48.2	SCADA Programming Update of Polymer Feed and Storage System (CR-148A) PR 4286 Task 3510	A	FBB	\$23,685.14						0				
48.3	Stairs and Platform at SHB Load-Out Area (CR-149) PR 4286 Task 3505	C	FBB	\$39,622.65						0				
48.4	Additional Polymer Dilution Flow Meters and Associated Conduits and Cables (CR-159B) PR 4286 Task 3510	A	IRWD	\$38,978.70						0				
48.5	Miscellaneous Andritz Items (CR-205) PR 4286 Task 3520	A	IRWD	\$41,246.71						0				
48.6	RIO-4001 Changes (CR-286) PR 4286 Task 3510	A	IRWD	\$27,889.74						0				
48.7	RIO-3102 Changes (CR-310) PR 4286 Task 3510	A	IRWD	\$18,280.62						0				
48.8	Mini Power Center - Additional Outlet and Data Locations in the SHB (CR-419) PR 4286 Task 3510	A	IRWD	\$13,261.60						0				
48.9	New Lighting in the SHB First Floor Area (CR-427A) PR 4286 Task 3510	A	IRWD	\$102,503.46						0				
48.10	Additional Conduits and Cables for Thermocouples for Several Pumps (CR-424, CR-424A through CR-424F) PR 4286 Task 3510	B	FBB	\$54,982.68						0				
48.11	Additional Wall Panel Framework at the SHB (CR-445) PR 4286 Task 3505	C	FBB	\$128,000.00						0				
48.12	Changes in Uninterruptible Power Supply Units (CR-162/CR-162A) PR 4286 Task 3510	A	IRWD	\$128,052.94						0				
48.13	Addition of Circuit Breaker at Transformer T-14 (CR-474) PR 4286 Task 3510	A	IRWD	\$53,027.60						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,948.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
49	Approved by Board of Directors Approved on March 13, 2017				(\$47,099.20)	\$15,430,799.69	\$15,383,700.49	9.41%	\$178,849,640.49	0	368	368	1,646	10/31/2017
49.1	Related Mechanical Piping Modifications Due to Change in Chemical Pumps in CCO No 42 (CR-054A) PR 4286 Task 3520	E	FBB	(\$23,897.73)						0				
49.2	Changing the Solids Handling Building Roofing from EPDM to PVC (CR-255) PR 4286 Task 3505	E	FBB	(\$9,000.00)						0				
49.3	Net Reduction of Scope of Work in CR-353 – SCADA Valve Matrix Tables Animation Clarifications (CR-353B/353C) PR 4286 Task 3510	A	IRWD	(\$4,429.09)						0				
49.4	Change in Starters for MCC-4100/4101 Cake Transfer Pump Breakers (CR-370A) PR 4286 Task 3510	A	IRWD	(\$4,047.43)						0				
49.5	Deletion of Insulation for the Solids Handling Building Foundation (CR-393) PR 4286 Task 3505	A	IRWD	(\$5,724.95)						0				
50	Approved by Executive Director of Engineering & Water Quality Approved on March 31, 2017				\$72,150.89	\$15,383,700.49	\$15,455,851.38	9.46%	\$178,921,791.38	0	368	368	1,646	10/31/2017
50.1	Electrical Modifications to FOG Local Control Panel 70-LCP-0710 (CR-304) PR 4286 Task 5.30	A	IRWD	\$6,614.77						0				
50.2	Condensate Modifications at Digester Gas Pre-Treatment Area (CR-312) PR 4286 Task 5.31	C	FBB	\$9,826.09						0				
50.3	Installation of Lindapters Instead of Eye Bolts (CR-413) PR 4286 Task 5.29	A	FBB	\$13,346.01						0				
50.4	T-5 Connection to Biosolids Switch-14 (CR-480) PR 4286 Task 5.30	A	IRWD	\$35,170.26						0				
50.5	Polymer Feeder Blender Skids Flow Element Grounding Conductor (CR-482) PR 4286 Task 5.30	C	IRWD	\$7,193.76						0				
51	Approved by Executive Director of Engineering & Water Quality Approved on March 31, 2017				(\$126,390.00)	\$15,455,851.38	\$15,329,461.38	9.38%	\$178,795,401.38	0	368	368	1,646	10/31/2017
51.1	Credit for Overtime Inspection Hours From 1/1/2016 to Through 12/31/2016 (CR-089C) PR 4286 Task 4.0	F	IRWD	(\$97,570.00)						0				
51.2	Credit for Overtime Inspection Hours From 1/1/2017 to Through 03/31/2017 (CR-089D) PR 4286 Task 4.0	E	IRWD	(\$28,820.00)						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filano/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Original Days:				10/28/2016
										Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	1,278
52	Approved by General Manager Approved on April 28, 2017				\$98,342.16	\$15,329,461.38	\$15,427,803.54	9.44%	\$178,893,743.54	0	368	368	1,646	10/31/2017
52.1	Removal of Unsuitable Alluvium (CR-146H) PR 4286 Task 5.29	B	FBB	\$3,564.32						0				
52.2	Polymer Dilution Water Flowmeters (CR-159A) PR 4286 Task 5.31	A	IRWD	\$14,090.39						0				
52.3	Aluminum Handrail and Guardrail Modifications at Liquid Chemical and Polymer Areas (CR-171) PR 4286 Task 5.30	A	IRWD	\$13,765.20						0				
52.4	Modifications Due to Solids Handling Building Electrical Room Equipment Clearance Issues (CR-196) PR 4286 Task 5.30	C	FBB	\$9,382.01						0				
52.5	Data and Telephone Outlets in Solids Handling Building (CR-261) PR 4286 Task 5.30	A	IRWD	\$27,620.21						0				
52.6	HVAC Duct Modifications in Dewatering Feed Pump Station (CR-268) PR 4286 Task 5.31	C	FBB	\$16,023.50						0				
52.7	Coating of 8 Roll-up doors (CR-358) PR 4286 Task 5.29	A	IRWD	\$5,710.32						0				
52.8	Upsizing Wire Size of Dewatering Feed Pump Station Main Breaker Light Panel LP-3501 (CR-390) PR 4286 Task 5.30	A	IRWD	\$1,449.75						0				
52.9	Modifications to the Roofs of the Solids Handling Building and Digester Control Building (CR-528) PR 4286 Task 5.29	A	IRWD	\$6,736.46						0				
53	Exe Director of Water Quality and Engineering Approved on June 5, 2017				\$42,281.96	\$15,427,803.54	\$15,470,085.50	9.46%	\$178,936,025.50	0	368	368	1,646	10/31/2017
53.1	Modifications to Regenerative Thermal Oxidizer (RTO) Drainage and Utility Water Piping (CR-267) PR 4286 Task 5.31	C	IRWD	\$33,814.80						0				
53.2	Modifications to Liquid Chemical Feed Control Panel Wiring (CR-396) per RF1-1602 PR 4286 Task 5.30	C	FBB	\$8,467.16						0				
54	Approved by General Manager Approved on June 19, 2017				\$44,210.51	\$15,470,085.50	\$15,514,296.01	9.49%	\$178,980,236.01	0	368	368	1,646	10/31/2017
54.1	Modifications to Thickening and Dewatering Platforms (CR-195) PR 4286 Task 5.29	C	FBB	\$44,210.51						0				
55	Approved by General Manager Approved on July 3, 2017				\$94,352.43	\$15,514,296.01	\$15,608,648.44	9.55%	\$179,074,588.44	0	368	368	1,646	10/31/2017
55.1	Additional Pipe Supports of 54-Inch Fiberglass Reinforced Air Duct (CR-106A) PR 4286 Task 5.29	C	FBB	\$14,211.18						0				
55.2	Natural Gas Step Down Manifolds and Gas Transition Piping (CR-146G) PR	B	IRWD	\$20,489.32						0				
55.3	Modifications to the West End Stair Landing of the Solids Handling Building (CR-315) PR 4286 Task 5.29	B	IRWD	\$5,622.11						0				

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B - 21

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filane/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
55.4	Regenerative Thermal Oxidizer (RTO) Pad Modifications (CR-400) PR 4286 Task 5.29	C	FBB	\$8,471.16						0				
55.5	Addition of Thin Client at the Dryer Facility (CR-485) PR 4286 Task 5.30	A	IRWD	\$36,874.10						0				
55.6	Change in Size to 2 Check Valves in the Digester Control Building (CR-514) PR 4286 Task 5.31	C	FBB	\$8,684.56						0				
56	Approved by Board Approved on July 24, 2017				\$201,744.33	\$15,608,648.44	\$15,810,392.77	9.67%	\$179,276,332.77	0	368	368	1,646	10/31/2017
56.1	Addition Of Stairs and Platform to RTO (CR-266) PR 4286 Task 5.29	A	IRWD	\$101,744.33						0				
56.2	Microturbine CLC (ESC Capstone) per RFI 1141 (CR-277) PR 4286 Task 5.30	B	FBB	\$100,000.00						0				
57	Approved by General Manager Approval on August 5, 2017				\$98,886.90	\$15,810,392.77	\$15,909,279.67	9.73%	\$179,375,219.67	0	368	368	1,646	10/31/2017
57.1	Additional Support at Digester Control Building (CR-342) PR 04286 Task 5.29	C	IRWD	\$2,522.47						0				
57.2	Pipe and Duct Hanger Modifications (CR-362) PR 04286 Task 5.29	C	IRWD	\$4,083.12						0				
57.3	Increase Wire Size of Main Breaker PP-3501 (CR-418) PR 04286 Task 5.30	C	FBB	\$696.66						0				
57.4	Roof Vent at DCB Elevator/Stair Tower (CR-437) PR 04286 Task 5.29	B	IRWD	\$8,563.72						0				
57.5	T-14 Fixed Type Manual Operator per Submittal 16443-0016A (CR-540) PR 04286 Task 5.31	C	IRWD	\$1,945.62						0				
57.6	Area Classification at Methane Digesters to meet NFPA Table 6.2(a) - Plug Valves Limit Switches (CR-557) PR 04286 Task 5.30	C	FBB	\$64,195.15						0				
57.7	Area Classification at Methane Digesters to meet NFPA Table 6.2(a) - Sump Pump Cable Retrofit PR 04286 Task 5.30	C	FBB	\$16,880.16						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Original Days:			1,278	10/28/2016
										Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
58	Approved by Board of Directors Approval on August 28, 2017				\$182,938.94	\$15,909,279.67	\$16,092,218.61	9.84%	\$179,558,158.61	0	368	368	1,646	10/31/2017
58.1	Concrete Cap over Shallow Pipe Crossings (CR-348) PR 04286 Task 5.3.1	B	FBB	\$7,923.00						0				
58.2	Additional Conduit and Wiring for Sludge Screen Moisture Sensors (CR-381) PR 04286 Task 5.3.0	C	FBB	\$8,355.32						0				
58.3	SCADA Programming Modifications (CR-433/476/546/547/551) PR 04286 Task 5.3.0	A	IRWD	\$15,758.38						0				
58.4	Polymer Storage Power Panels Wire and Breaker Modifications (CR-456) PR 04286 Task 5.3.0	C	FBB	\$24,238.65						0				
58.5	Odor Control Starter Modifications (CR-466) PR 04286 Task 5.3.0	B	FBB	\$41,436.09						0				
58.6	Odor Control Fan Remote Temperature Device Revisions (CR-522) PR 04286 Task 5.3.0	A	IRWD	\$52,484.50						0				
58.7	Re-location of Digester Control Building Gas Room Local Control Panels (CR-534) PR 04286 Task 5.3.0	A	FBB	\$32,743.00						0				
59	Approved by Exe Director of Water Quality and Engineering Approval on September 6, 2017				\$98,988.68	\$16,092,218.61	\$16,191,207.29	9.90%	\$179,657,147.29	0	368	368	1,646	10/31/2017
59.1	Modifications to Building 101 (CR-212) PR 04286 Task 5.3.0	E	FBB	\$26,500.00						0				
59.2	Change in Conduit Size in Area 20 (CR-292) PR 04286 Task 5.1.0	C	FBB	\$1,946.70						0				
59.3	Centrifuge Discharge Cake Conveyors Schematic Modifications (CR-422) PR 04286 Task 5.1.0	C	FBB	\$6,410.04						0				
59.4	Power Monitor Programming Modifications (CR-539) PR 04286 Task 5.1.0	A	IRWD	\$2,595.60						0				
59.5	SCADA Programming Modifications (CR-547A) PR 04286 Task 5.1.0	A	IRWD	\$1,574.86						0				
59.6	Change in Area Classification at Methane Digesters to meet NFPA Standards - MOVs (CR-557B) PR 04286 Task 5.1.0	C	FBB	\$54,736.73						0				
59.7	FOG Heating Disconnect Switch Relocation (CR-559) PR 04286 Task 5.1.0	C	FBB	\$5,224.75						0				
60	Approved by Exe Director of Water Quality and Engineering Approval on September 5, 2017				(\$34,540.00)	\$16,191,207.29	\$16,156,667.29	9.88%	\$179,622,607.29	0	368	368	1,646	10/31/2017
60.1	Credit for Overtime Inspection Hours From 4/1/2017 Through 6/30/2017 (CR-089E) PR 04286 Task 4.0	F	FBB	(\$34,540.00)						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C.O. days	Revised Total Contract Days	Revised Completion Date
61	Approved by Exe Director of Water Quality and Engineering Approved on September 6, 2017 61.1 Credit for Bulk Polymer Storage Changes per RFI-0863 and Submittal 15140-013B (CR-168) PR 04286 Task 5 16	E	FBB	(\$1,752.39)	(\$1,752.39)	\$16,156,667.29	\$16,154,914.90	9.88%	\$179,620,854.90	0	368	368	1,646	10/31/2017
62	Approved by Board of Directors Approved on October 9, 2017 62.1 Fats, Oil, and Grease (FOG) Modifications (CR-223A) PR 04286 Task 5 30 62.2 Density Meter Conduit and Cabling Modifications (CR-326) PR 04286 Task 5 30 62.3 Fiber Optic Modifications (CR-356) PR 04286 Task 5 30 62.4 Sludge Screen Pneumatic Control Panel Conduit and Cabling (CR-380) PR 04286 Task 5 30 62.5 Additional Circuits for Control of the Thickening Centrifuges (CR-386) PR 04286 Task 5 30 62.6 Upsize of Power Panel PP-8001 Circuit Breaker (CR-414) PR 04286 Task 5 30 62.7 Electrical Power Feeders to Electric Water Heater (CR-426) PR 04286 Task 5 30 62.8 Chemical Sump Pump Control Panel Space Heater Wiring Modifications (CR-461) PR 04286 Task 5 30 62.9 Relocate Electrical Feeders to Generator Bus (CR-462) PR 04286 Task 5 30 62.10 Electrical and Instrumentation Related Components for the Installation of Thin Client at Dryer Facility (CR-485A) PR 04286 Task 5 30 62.11 Polymer Room Eye Wash Station Flow Switches (CR-535) PR 04286 Task 5 30 62.12 Chemical Storage and Feed Modifications (CR-563) PR 04286 Task 5 30 62.13 PLC Redundancy Hot Standby Status Register (CR-568) PR 04286 Task 5 30	A	IRWD	\$52,174.90	\$708,162.72	\$16,154,914.90	\$16,863,077.62	10.32%	\$180,329,017.62	0	368	368	1,646	10/31/2017

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C.O. days	Revised Total Contract Days	Revised Completion Date
63	Approved by General Manager Approved on October 2, 2017				\$91,766.09	\$16,863,077.62	\$16,954,843.71	10.37%	\$180,420,783.71	0	368	368	1,646	10/31/2017
63.1	Electrical Modifications to RIO-2001 (CR-269) PR 04286 Task 5.30	C	IRWD	\$30,563.48						0				
63.2	Modifications to RIO-4002 (CR-285) PR 04286 Task 5.30	C	FBB	\$14,563.39						0				
63.3	Cap for 12-Inch Storm Drain (CR-351) PR 04286 Task 5.16	B	FBB	\$2,394.54						0				
63.4	Access Hatch for Regenerative Thermal Oxidizer Pipe Chase (CR-473) PR 04286 Task 5.31	C	FBB	\$3,958.91						0				
63.5	Electrical Upgrades to RIO-4002 (CR-447) PR 04286 Task 5.30	A	FBB	\$40,285.77						0				
64	Approved by Board of Directors Approved on October 23, 2017				\$231,100.22	\$16,954,843.71	\$17,185,943.93	10.51%	\$180,651,883.93	0	368	368	1,646	10/31/2017
64.1	Modifications to Centrate Treatment Facility Stairs (CR-379) PR 04286 Task 5.29	B	FBB	\$9,758.16						0				
64.2	Modifications to Ductwork in Solids Handling Building (CR-401) PR 04286 Task 5.31	C	FBB	\$9,537.05						0				
64.3	Electrical Conduits and Wires for Additional Bridge Breakers for Cake Receiving Pumps (CR-416) PR 04286 Task 5.30	B	FBB	\$21,678.83						0				
64.4	Handrail Modifications at the Methane Digesters (CR-472) PR 04286 Task 5.29	B	FBB	\$22,154.53						0				
64.5	Electrical and Instrumentation Related Components for the Installation of Thin Client at Dryer Facility (CR-485B) PR 04286 Task 5.30	A	IRWD	\$53,090.84						0				
64.6	Electrical Modifications at the Motor Control Centers for the Acid Phase Sludge Heating Recirculation Pumps (CR-517) PR 04286 Task 5.30	A	IRWD	\$47,611.11						0				
64.7	FOG Receiving Pumps Thermocouple and Thermostat Wiring (CR-525) PR 04286 Task 5.30	C	FBB	\$37,826.58						0				
64.8	SCADA Programming Changes (CR-537/570/573/573A) PR 04286 Task 5.30	A	IRWD	\$23,694.13						0				
64.9	Change of Limit Switches for Buried Service (CR-560) PR 04286 Task 5.30	C	FBB	\$5,748.99						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filane/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:	
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	10/28/2016	
65	Approved by Board of Directors Approved on October 23, 2017				\$149,591.14	\$17,185,943.93	\$17,335,535.07	10.60%	\$180,801,475.07	0	368	368	1,646	10/31/2017	
65.1	Additional Conduits and Wires for the Engine Generator, Switchgear-16, and Switchgear-16 Programmable Logic Controller (CR-204) PR 04286 Task 5.30	C	FBB	\$100,000.00						0					
65.2	Modifications to Spirac Conveyor in the Solids Handling Building (CR-409) PR 04286 Task 5.31	B	FBB	\$13,641.00						0					
65.3	Additional Metal Bridge Walkway Structural Support Angles (CR-420) PR 04286 Task 5.29	B	FBB	\$35,950.14						0					
66	Approved by General Manager Approved on November 30, 2017				\$98,201.20	\$17,335,535.07	\$17,433,736.27	10.67%	\$180,899,676.27	0	368	368	1,646	10/31/2017	
66.1	SCADA Programming Modifications and Updates (CR-247A/CR-469/CR-485C/CR-571/CR-575A/CR-579/CR-580/CR-585) PR 04286 Task 5.30	A	IRWD	\$61,734.78						0					
66.2	Installation of Sump Pump Floats (CR-452) PR 04286 Task 5.31	A	IRWD	\$17,228.56						0					
66.3	Electrical Work Associated with Air Handling/Heating Units, Recycle Bin Feed Conveyor, and Recycle Bucket Elevator in the Solids Handling Building (CR-457/CR-529) PR 04286 Task 5.30	B	IRWD	\$11,003.85						0					
66.4	Additional Wires and Conduits for FOG Receiving Valves (CR-565) PR 04286 Task 5.30	B	FBB	\$6,368.21						0					
66.5	Additional Door Cover Plates for MCC-4100 and MCC-4101	B	IRWD	\$1,865.80						0					
67	Approved by Exec Dir of Engineering and Water Quality Approved on November 30, 2017				(\$53,626.83)	\$17,433,736.27	\$17,380,109.44	10.63%	\$180,846,049.44	0	368	368	1,646	10/31/2017	
67.1	Credit for Overtime Inspection Hours from 07/1/2017 to 09/30/2017 (CR-089F) PR 04286 Task 4.0	F	FBB	(\$19,140.00)						0					
67.2	Credit for Additional Conduits and Wires for the Engine Generator, Switchgear-16, and Switchgear-16 Programmable Logic Controller (CR-204A) PR 04286 Task 5.30	E	FBB	(\$13,591.83)						0					
67.3	Deletion of Pavement Prime Coat (CR-331D) PR 04286 Task 5.29	A	IRWD	(\$20,895.00)						0					

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filano/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O. days	Revised Total Contract Days	Revised Completion Date
68	Approved by Board of Directors Approved on December 11, 2017				\$569,553.19	\$17,380,109.44	\$17,949,662.63	10.98%	\$181,415,602.63	0	368	368	1,646	10/31/2017
68.1	Fats, Oil, and Grease (FOG) Modifications (CR-223) PR 04286 Task 5.30	A	IRWD	\$83,648.47						0				
68.2	Additional Electrical Outlets and Circuits in the Solids Handling Building (CR-453) PR 04286 Task 5.30	A	IRWD	\$44,054.83						0				
68.3	Control Panel Modifications in the Methane Digester Complex (CR-545) PR 04286 Task 5.30	C	IRWD	\$55,414.03						0				
68.4	Additional Electrical, Instrumentation, and Controls for the Heat Dryer System (CR-270 and CR-471A through CR-471G, CR-496, and CR-555) PR 04286 Task 5.30	B	FBB	\$386,435.86						0				
69	Approved by General Manager Approved on December 20, 2017				\$90,846.69	\$17,949,662.63	\$18,040,509.32	11.04%	\$181,506,449.32	0	368	368	1,646	10/31/2017
69.1	Power Supply Failure Alarms for Acid Gas Boosters (CR-477) PR 04286 Task 5.30	A	IRWD	\$10,965.90						0				
69.2	Addition of Waste Gas Burner Instrument Air Compressor System (Electrical) (CR-484A) PR 04286 Task 5.30	C	IRWD	\$8,046.52						0				
69.3	Circuit Breaker for MOC-2034 (CR-541) PR 04286 Task 5.30	B	IRWD	\$2,389.56						0				
69.4	Change in Limit Switches Located in the Methane Digester Complex Due Electrical Classification Change (CR-557D) PR 04286 Task 5.30	C	IRWD	\$37,744.12						0				
69.5	Change in Limit Switches Located in the Methane Digester Complex Due Electrical Classification Change (CR-582) PR 04286 Task 5.30	C	IRWD	\$16,228.03						0				
69.6	SCADA Programming Changes - Totalizers (CR-590) PR 04286 Task 5.30	A	IRWD	\$7,830.90						0				
69.7	Control Panel Modifications in the Methane Digester Complex (CR-592) PR 04286 Task 5.30	A	IRWD	\$7,641.66						0				

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F - Contractor Requested Inspection Overtime

B - 27

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Original Days:			Revised Completion Date	
										Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	
														10/28/2016
70	Approved by Exe Dir of Engineering and Water Quality Approved on January 23, 2018				\$73,972.77	\$18,040,509.32	\$18,114,482.09	11.08%	\$181,580,422.09	0	368	368	1,646	10/31/2017
70.1	Addition of Limit Switches on Gas Dryer Heat Exchanger (CR-303) PR 04286 Task 5.30	A	IRWD	\$17,367.32						0				
70.2	Change of Electrical Classification of Valve Limit Switches at Acid Phase Digester Complex (CR-415) PR 04286 Task 5.30	C	IRWD	\$24,018.04						0				
70.3	Power Source to the Solids Handling Building Bridge Cranes (CR-574) PR 04286 Task 5.30	C	IRWD	\$27,479.58						0				
70.4	Investigation of Street Lights, South side of Biosolids Site (CR-613) PR 04286 Task 5.30	A	IRWD	\$1,204.20						0				
70.5	Additional Switches in the Solids Handling Building (CR-625) PR 04286 Task 5.30	A	IRWD	\$3,903.63						0				
71	Approved by Exe Dir of Engineering and Water Quality Approved on January 31, 2018				(\$12,210.00)	\$18,114,482.09	\$18,102,272.09	11.07%	\$181,568,212.09	0	368	368	1,646	10/31/2017
71.1	Credit for Overtime Inspection Hours from 10/1/2017 to 12/31/2017 (CR-089G) PR 04286 Task 4.0	F	IRWD	(\$12,210.00)						0				
72	Approved by General Manager Approved on January 25, 2018				\$25,256.29	\$18,102,272.09	\$18,127,528.38	11.09%	\$181,593,468.38	0	368	368	1,646	10/31/2017
72.1	Installation of Breakers for Power Panel PP-8001 (CR-414A) PR 04286 Task 5.30	A	IRWD	\$25,256.29						0				
73	Approved by Board of Directors Approved on March 12, 2018				\$150,755.29	\$18,127,528.38	\$18,278,283.67	11.18%	\$181,744,223.67	0	368	368	1,646	10/31/2017
73.1	Additional Circuits for Control of the Dewatering Centrifuges (CR-386B) PR 04286 Task 5.30	B	FBB	\$150,755.29						0				

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
74	Approved by General Manager Approved on February 22, 2018				\$99,467.47	\$18,278,283.67	\$18,377,751.14	11.24%	\$181,843,691.14	0	368	368	1,646	10/31/2017
74.1	Access Platform to Heat Dryer Acid Scrubber (CR-485D) PR 04286 Task 5.30	A	IRWD	\$14,637.02						0				
74.2	Modifications to the FRP Ducting in the Solids Handling Building (CR-491) PR 04286 Task 5.31	A	IRWD	\$20,171.39						0				
74.3	Power to Air Compressors and Pre-Action Panels of the Fire Sprinkler System (CR-526) PR 04286 Task 5.30	B	IRWD	\$24,442.16						0				
74.4	Electrical and Instrumentation Revisions to the FOG System (CR-578) PR 04286 Task 5.30	A	IRWD	\$13,035.52						0				
74.5	Addition of Centrate Air Purge System (CR-581) PR 04286 Task 5.30	A	IRWD	\$17,777.95						0				
74.6	Addition of Flame Checks on Foam Separator Digested Sludge Line (CR-587) PR 04286 Task 5.3	A	IRWD	\$3,038.27						0				
74.7	Modifications to 10-Ton Crane Stops (CR-589) PR 04286 Task 5.31	C	FBB	\$6,365.16						0				

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**MWRP Biosolids and Energy Recovery Facilities  
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Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
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Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
75	Approved by General Manager Approved on March 2, 2018				\$98,698.78	\$18,377,751.14	\$18,476,449.92	11.30%	\$181,942,389.92	0	368	368	1,646	10/31/2017
75.1	Electrical Modifications to the Acid Phase Digester and Methane Phase Digester System (CR-252C) PR 04286 Task 5.30	A	IRWD	\$31,492.38						0				
75.2	Modifications to the Odor Control Panels (CR-382) PR 04286 Task 5.30	A	IRWD	\$12,726.70						0				
75.3	Additional Lock-Out Switch for the Bridge Breaker (CR-384A) PR 04286 Task 5.30	B	IRWD	\$14,276.72						0				
75.4	Additional On/Off Switch for Duct Fans (CR-384B) PR 04286 Task 5.30	A	IRWD	\$12,100.47						0				
75.5	Aeration Blower MCC Modifications (CR-481) PR 04286 Task 5.30	C	IRWD	\$14,441.86						0				
75.6	Addition of Level Switches and Solenoid Valves for Gas/Foam Separator Tanks (CR-566) PR 04286 Task 5.30	B	IRWD	\$7,568.99						0				
75.7	SCADA Template Update (CR-622) PR 04286 Task 5.30	A	IRWD	\$2,775.05						0				
75.8	Additional Lights in the Shower Stalls of the Solids Handling Building (CR-628) PR 04286 Task 5.30	C	FBB	\$1,639.80						0				
75.9	Relocation of Flow Switch in Sample Analysis Room (CR-637) PR 04286 Task 5.30	A	IRWD	\$1,676.81						0				
76	Approved by Board of Directors Approved on March 26, 2018				\$150,690.04	\$18,476,449.92	\$18,627,139.96	11.40%	\$182,093,079.96	0	368	368	1,646	10/31/2017
76.1	Power Feed to Microturbine CLCs (CR-289) PR 04286 Task 5.30	B	FBB	\$49,534.35						0				
76.2	Upsizing of Electrical Cables related to the Heat Drying System (CR-510) PR 04286 Task 5.30	B	FBB	\$4,670.94						0				
76.3	Additional Cables to MCC-1 (CR-538) PR 04286 Task 5.30	B	FBB	\$5,679.24						0				
76.4	Electrical Code Area Classification Change in the Digester Control Building Gas Room (CR-582A) PR 04286 Task 5.30	C	IRWD	\$8,804.31						0				
76.5	Addition of Water Source for the Foam Separator (CR-583) PR 04286 Task 5.31	C	FBB	\$8,418.23						0				
76.6	SCADA Modifications on Solids Handling Polymer System (CR-620) PR 04286 Task 5.30	A	IRWD	\$7,761.00						0				
76.7	3-Way Valve Graphical Modifications to SCADA (CR-621) PR 04286 Task 5.30	A	IRWD	\$22,540.18						0				
76.8	SCADA Modifications on FOG System (CR-623) PR 04286 Task 5.30	A	IRWD	\$7,970.58						0				
76.9	SCADA Modifications on the Digested Tank Level (CR-626) PR 04286 Task 5.30	A	IRWD	\$8,898.86						0				
76.10	Solids Handling Building Stair Modifications (CR-634) PR 04286 Task 5.29	C	FBB	\$26,412.35						0				

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**MWRP Biosolids and Energy Recovery Facilities  
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Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

Change Order	Description	Category	IRWD or FBB	Contract Amount						Contract Days				Original Completion Date:
				Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Original Days: 1,278				10/28/2016
										Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
77	Approved by General Manager Approved on April 30, 2018				\$94,371.12	\$18,627,139.96	\$18,721,511.08	11.45%	\$182,187,451.08	0	368	368	1,646	10/31/2017
77.1	Modifications of Notching Shear Lugs - Solids Handling Building (CR-299A) PR 04286 Task 5.29	C	FBB	\$1,269.23						0				
77.2	Cake Storage Hopper Conveyor Control Changes (CR-384) PR 04286 Task 5.30	A	IRWD	\$30,869.71						0				
77.3	Electrical Testing for Manual Transfer Switchgear SWGR-14 (CR-474A) PR 04286 Task 5.30	C	FBB	\$5,891.73						0				
77.4	Additional HVAC Fan Coil Power Circuits (CR-474A) PR 04286 Task 5.30	B	FBB	\$16,053.47						0				
77.5	Modifications to Digester Control Building Roof Guardrail and Bridge Steps (CR-617) PR 04286 Task 5.29	B	IRWD	\$10,147.48						0				
77.6	Electrical Modifications to the Condensing Unit and Heat Pumps in the Solids Handling Building (CR-635) PR 04286 Task 5.30	A	FBB	\$9,551.13						0				
77.7	SCADA Control Logic Change in the Acid Phase Digester Area (CR-668) PR 04286 Task 5.30	A	IRWD	\$9,741.22						0				
77.8	SCADA Control Logic Change in the Polymer Thickening Tank Area (CR-669) PR 04286 Task 5.30	A	IRWD	\$8,144.54						0				
77.9	SCADA Control Logic Change in the Polymer Thickening Tank Area (CR-669) PR 04286 Task 5.30	A	IRWD	\$2,702.61						0				
78	Approved by Board of Directors Approved on April 26, 2018				\$344,006.55	\$18,721,511.08	\$19,065,517.63	11.66%	\$182,531,457.63	0	368	368	1,646	10/31/2017
78.1	Operator Interface Terminal (OIT) Indusoft Licensing Cost (CR-244) PR 04286 Task 5.30	A	IRWD	\$4,618.13						0				
78.2	Retaining Wall Modifications at Solids Handling Building (CR-331E) PR 04286 Task 5.29	C	IRWD	\$26,508.00						0				
78.3	Andritz Air Compressor Equipment Pad Modifications (CR-550) PR 04286 Task 5.31	C	FBB	\$6,729.00						0				
78.4	Waste Activated Sludge (WAS), Digested Sludge (DS), and Primary Sludge (PS) Piping Modifications (CR-594) PR 04286 Task 5.31	A	IRWD	\$28,967.68						0				
78.5	Modifications to MWRP Biosolids Hardscape (CR-331K) PR 04286 Task 5.29	A	IRWD	\$277,183.74						0				

- A - District Convenience/Initiation - Project Related
- B - Differing Site Conditions
- C - Design Oversight
- D - District Convenience/Initiation - Non-Project Related
- E - Contractor Convenience/Initiation
- F - Contractor Requested Inspection Overtime

**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
79	Pending Approval by General Manager Pending Approval on May 1, 2018				\$89,123.41	\$19,065,517.63	\$19,154,641.04	11.72%	\$182,620,581.04	0	368	368	1,646	10/31/2017
79.1	Addition of High Temperature Switches for the Primary Sludge/Waste Activated Sludge Wet Well Mixers (CR-377A) PR 04286 Task 5.30	C	FBB	\$12,145.12						0				
79.2	Utility Line Modifications in the Solids Handling Building (CR-521) PR 04286 Task 5.31	A	IRWD	\$2,163.21						0				
79.3	SCADA Programming Changes in the Methane Digester Area (CR-542) PR 04286 Task 5.30	A	IRWD	\$7,191.02						0				
79.4	MCC-4100 Bridge Breaker Modifications in the Bulk Polymer Storage Area (CR-562) PR 04286 Task 5.30	B	IRWD	\$9,905.77						0				
79.5	Electrical Modifications of Exhaust Air Unit in the Solids Handling Building (CR-618) PR 04286 Task 5.30	B	FBB	\$6,391.05						0				
79.6	SCADA Programming Changes on the Biosolids Conveyor Distribution System (CR-630) PR 04286 Task 5.30	A	IRWD	\$7,226.35						0				
79.7	Electrical Modifications to the Dewatering Conveyors in the Solids Handling Building (CR-672) PR 04286 Task 5.30	B	FBB	\$21,239.15						0				
79.8	Additional Space Heater for Regenerative Thermal Oxidizer Draft Fan (CR-675) PR 04286 Task 5.30	A	FBB	\$9,351.07						0				
79.9	SCADA Programming Update on the Acid Phase Sludge Transfer Pumps (CR-689) PR 04286 Task 5.30	A	IRWD	\$13,510.67						0				

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
E - Contractor Convenience/Initiation  
F - Contractor Requested Inspection Overtime

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**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
80	Pending Approval by Board of Directors				\$313,076.14	\$19,154,641.04	\$19,467,717.18	11.91%	\$182,933,657.18	0	368	368	1,646	10/31/2017
	Pending Approval on May 21, 2018													
80.1	Modifications to MCC-4100, MCC-4101 and MCC-4102 (CR-384) PR 04286 Task 5.30	C	FBB	\$36,158.66						0				
80.2	Modifications to MCC-4102 and MCC-4103 (CR-384D) PR 04286 Task 5.30	C	FBB	\$63,388.51						0				
80.3	Separate Air Compressor System Electrical Panel for Waste Gas Burner (CR-484B) PR 04286 Task 5.3	B	FBB	\$50,723.04						0				
80.4	Additional Power Monitoring Equipment for Self-Generation Incentive Program (CR-577) PR 04286 Task 5.30	A	IRWD	\$34,887.16						0				
80.5	Electrical Modifications for the Gas Compressor Detector and Enclosure Fire Alarm Panel (CR-629) PR 04286 Task 5.30	A	IRWD	\$13,215.42						0				
80.6	Additional Power Circuits for the Solids Handling Building Roll-Up Doors (CR-631) PR 04286 Task 5.30	C	IRWD	\$24,446.58						0				
80.7	Modifications to Digested Sludge Line (CR-648) PR 04286 Task 5.31	C	FBB	\$17,023.42						0				
80.8	Relocation of Local Control Panel in the Solids Handling Building (CR-676) PR 04286 Task 5.30	C	FBB	\$34,619.35						0				
80.9	Additional Manual Valves and Components for Heat Dryer System (CR-683) PR 04286 Task 5.30	C	FBB	\$38,614.00						0				

- A - District Convenience/Initiation - Project Related
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- D - District Convenience/Initiation - Non-Project Related
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- F - Contractor Requested Inspection Overtime



**MWRP Biosolids and Energy Recovery Facilities  
PR 21146 (4286)  
Construction Change Order Summary**

Contractor: Filanc/Balfour-Beatty  
Design Engineer: Black & Veatch

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$163,465,940.00						Original Days: 1,278				10/28/2016
Change Order	Description	Category	IRWD or FBB	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum Total C O days	Revised Total Contract Days	Revised Completion Date
<b>Category</b>				<b>Total Amount</b>	<b>% of Original Contract</b>									
A - District Convenience/Initiation - Project Related				\$ 3,414,699.44	2.09%									
B - Differing Site Conditions				\$ 12,659,056.76	7.74%									
C - Design Oversight				\$ 3,557,678.44	2.18%									
D - District Convenience/Initiation - Non-Project Related				\$ -	0.00%									
E - Contractor Convenience/Initiation				\$ 98,302.54	0.06%									
F - Contractor Requested Inspection Overtime				\$ (262,020.00)	-0.16%									
<b>TOTAL (A + B + C + D + E + F)</b>				<b>\$ 19,467,717.18</b>	<b>11.91%</b>									
<b>Category</b>				<b>Total Amount</b>	<b>% of Original Contract</b>									
IRWD-Initiation/Driven				\$ 4,473,627.93	2.74%									
FBB-Initiation/Driven				\$ 14,823,369.03	9.07%									
N/A				\$ 170,720.22	0.10%									
<b>TOTAL</b>				<b>\$ 19,467,717.18</b>	<b>11.91%</b>									

A - District Convenience/Initiation - Project Related  
B - Differing Site Conditions  
C - Design Oversight  
D - District Convenience/Initiation - Non-Project Related  
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F - Contractor Requested Inspection Overtime

**AMENDMENT NO. 2 TO AGREEMENT FOR  
TRANSFER OF WASTEWATER SOLIDS RESIDUALS**



This Amendment No. 2 to Agreement for Transfer of Wastewater Solids Residuals (this "**Amendment No. 2**") is effective as of \_\_\_\_\_, 2018 ("**Effective Date**") and is between the ORANGE COUNTY SANITATION DISTRICT ("**OCSD**") and the IRVINE RANCH WATER DISTRICT ("**IRWD**"). OCSD is a County Sanitation District, organized and existing pursuant to the County Sanitation District Act, California Health & Safety Code Section 4700 *et seq.* IRWD is a California Water District, organized and existing pursuant to the California Water District Law, California Water Code Section 34000 *et seq.* OCSD and IRWD are sometimes individually referred to herein as each "**Party**" and collectively as the "**Parties.**"

**RECITALS**

This Amendment No. 2 is entered into with reference to the following facts:

WHEREAS, the Parties entered into the Agreement for Transfer of Wastewater Solids Residuals, dated April 28, 2010 (the "**Agreement**"). Capitalized terms used herein and not otherwise defined shall have the meanings given such terms in the Agreement.

WHEREAS, the Parties entered into Amendment No. 1 to the Agreement for Transfer of Wastewater Solids Residuals, dated May 23, 2016 ("**Amendment No. 1**").

WHEREAS, Section 7.2 of the Agreement provides that during the Initial Term, IRWD may notify OCSD that the date for completion of the project to construct solids handling facilities at MWRP has been delayed beyond December 31, 2016, in which event the Parties shall meet and confer in good faith to enter into an amendment to the Agreement to extend the Initial Term, including consideration of whether the duration of the extension requires any change to the methodology for calculating the interim Solids Handling Charge Capital Component.

WHEREAS, IRWD has notified OCSD that the construction of the solids handling facilities at MWRP by IRWD's contractor is ongoing but completion will not occur prior to the expiration of the Initial Term on December 31, 2018 as provided in Amendment No. 1.

WHEREAS, the Parties have met and conferred and determined that an additional three-year extension of the Initial Term will accommodate the expected completion of the MWRP solids handling facilities construction contract, and that such duration does not require any change to the current methodology for calculating the interim Solids Handling Charge Capital Component.

WHEREAS, the Parties agree that the definition of "Solids" includes primary and secondary settled material only.

## AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the Parties agree as follows:

Section 1. Extension of Initial Term. (a) Section 6 of the Agreement is amended to read as follows:

“Section 6. Initial Term.

IRWD may transfer Solids to the OCSD Wastewater System in accordance with the terms of this Agreement from the effective date set forth above until the earlier of (i) the date that the proposed MWRP solids handling facilities are operational and all non-emergency discharges of wastewater solids residuals by IRWD to the OCSD Wastewater System have ceased, or (ii) December 31, 2021. This period shall be called the ‘Initial Term.’”

Section 2. Terms of Agreement.

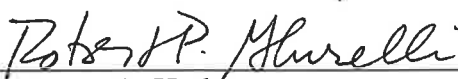
Except as expressly amended by this Amendment No. 2, all terms and conditions of the Agreement and Amendment No. 1 and all attachments and exhibits thereto, shall remain in full force and effect.

IN WITNESS WHEREOF, this Amendment No. 2 has been executed in duplicate in the names of the respective Parties by their duly authorized officers, effective as of the day and year first above written.

[Signatures on the following page.]

ORANGE COUNTY SANITATION DISTRICT

By   
Gregory C. Sebourn, PLS  
Chair, Board of Directors

By   
*Sor* James D. Herberg  
General Manager

ATTEST:

  
Kelly A. Lore MMC 5/23/18  
Clerk of the Board

APPROVED AS TO FORM:  
BRADLEY R. HOGIN,  
GENERAL COUNSEL

By 

IRVINE RANCH WATER DISTRICT

By \_\_\_\_\_  
Paul Cook  
General Manager

ATTEST:

\_\_\_\_\_  
Leslie Bonkowski  
District Secretary

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

By \_\_\_\_\_  
General Counsel