

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

April 25, 2022

**CALL TO ORDER**      5:00 p.m.

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

This meeting will be held in-person at the District’s headquarters located at 15600 Sand Canyon Avenue, Irvine, California. The meeting will also be broadcasted via Webex for those wanting to observe the meeting virtually.

To observe this meeting virtually, please join online using the link and information below:

Via Web:

<https://irwd.webex.com/irwd/j.php?MTID=me94975bb693ac2a655576bb7e77f0db5>

Meeting Number (Access Code): 2492 147 4169

Meeting Password: TUhRPCip242

PLEASE NOTE: Webex observers of the meeting will be placed into the Webex lobby when the Board enters closed session. Participants who remain in the “lobby” will automatically be returned to the open session of the Board once the closed session has concluded. Observers joining the meeting while the Board is in closed session will receive a notice that the meeting has been locked. They will be able to observe the meeting once the closed session has concluded.

**PUBLIC COMMENT NOTICE**

Public comments are limited to three minutes per speaker on each subject. If you wish to address the Board of Directors on any item, you may attend the meeting in person and submit a “speaker slip” to the Secretary. Forms are provided outside of IRWD’s Board Room. If attending via Webex, please submit your request to speak, or your comment, via the “chat” feature and your remarks will be read into the record at the meeting. You may also submit a public comment in advance of the meeting by emailing [comments@irwd.com](mailto:comments@irwd.com) before 1:00 p.m. on Monday, April 25, 2022.

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**COMMUNICATIONS TO THE BOARD**

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1.     A. Written:
2.     B. Oral:
3.     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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**CONSENT CALENDAR, ITEMS 4-7**

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4. BOARD MEETING MINUTES

Recommendation: That the minutes of the April 11, 2022, Regular Board meeting be approved as presented.

5. IRWD OPERATIONAL PERFORMANCE MEASURES

Recommendation: Receive and file.

6. MARCH 2022 TREASURY REPORT

Recommendation: That the Board receive and file the Treasurer's Investment Summary report, the Summary of Fixed and Variable Rate Debt, and Disclosure Report of reimbursements to Board members and staff, approve the March 2022 summary of Payroll ACH payments in the total amount of \$2,160,433 and approve the March 2022 accounts payable disbursement summary of Warrants 425269 through 426151, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$17,865,491.

7. ADOPTION OF REVISED IRWD SCHEDULE OF POSITIONS AND SALARY RATE RANGES

Recommendation: That the Board adopt a resolution by title rescinding Resolution No. 2021-27 and adopting a revised Schedule of Positions and Salary Rate Ranges.

Reso. 2022 - 8

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**ACTION CALENDAR**

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8. ORANGE HEIGHTS ZONE 5 TO 6 AND ZONE C+ TO E PUMP STATIONS AND ZONE 6 RESERVOIR CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services agreement with Lee & RO in the amount of \$602,000 for engineering design services for the Orange Heights Zone 5 to 6 and Zone C+ to E Pump Stations, Project 07136 and 07139; and authorize the General Manager to execute a Professional Services Agreement with Tetra in the amount of \$484,000 for engineering design services for the Orange Heights Zone 6 Reservoir, Project 07138.

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**ACTION CALENDAR (Continued)**

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9. WOODBIDGE RECYCLED WATER PIPELINES REPLACEMENT CONSTRUCTION AWARD

Recommendation: That the Board authorize a budget increase for Project 11571 in the amount of \$4,200,000, from \$11,018,000 to 15,218,000; and authorize the General Manager to execute a Construction Contract with E.J. Meyer Company in the amount of \$11,959,999 for the Woodbridge Recycled Water Pipeline Replacement, Project 11571.

10. LAKE FOREST WELL 2 TREATMENT SYSTEM CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Tetra Tech in the amount of \$340,729 for design engineering services for the Lake Forest Well 2 Treatment System, Project 11218.

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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.

11. General Manager's Report

12. Receive oral update(s) from District liaison(s) regarding communities within IRWD's service area and provide information on relevant community events.

13. Directors' Comments

14. Closed Sessions

A. CLOSED SESSION CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION – Pursuant to Government Code Section 54956.9(d)(1): *Kern County Water Agency v. Groundwater Banking Joint Powers Authority, Rosedale-Rio Bravo Water Storage District, Irvine Ranch Water District*, Kern County Superior Court Case No. BCV-21-100223.

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**OTHER BUSINESS (Continued)**

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15. Closed Sessions, continued

B. CLOSED SESSION CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION – Pursuant to Government Code Section 54956.9(d)(1): *City of Bakersfield v. Groundwater Banking Joint Powers Authority, Rosedale-Rio Bravo Water Storage District, Irvine Ranch Water District, Kern County Superior Court Case No. BCV-21-100221.*

16. Open Session

17. Adjournment

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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 above-named Board in connection with a matter subject to discussion or consideration at an open meeting of the Board 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 electronically via the Webex meeting noted. Upon request, the District will provide for written agenda materials in appropriate alternative formats, and reasonable disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments at public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to [comments@irwd.com](mailto:comments@irwd.com). Requests made by mail must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.



April 25, 2022  
Prepared and  
submitted by: L. Bonkowski  
Approved by: Paul A. Cook *PAC*

CONSENT CALENDAR

BOARD MEETING MINUTES

SUMMARY:

Provided are the minutes of the April 11, 2022 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE APRIL 11 2022 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – April 11, 2022 Minutes

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EXHIBIT “A”

MINUTES OF REGULAR MEETING –APRIL 11, 2022

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 LaMar on April 11, 2022 at the District offices, 15600 Sand Canyon Avenue, Irvine.

Directors Present: LaMar, McLaughlin, Reinhart, Swan, and Withers

Directors Absent: None.

Written and Oral Communications: None.

Also Present: General Manager Cook, Executive Director of Technical Services Burton, Executive Director of Operations Chambers, Executive Director of Finance and Administration Clary, Director of Treasury and Risk Management Jacobson, Executive Director of Water Policy Weghorst, Director of Recycling Operations Zepeda, Director of Water Resources Sanchez, Director of Human Resources Mitcham, Director of Maintenance Mykitta, Director of Strategic Communications and Advocacy/Deputy General Counsel Compton, Director of Safety and Security Choi, Director of Information Services Kaneshiro, Director of Water Quality and Regulatory Compliance Colston, Secretary Bonkowski, Assistant Secretary Swan, General Counsel Collins, Consultant Newell, and members of the public and other staff.

CONSENT CALENDAR

On MOTION by Reinhart, seconded by Withers and unanimously carried, CONSENT CALENDAR ITEMS 4 THROUGH 8 WERE APPROVED AS FOLLOWS:

4. BOARD MEETING MINUTES

Recommendation: That the minutes of the March 18, 2022 Regular Board meeting be approved as presented.

5. RATIFY/APPROVE BOARD OF DIRECTORS’ ATTENDANCE AT MEETINGS AND EVENTS IN 2022

Recommendation: That the Board ratify/approve the event for John Withers, as described.

6. 2022 LEGISLATIVE AND REGULATORY UPDATE

Recommendation: That the Board adopt a “support” position on SB 938 (Hertzberg) and S.3956 (Merkley/Collins).

7. 2022 REGULAR AND ALTERNATE LAFCO SPECIAL DISTRICTS SEAT ELECTION

Recommendation: That the Board authorize the District Secretary to submit the “Declaration of Qualification to Vote” form designating President Steve LaMar as IRWD’s authorized voting member and Vice President Karen McLaughlin as IRWD’s alternate voting member for the Orange County Special District Selection Committee election and authorize IRWD’s voting member to cast the District’s ballot.

## CONSENT CALENDAR (CONTINUED)

### 8. STATE ROUTE-55 FREEWAY WIDENING SANITARY SEWER RELOCATION FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the State Route-55 Freeway Widening Sanitary Sewer Relocation project on Cowan in Irvine, authorize the General Manager to file a Notice of Completion, and authorize the payment of the retention 35 days after the date of recording the Notice of Completion for Project 11583.

## ACTION CALENDAR

### REVISED IRWD POLICY PRINCIPLES REGARDING METROPOLITAN WATER DISTRICT'S INTEGRATED WATER RESOURCES PLAN AND LOCAL RESOURCES PROGRAM

Executive Director of Water Policy Weghorst reported that on May 7, 2020, the Board adopted a policy paper to help guide IRWD's advocacy efforts related to ongoing policy discussions on Metropolitan's IRP and Local Resources Program. Mr. Weghorst said that due to increased complexities, Metropolitan has been delayed in completing its 2020 IRP which has delayed discussions regarding making changes to the Local Resource Program. He said that to ensure that IRWD's policy positions are up to date for its continued advocacy efforts, staff has revised the policy position paper. He then reviewed the exhibit containing the redlined changes. Following input from the Board, staff will amend language in the policy, and bring this item back to the Board for adoption at its next meeting.

### FORMER FRANCES MUTUAL WATER COMPANY WELL 14 PROPERTY EXEMPT SURPLUS DESIGNATION AND AUTHORIZATION TO SELL

General Manager Cook reported that IRWD owns real property located in the city of Tustin, which is a former wellsite from the Frances Mutual Water Company system that was destructed in 2009. Staff has determined that the property will not be required for any future IRWD operational purposes. On **MOTION** by Swan, seconded by Reinhart and unanimously carried, **THE BOARD DESIGNATED THE FORMER FRANCES MUTUAL WATER COMPANY WELL 14 PROPERTY LOCATED IN THE CITY OF TUSTIN AS "EXEMPT SURPLUS LAND" AND AUTHORIZED THE GENERAL MANAGER TO NEGOTIATE AND EXECUTE ALL DOCUMENTS REQUIRED TO COMPLETE THE SALE TO ONE OR MORE ADJACENT HOMEOWNER(S) AT A FAIR VALUE TO THE IRVINE RANCH WATER DISTRICT.**

GENERAL MANAGER'S REPORT – None.

## COMMUNITY LIAISON UPDATES

General Manager Cook said that Consultant Newell had to leave the meeting early and said there was nothing to report in the canyon area.

DIRECTORS' COMMENTS

Director Reinhart reported that he attended all of the meetings listed.

Director Withers reported that he attended all of the meetings listed. He said tomorrow he will be attending an OCBC Infrastructure Committee meeting.

Director Swan reported that he attended a Water UCI presentation, an OC Forum meeting, a WACO meeting, a MWDOC Planning and Operations Committee meeting, a MWDOC Board meeting, a Water Education Foundation 101 Workshop, and a Southern California Water Dialogue Planning meeting. He further asked to receive regular Biosolids updates from staff.

Director Mclaughlin reported on her attendance at a WACO meeting, a MWDOC annual elected officials forum, and an IRWD community tour. She further complimented staff on their efforts on this tour.

Director LaMar reported on his attendance at an OC Forum meeting, a WACO meeting, and an OCBC annual dinner and installation event.

CLOSED SESSIONS

General Manager Cook reported that none of the Closed Sessions listed on the agenda need to be discussed this evening.

ADJOURNMENT

There being no further business, Director LaMar adjourned the meeting at 5:30 p.m.

APPROVED and SIGNED this 25th day of April 2022.

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President, IRVINE RANCH WATER  
DISTRICT

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Secretary IRVINE RANCH WATER  
DISTRICT

APPROVED AS TO FORM:

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Claire Hervey Collins, General Counsel  
Hanson Bridgett LLP

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April 25, 2022  
Prepared by: D. Pardee / C. Smithson  
Submitted by: C. Clary  
Approved by: Paul A. Cook *PAC*

CONSENT CALENDAR

IRWD OPERATIONAL PERFORMANCE MEASURES

SUMMARY:

Provided as Exhibit “A” are the IRWD Operational Performance Measures and informational items for the Board’s review. These measures are intended to reflect the critical performance measures that gauge the District’s key business objectives.

BACKGROUND:

The Operational Performance Measures document summarizes several operational, financial, customer service, and other key measures important to the ongoing operation of the District. These measures were selected and designed to provide a “snapshot” view of the measures that are of interest to the Board.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

RECEIVE AND FILE.

LIST OF EXHIBITS:

Exhibit “A” – Operational Performance Measures as of March 31, 2022

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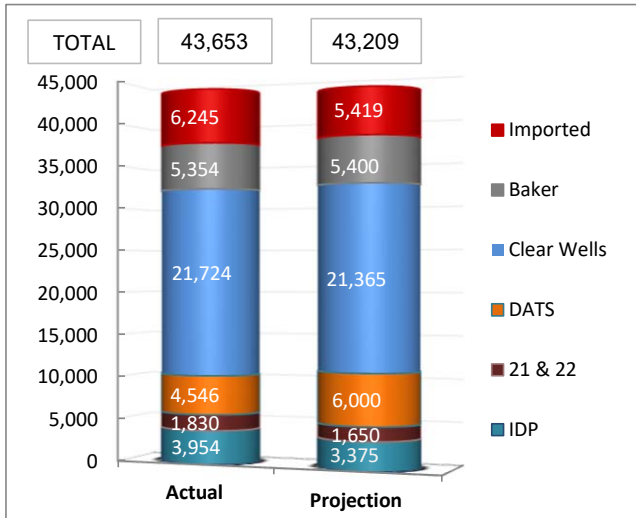
# Exhibit "A"

## IRVINE RANCH WATER DISTRICT

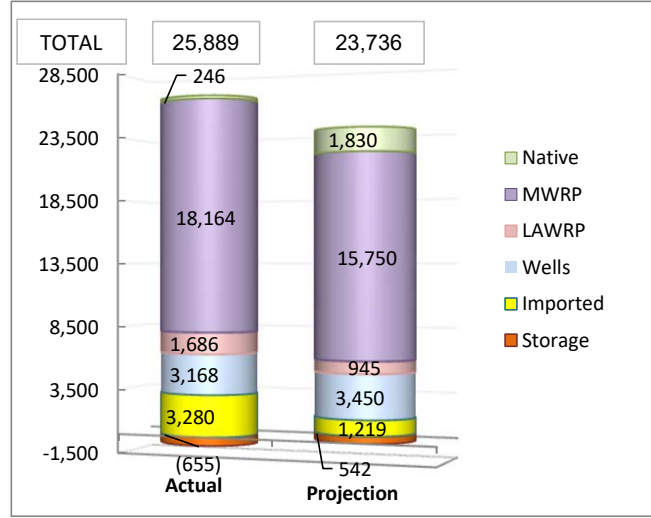
### Operational Performance Measures

Data as of March 31, 2022

**Potable Water Production FYTD**  
(AF)



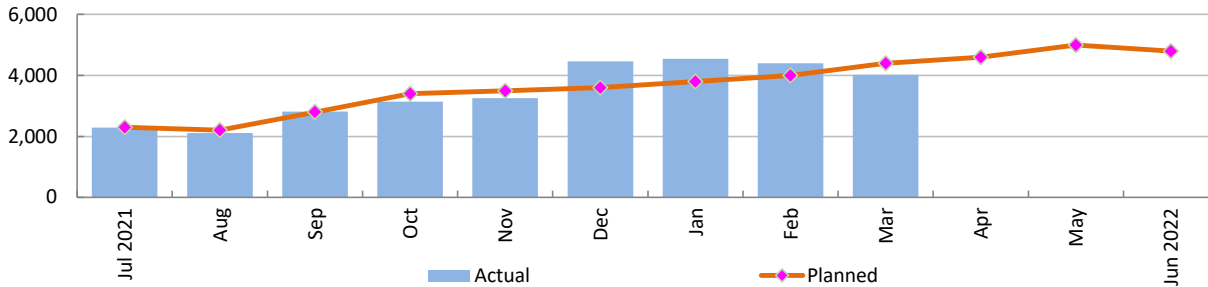
**Non-Potable Water Production FYTD**  
(AF)



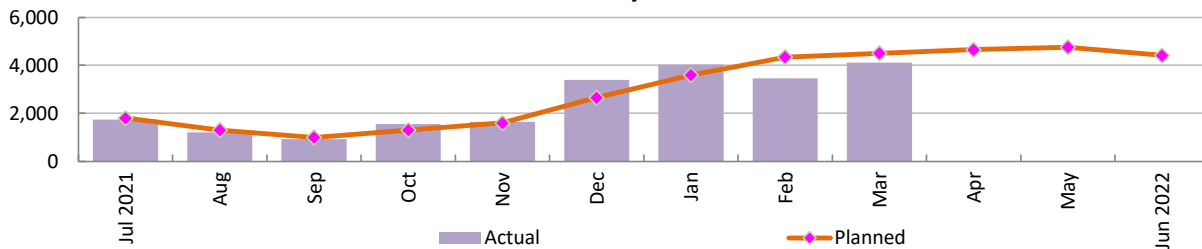
### Non-Potable Reservoir Storage

(AF)

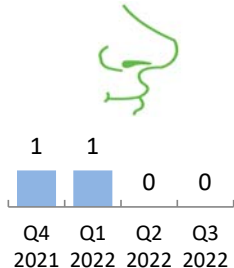
#### Irvine Lake



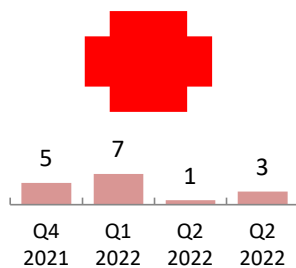
#### Recycled



#### Odor Complaints (FY by quarter)



#### OSHA Recordables Incidents



#### Regulatory Compliance Incidents

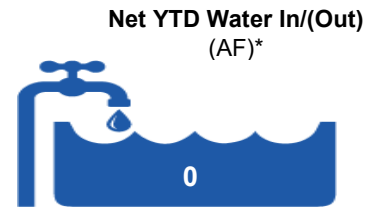
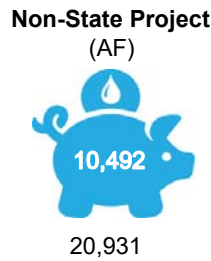
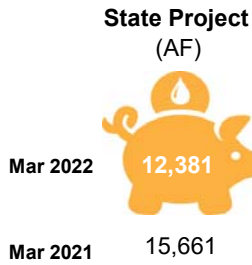
Category	Q4 2021	Q1 2022	Q2 2022	Q2 2023
AQMD	3	9	4	7
Plants	1	0	0	0
Sewer Spills	1	0	0	2

# IRVINE RANCH WATER DISTRICT

## Other Statistical Information

Data as of March 31, 2022

### Banked Water

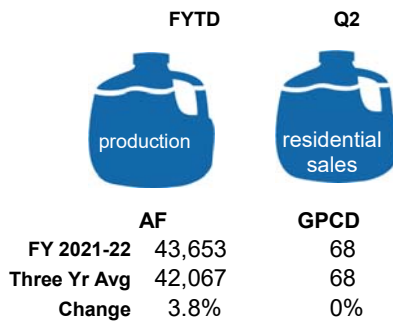


\*Calendar Year including extraordinary supply received.

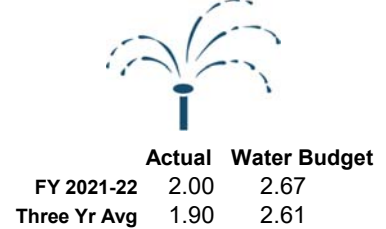
### Certificates of Occupancies FYTD



### Total Potable Water

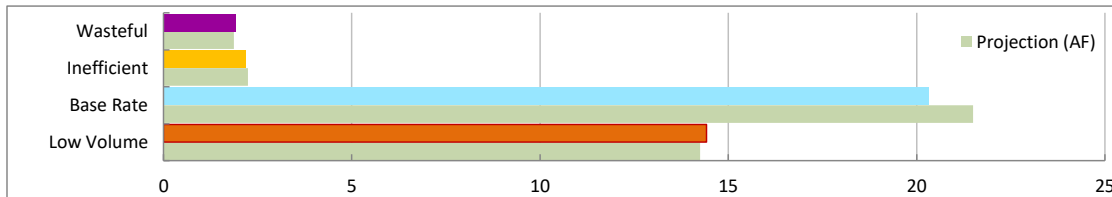


### Acre-Feet Per Acre Irrigation

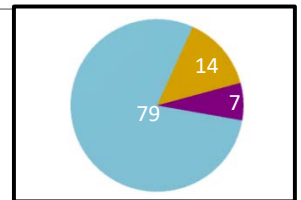


### Potable Sales by Tier FYTD

(in thousands)

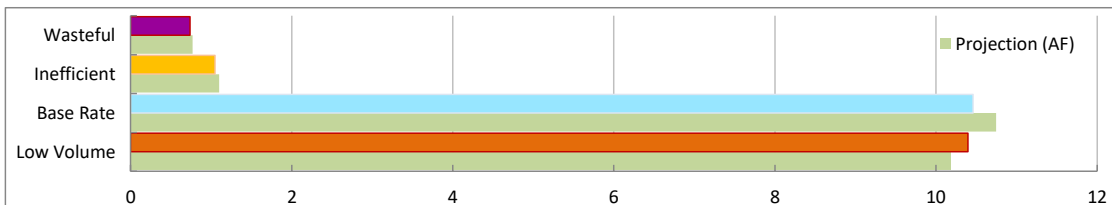


### % of Customers by Tier

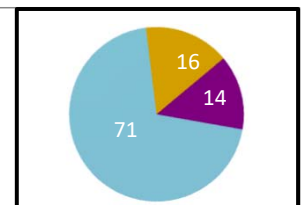


### Non-Potable Sales by Tier FYTD

(in thousands)

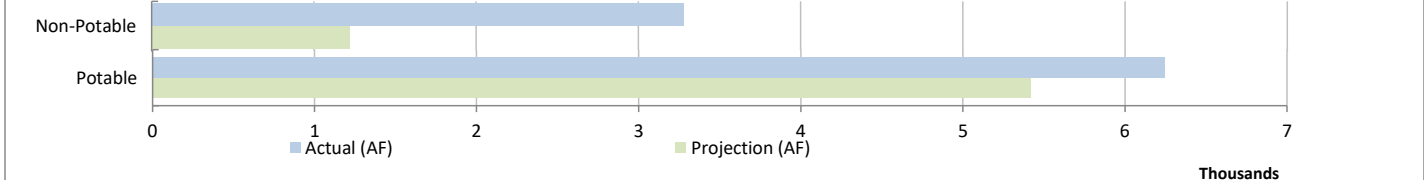


### % of Customers by Tier

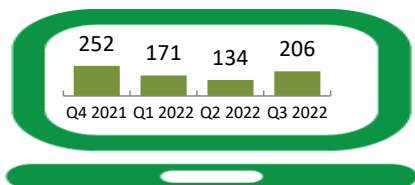


### Imported Water Purchases FYTD

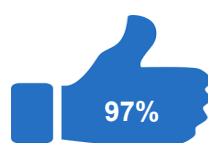
(in thousands)



### Website Hits



### Customer Satisfaction Index\*\*




\*\* 12 month rolling average

April 25, 2022

Prepared by: O. Mendoza / J. Davis

Submitted by: R. Jacobson / C. Clary

Approved by: Paul A. Cook 

## CONSENT CALENDAR

### MARCH 2022 TREASURY REPORT

#### SUMMARY:

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

- A. The March 2022 Investment Summary Report. This Investment Summary Report conforms with the 2022 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 Rate Debt as of March 31, 2022, as outlined in Exhibit "B";
- C. The Monthly Interest Rate Swap Summary as of March 31, 2022, as outlined in Exhibit "C";
- D. The March 31, 2022 Disbursement Summary of warrants 425269 through 426151, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$17,865,491, as outlined in Exhibit "D";
- E. The Summary of Payroll ACH payments in the total amount of \$2,160,433 as outlined in Exhibit "E"; and
- F. The Disclosure Report of Reimbursements to Board members and staff for March 2022, detailing payments or reimbursements for individual charges of \$100 or more per transaction, as outlined in Exhibit "F".

#### FISCAL IMPACTS:

As of March 31, 2022, the book value of the investment portfolio was \$384,303,524, with a 0.43% rate of return and a market value of \$381,242,477. Based on IRWD's March 31, 2022, quarterly real estate investment rate of return of 12.41%, the weighted average return for the fixed income and real estate investments was 2.88%.

As of March 31, 2022, the outstanding principal amount of fixed and variable rate debt was \$624,995,000. The monthly weighted average all-in variable rate was 0.59%. Including IRWD's weighted average fixed rate bond issues of 3.71% and the 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 3.09%.

Payroll ACH payments totaled \$2,160,433 and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for March totaled \$17,865,491.

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; the investment and debt reports are submitted to the Finance and Personnel Committee monthly.

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF, APPROVE THE MARCH 2022 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$2,160,433, AND APPROVE THE MARCH 2022 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 425269 THROUGH 426151, WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$17,865,491.

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

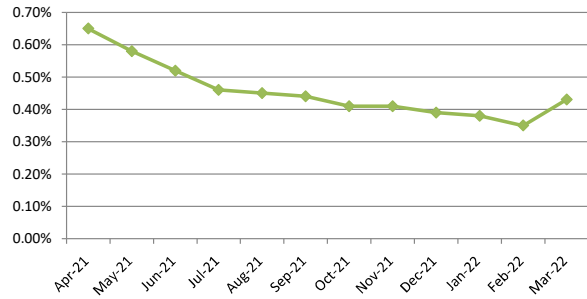
Exhibit "E" – Monthly Payroll ACH Summary

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

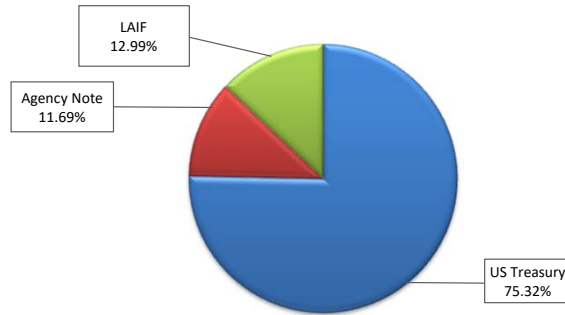
# Exhibit "A"

## Irvine Ranch Water District Investment Portfolio Summary March 2022

**Monthly Fixed Income Yield**



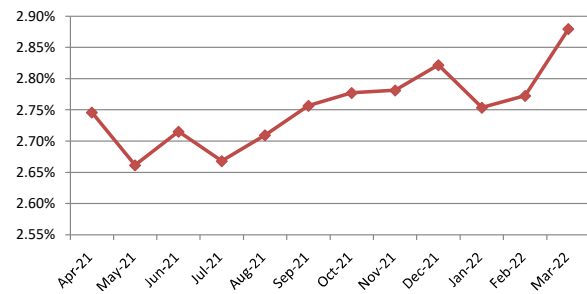
**Portfolio Distribution**



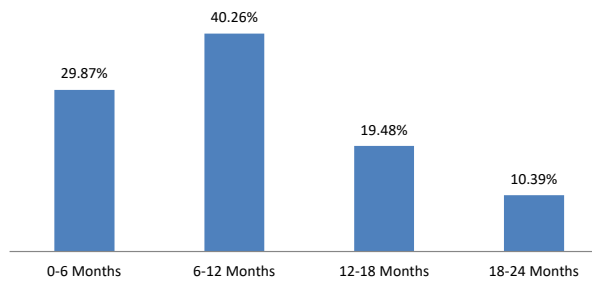
**Investment Summary**

Type	PAR	Book Value	Market Value
US Treasury	290,000,000	289,226,281	286,945,700
LAIF	50,000,000	50,000,000	49,437,677
Agency Note	45,000,000	45,077,243	44,859,100
<b>Grand Total</b>	<b>385,000,000</b>	<b>384,303,524</b>	<b>381,242,477</b>

**Weighted Average Return Including Real Estate Portfolio**



**Maturity Distribution**



**Top Issuers**

Issuer	PAR	% Portfolio
US Treasury	290,000,000	75.32%
State of California Tsy.	50,000,000	12.99%
Fed Farm Credit Bank	30,000,000	7.79%
Fed Home Loan Bank	15,000,000	3.90%
<b>Grand Total</b>	<b>385,000,000</b>	<b>100.00%</b>

IRVINE RANCH WATER DISTRICT

03/31/22

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> 3/31/2022	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
03/23/22			04/01/22		LAIF	State of California Tsy.	\$50,000,000		0.450%	\$50,000,000.00	\$50,000,000.00	49,437,676.90	(562,323.10)
02/21/20	NA	NA	04/14/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.400%	1.414%	4,998,500.00	4,999,841.00	5,001,100.00	1,259.00
04/23/20	NA	NA	04/21/22	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.580%	0.320%	10,250,200.00	10,009,623.08	10,004,300.00	(5,323.08)
08/12/21	NA	NA	05/31/22	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.750%	0.061%	10,135,156.25	10,035,526.36	10,022,200.00	(13,326.36)
04/22/21	NA	NA	06/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.082%	10,005,078.13	10,001,053.07	9,989,100.00	(11,953.07)
04/30/21	NA	NA	06/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.082%	5,002,539.06	5,000,536.42	4,994,550.00	(5,986.42)
05/28/21	NA	NA	06/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.064%	5,003,320.31	5,000,750.82	4,994,550.00	(6,200.82)
05/20/21	NA	NA	06/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.750%	0.065%	5,093,750.00	5,020,782.02	5,014,850.00	(5,932.02)
01/15/20	NA	NA	07/15/22	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.600%	1.594%	5,000,750.00	5,000,086.35	5,010,850.00	10,763.65
12/23/21	NA	NA	07/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.157%	9,998,046.88	9,998,925.78	9,978,100.00	(20,825.78)
04/28/21	NA	NA	08/31/22	Aaa/NR/NR	Treasury - Note	US Treasury	5,000,000	0.125%	0.102%	5,001,562.50	5,000,484.69	4,984,000.00	(16,484.69)
12/15/21	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	1.875%	0.188%	5,059,570.31	5,034,960.18	5,020,300.00	(14,660.18)
01/13/22	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.312%	4,994,140.63	4,996,127.72	4,984,000.00	(12,127.72)
02/15/22	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.776%	4,982,617.19	4,986,587.88	4,984,000.00	(2,587.88)
02/15/22	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.769%	4,982,812.50	4,986,738.58	4,984,000.00	(2,738.58)
04/28/21	NA	NA	09/09/22	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.000%	0.112%	5,128,632.30	5,041,502.61	5,022,250.00	(19,252.61)
12/03/21	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.210%	4,996,484.38	4,997,874.28	4,977,750.00	(20,124.28)
01/10/22	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.332%	4,992,578.13	4,994,863.95	4,977,750.00	(17,113.95)
02/28/22	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.742%	4,982,031.25	4,984,718.17	4,977,750.00	(6,968.17)
03/23/22	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.937%	9,957,812.50	9,959,800.39	9,955,500.00	(4,300.39)
04/22/21	NA	NA	10/31/22	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.110%	10,002,343.75	10,003,630.64	9,939,800.00	(63,830.64)
12/23/21	NA	NA	10/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.253%	9,989,062.50	9,992,533.05	9,939,800.00	(52,733.05)
05/20/21	NA	NA	11/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.103%	5,001,647.15	5,000,716.02	4,961,350.00	(39,366.02)
12/20/21	NA	NA	11/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.266%	9,986,718.75	9,990,645.38	9,922,700.00	(67,945.38)
01/07/22	NA	NA	11/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.401%	4,987,695.31	4,990,856.15	4,961,350.00	(29,506.15)
10/15/21	NA	NA	12/15/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	1.625%	0.140%	10,173,046.88	10,104,803.04	10,019,900.00	(84,903.04)
11/30/21	NA	NA	12/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.216%	9,990,234.38	9,993,242.98	9,903,900.00	(89,342.98)
09/30/21	NA	NA	01/31/23	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.143%	4,998,828.13	4,999,267.58	4,941,400.00	(57,867.58)
12/30/21	NA	NA	01/31/23	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.417%	9,968,359.38	9,975,691.72	9,882,800.00	(92,891.72)
02/28/22	NA	NA	01/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	1.070%	4,956,640.63	4,960,757.84	4,941,400.00	(19,357.84)
11/18/21	NA	NA	02/10/23	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	10,000,000	0.160%	0.285%	9,984,690.00	9,989,259.13	9,898,300.00	(90,959.13)
10/07/21	NA	NA	02/28/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.181%	9,992,187.50	9,994,888.88	9,867,200.00	(127,688.88)
09/09/21	NA	NA	03/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.153%	9,995,703.13	9,997,246.37	9,846,500.00	(150,746.37)
11/02/21	NA	NA	03/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.308%	4,987,109.38	4,990,871.23	4,923,250.00	(67,621.23)
09/30/21	NA	NA	04/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.202%	9,987,890.63	9,991,731.21	9,824,600.00	(167,131.21)
10/19/21	NA	NA	04/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.307%	9,972,265.63	9,980,416.95	9,824,600.00	(155,816.95)
11/16/21	NA	NA	05/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.385%	9,960,156.25	9,969,815.34	9,799,600.00	(170,215.34)
12/29/21	NA	NA	06/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.563%	4,967,187.50	4,972,756.04	4,889,450.00	(83,306.04)
01/11/22	NA	NA	07/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.710%	4,954,882.81	4,961,259.80	4,876,150.00	(85,109.80)
02/28/22	NA	NA	07/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	1.408%	4,909,960.94	4,915,523.20	4,876,150.00	(39,373.20)
01/13/22	NA	NA	08/15/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.769%	9,898,437.50	9,912,119.49	9,741,400.00	(170,719.49)
02/15/22	NA	NA	08/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	1.473%	4,898,046.88	4,906,210.39	4,866,800.00	(39,410.39)
11/26/21	NA	NA	09/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.250%	0.572%	9,941,015.63	9,952,058.77	9,727,300.00	(224,758.77)
03/31/22	NA	NA	10/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	1.625%	2.155%	4,958,984.38	4,959,055.22	4,960,550.00	1,494.78
03/31/22	NA	NA	11/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.500%	2.210%	4,860,742.19	4,860,970.86	4,862,700.00	1,729.14
03/22/22	NA	NA	01/31/24	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.875%	2.013%	4,896,484.38	4,898,006.67	4,876,000.00	(22,006.67)
03/22/22	NA	NA	02/29/24	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	1.500%	2.020%	4,950,781.25	4,951,475.45	4,930,650.00	(20,825.45)
03/10/22	NA	NA	03/08/24	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.875%	1.680%	10,038,080.00	10,036,930.81	9,922,300.00	(114,630.81)
SUB-TOTAL							\$385,000,000			\$384,774,765.16	\$384,303,523.56	\$381,242,476.90	(\$3,061,046.66)

IRVINE RANCH WATER DISTRICT

03/31/22

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> 3/31/2022	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
<b>TOTAL INVESTMENTS</b>							<u>\$385,000,000</u>			<u>\$384,774,765.16</u>	<u>\$384,303,523.56</u>	<u>\$381,242,476.90</u>	<u>(\$3,061,046.66)</u>
					Petty Cash					3,400.00			
					Ck Balance	Bank of America		ECR	0.19%	<u>5,280,346.08</u>			
										<u>\$390,058,511.24</u>			

<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

Outstanding Variable Rate Debt	\$239,100,000
Net Outstanding Variable Rate Debt (Less \$60 million fixed-payer swaps)	\$179,100,000
Investment Balance:	\$390,058,511
Investment to Variable Rate Debt Ratio:	218%
Portfolio - Average Number of Days To Maturity	257

	Investment Portfolio	Real Estate <sup>(3)</sup> Portfolio	Weighted Avg. Return
<b>March</b>	<b>0.43%</b>	<b>12.41%</b>	<b>2.88%</b>
<b>February</b>	<b>0.35%</b>	<b>12.23%</b>	<b>2.77%</b>
<b>Change</b>	<b>0.08%</b>	<b>0.18%</b>	<b>0.11%</b>

This Investment Summary Report is in conformity with the 2022 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures. \*S - Step up

IRVINE RANCH WATER DISTRICT  
SUMMARY OF MATURITIES

03/31/22

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Municipal Bonds	US Treasury
03/22	50,000,000	12.99%	\$50,000,000				
04/22	15,000,000	3.90%		15,000,000			
05/22	10,000,000	2.60%					10,000,000
06/22	25,000,000	6.49%					25,000,000
07/22	15,000,000	3.90%		5,000,000			10,000,000
08/22	25,000,000	6.49%					25,000,000
09/22	30,000,000	7.79%		5,000,000			25,000,000
10/22	20,000,000	5.19%					20,000,000
11/22	20,000,000	5.19%					20,000,000
12/22	20,000,000	5.19%					20,000,000
1/23	20,000,000	5.19%					20,000,000
2/23	20,000,000	5.19%		10,000,000			10,000,000
SUB-TOTAL	\$270,000,000	70.13%	\$50,000,000	35,000,000	-	-	185,000,000

13 Months - 3 YEARS							
03/01/2023 - 05/31/2023	\$45,000,000	11.69%					45,000,000
06/01/2023 - 08/31/2023	\$30,000,000	7.79%					30,000,000
09/01/2023 +	\$40,000,000	10.39%		10,000,000			30,000,000
TOTALS	\$385,000,000	100.00%	\$50,000,000	45,000,000	-		290,000,000

% OF PORTFOLIO

12.99%

11.69%

75.32%



Irvine Ranch Water District  
Summary of Real Estate - Income Producing Investments  
3/31/2022

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	MARKET VALUE 6/30/2021	ANNUALIZED RATE OF RETURN QUARTER ENDED 3/31/2022
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 170,000,000	22.20%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 32,258,924	8.51%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 12,000,000	9.95%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 11,600,000	8.82%
Sand Canyon Professional Center - Medical Office	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 11,900,000	9.64%
Sand Canyon Professional Center - General Office	Sep-20	Office Building	Fee Simple	\$ 25,985,968	\$ 33,250,000	-0.44%
<b>Total - Income Properties</b>				<b>\$ 98,555,794</b>	<b>\$ 271,008,924</b>	<b>12.41%</b>

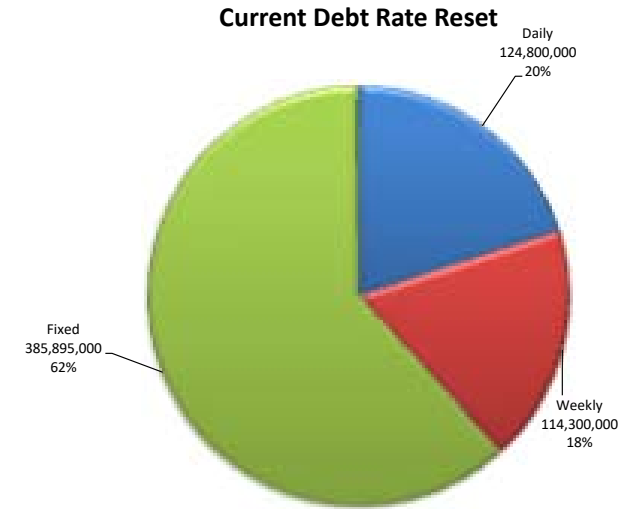
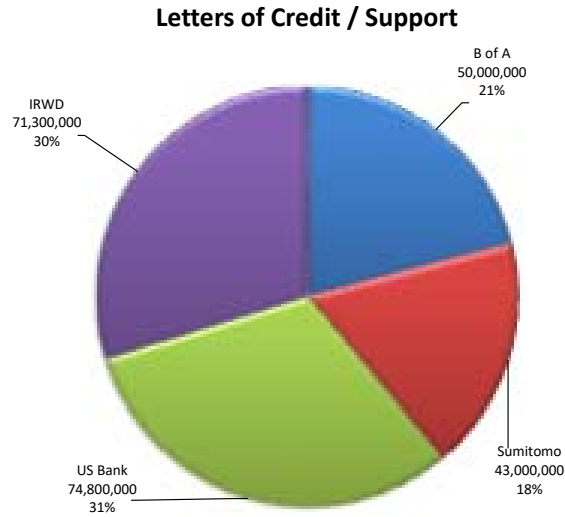
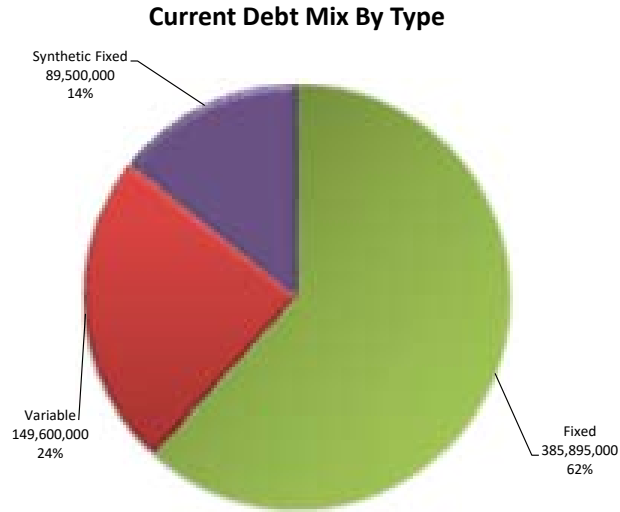
**IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT**  
**INVESTMENT ACTIVITY**  
**Mar-22**

**MATURITIES/SALES/CALLS**

**PURCHASES**

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
3/11/2022	FHLB - Note	\$5,000,000	2.48%	3/10/2022	3/8/2024	FHLB - Note	\$10,000,000	1.68%
3/22/2022	FFCB - Note	\$10,000,000	0.09%	3/22/2022	2/29/2024	Treasury - Note	\$5,000,000	2.02%
3/31/2022	Treasury - Note	\$5,000,000	1.65%	3/22/2022	1/31/2024	Treasury - Note	\$5,000,000	2.01%
3/31/2022	Treasury - Note	\$5,000,000	0.06%	3/23/2022	9/30/2022	Treasury - Note	\$10,000,000	0.94%
				3/31/2022	11/30/2023	Treasury - Note	\$5,000,000	2.21%
				3/31/2022	10/31/2023	Treasury - Note	\$5,000,000	2.15%

Exhibit "B"  
**Irvine Ranch Water District**  
**Summary of Fixed and Variable Rate Debt**  
**March 2022**



**Outstanding Par by Series**

Series	Issue Date	Maturity Date	Remaining Principal	Percent	Letter of Credit/Support	Rmkt Agent	Mode	Reset
Series 1993	05/19/93	04/01/33	\$24,800,000	3.97%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$43,000,000	6.88%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$42,780,000	6.84%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$28,520,000	4.56%	IRWD	Goldman	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$50,000,000	8.00%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$50,000,000	8.00%	B of A	Goldman	Variable	Daily
2016 COPS	09/01/16	03/01/46	\$109,650,000	17.54%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	28.00%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$101,245,000	16.20%	N/A	N/A	Fixed	Fixed
<b>Total</b>			<b>\$624,995,000</b>	<b>100.00%</b>				

**IRVINE RANCH WATER DISTRICT**  
**SUMMARY OF FIXED & VARIABLE RATE DEBT**

March-22

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION										TRUSTEE INFORMATION									
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee						
SERIES 1993	05/19/93	04/01/33	Apr 1	5th Bus. Day	\$38,300,000	\$24,800,000	US BANK	05/07/15	05/01/25	Aa3/VMIG1	AA-/A-1+	N/R	\$25,134,290	0.3000%	\$75,403	BAML	DAILY	0.10%	\$24,800	BANK OF NY						
SERIES 2008-A Refunding	04/24/08	07/01/35	Jul 1	5th Bus. Day	\$60,215,000	\$43,000,000	SUMITOMO	04/01/11	05/28/25	A1/P-1	A/A-1	A/F1	\$43,636,164	0.3150%	\$137,454	BAML	WED	0.07%	\$30,100	BANK OF NY						
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$60,545,000	\$42,780,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$53,475	BANK OF NY						
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$40,370,000	\$28,520,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$35,650	BANK OF NY						
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$50,000,000	US BANK	04/01/11	05/01/25	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$50,558,904	0.3000%	\$151,677	US Bank	DAILY	0.07%	\$35,000	US BANK						
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$50,000,000	B of A	04/01/11	05/16/22	Aa2/VMIG 1	A/A-1	A1/F1+	\$50,558,904	0.3000%	\$151,677	Goldman	DAILY	0.10%	\$50,000	US BANK						
					<b>\$349,430,000</b>	<b>\$239,100,000</b>	<b>SUB-TOTAL VARIABLE RATE DEBT</b>										<b>\$169,888,263</b>		<b>0.3038%</b>		<b>\$516,210</b>		<b>0.10%</b>		<b>\$229,025</b>	
																	(Wt. Avg)				(Wt. Avg)					
FIXED RATE ISSUES																										
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	US BANK						
2016 COPS	09/01/16	03/01/46	Mar 1	Mar/Sept	\$116,745,000	\$109,650,000	N/A	N/A	N/A	NR	AAA	AAA	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	\$101,245,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY						
					<b>\$395,145,000</b>	<b>\$385,895,000</b>	<b>SUB-TOTAL FIXED RATE DEBT</b>																			
					<b>\$744,575,000</b>	<b>\$624,995,000</b>	<b>TOTAL- FIXED &amp; VARIABLE RATE DEBT</b>																			

Remarketing Agents			GO VS COP's		
Goldman	121,300,000	51%	GO:	515,345,000	82%
BAML	67,800,000	28%	COPS:	109,650,000	18%
US Bank	50,000,000	21%	Total	<u>624,995,000</u>	
	<u>239,100,000</u>				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	43,000,000	Daily Issues	124,800,000 20%
BANK OF AMERICA	50,000,000	Weekly Issues	43,000,000 7%
US BANK	74,800,000	ITN Issues	71,300,000 11%
	<u>167,800,000</u>	Sub-Total	<u>239,100,000</u>
		Fixed Rate Issues	\$385,895,000 62%
		Sub-Total - Fixed	<u>385,895,000</u>
		TOTAL DEBT	
		FIXED & VAR.	<u>624,995,000</u> 100%

SUMMARY OF DEBT RATES

Mar-22

Rmkt Agent Mode	GOLDMAN DAILY	GOLDMAN WEEKLY	GOLDMAN WEEKLY	MERRILL LYNCH DAILY	MERRILL LYNCH WEEKLY	US BANK DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	1993	2008-A	2009-A
Par Amount	50,000,000	42,780,000	28,520,000	24,800,000	43,000,000	50,000,000
LOC Bank	BOFA	(SIFMA + 6)	(SIFMA + 6)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday		Wednesday	
3/1/2022	0.02%	0.26%	0.26%	0.04%	0.19%	0.05%
3/2/2022	0.02%	0.26%	0.26%	0.04%	0.19%	0.04%
3/3/2022	0.02%	0.26%	0.26%	0.02%	0.20%	0.03%
3/4/2022	0.03%	0.26%	0.26%	0.02%	0.20%	0.04%
3/5/2022	0.03%	0.26%	0.26%	0.02%	0.20%	0.04%
3/6/2022	0.03%	0.26%	0.26%	0.02%	0.20%	0.04%
3/7/2022	0.03%	0.26%	0.26%	0.04%	0.20%	0.04%
3/8/2022	0.06%	0.26%	0.26%	0.05%	0.20%	0.07%
3/9/2022	0.10%	0.26%	0.26%	0.08%	0.20%	0.10%
3/10/2022	0.12%	0.30%	0.30%	0.13%	0.23%	0.13%
3/11/2022	0.12%	0.30%	0.30%	0.15%	0.23%	0.16%
3/12/2022	0.12%	0.30%	0.30%	0.15%	0.23%	0.16%
3/13/2022	0.12%	0.30%	0.30%	0.15%	0.23%	0.16%
3/14/2022	0.12%	0.30%	0.30%	0.16%	0.23%	0.16%
3/15/2022	0.12%	0.30%	0.30%	0.16%	0.23%	0.14%
3/16/2022	0.12%	0.30%	0.30%	0.16%	0.23%	0.18%
3/17/2022	0.27%	0.43%	0.43%	0.24%	0.37%	0.25%
3/18/2022	0.35%	0.43%	0.43%	0.30%	0.37%	0.33%
3/19/2022	0.35%	0.43%	0.43%	0.30%	0.37%	0.33%
3/20/2022	0.35%	0.43%	0.43%	0.30%	0.37%	0.33%
3/21/2022	0.32%	0.43%	0.43%	0.35%	0.37%	0.33%
3/22/2022	0.35%	0.43%	0.43%	0.36%	0.37%	0.34%
3/23/2022	0.35%	0.43%	0.43%	0.38%	0.37%	0.36%
3/24/2022	0.35%	0.55%	0.55%	0.38%	0.46%	0.39%
3/25/2022	0.35%	0.55%	0.55%	0.38%	0.46%	0.39%
3/26/2022	0.35%	0.55%	0.55%	0.38%	0.46%	0.39%
3/27/2022	0.35%	0.55%	0.55%	0.38%	0.46%	0.39%
3/28/2022	0.34%	0.55%	0.55%	0.38%	0.46%	0.39%
3/29/2022	0.34%	0.55%	0.55%	0.37%	0.46%	0.39%
3/30/2022	0.34%	0.55%	0.55%	0.35%	0.46%	0.39%
3/31/2022	0.32%	0.57%	0.57%	0.33%	0.47%	0.37%
Avg Interest Rates	0.20%	0.38%	0.38%	0.21%	0.31%	0.22%
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.30%			0.30%	0.32%	0.30%
<b>All-In Rate</b>	<b>0.60%</b>	<b>0.51%</b>	<b>0.51%</b>	<b>0.61%</b>	<b>0.70%</b>	<b>0.59%</b>
Par Amount	92,780,000		28,520,000	67,800,000		50,000,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	52.20%	124,800,000	0.60%	0.21%
Weekly	47.80%	114,300,000	0.58%	0.36%
	100.00%	<b>\$ 239,100,000</b>	0.59%	0.28%
<b>Fixed</b>				
COPS 2016	28.41%	109,650,000	2.90%	
BABS 2010	45.35%	175,000,000	4.44%	(1)
SERIES 2016	26.24%	101,245,000	3.32%	
	100.00%	<b>\$ 385,895,000</b>	3.71%	
<b>All-In Debt Rate Including \$60 Million Notional Amount of Swaps</b>				<b>3.09%</b>

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 5.7%

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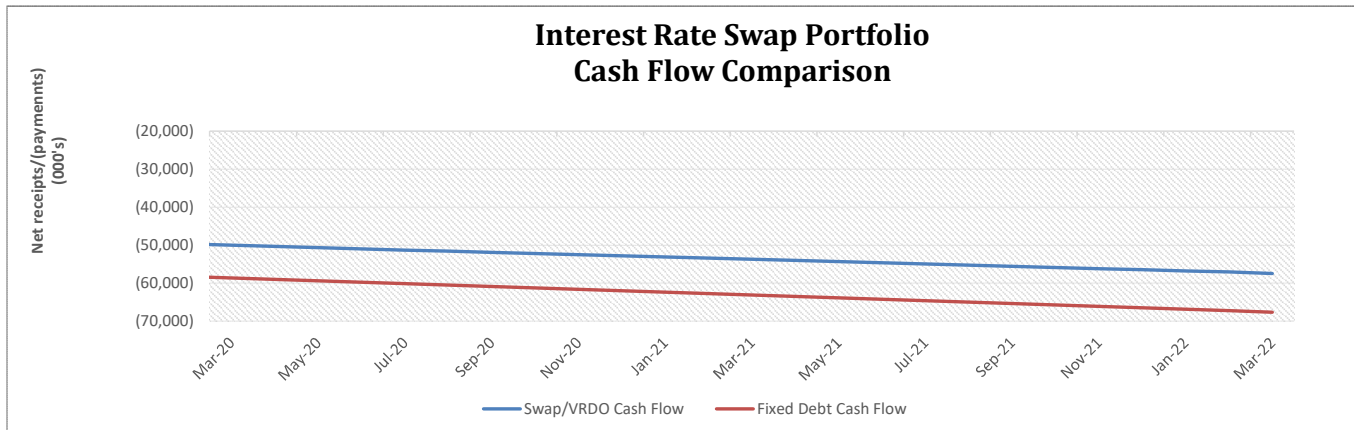
Exhibit "C"  
**Irvine Ranch Water District**  
**Interest Rate Swap Summary**  
**March 2022**

	Prior Mo.	Current Mo.	12-Mo Avg
LIBOR Avg %	0.15%	0.40%	0.12%

Current Fiscal Year Active Swaps								Cash Flow				Mark to Market																																																																	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Net Accrual	Current Mark to Market	Notional Difference																																																																
														<table border="1"> <thead> <tr> <th colspan="8">Fixed Payer Swaps - By Effective Date</th> </tr> </thead> <tbody> <tr> <td>3/10/2007</td> <td>3/10/2029</td> <td>6.9</td> <td>ML</td> <td>30,000,000</td> <td>FXP</td> <td>LIBOR</td> <td>5.687%</td> <td>(125,204)</td> <td>(149,725)</td> <td>(1,258,141)</td> <td>(21,017,408)</td> <td>23,406,556</td> <td>(6,593,444)</td> </tr> <tr> <td>3/10/2007</td> <td>3/10/2029</td> <td>6.9</td> <td>CG</td> <td>30,000,000</td> <td>FXP</td> <td>LIBOR</td> <td>5.687%</td> <td>(125,204)</td> <td>(149,725)</td> <td>(1,258,141)</td> <td>(21,017,408)</td> <td>23,407,474</td> <td>(6,592,526)</td> </tr> <tr> <td colspan="2">Totals/Weighted Avgs</td> <td>6.9</td> <td></td> <td>\$ 60,000,000</td> <td></td> <td></td> <td>5.687%</td> <td>\$ (250,408)</td> <td>\$ (299,450)</td> <td>\$ (2,516,282)</td> <td>\$ (42,034,815)</td> <td>\$ 46,814,030</td> <td>\$ (13,185,970)</td> </tr> <tr> <td colspan="4">Total Current Year Active Swaps</td> <td>\$ 60,000,000</td> <td></td> <td></td> <td></td> <td>\$ (250,408)</td> <td>\$ (299,450)</td> <td>\$ (2,516,282)</td> <td>\$ (42,034,815)</td> <td>\$ 46,814,030</td> <td>\$ (13,185,970)</td> </tr> </tbody> </table>														Fixed Payer Swaps - By Effective Date								3/10/2007	3/10/2029	6.9	ML	30,000,000	FXP	LIBOR	5.687%	(125,204)	(149,725)	(1,258,141)	(21,017,408)	23,406,556	(6,593,444)	3/10/2007	3/10/2029	6.9	CG	30,000,000	FXP	LIBOR	5.687%	(125,204)	(149,725)	(1,258,141)	(21,017,408)	23,407,474	(6,592,526)	Totals/Weighted Avgs		6.9		\$ 60,000,000			5.687%	\$ (250,408)	\$ (299,450)	\$ (2,516,282)	\$ (42,034,815)	\$ 46,814,030	\$ (13,185,970)
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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 Net Accrual	Current Mark to Market	Notional Difference
Total Current Year Terminated Swaps								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market	
								Prior Month	Current Month	Fiscal YTD	Cumulative Net Accrual	Current Mark to Market	Notional Difference
Total Current Year Active & Terminated Swaps								\$ (250,408)	\$ (299,450)	\$ (2,516,282)	\$ (42,034,815)	\$ 46,814,030	\$ (13,185,970)



Cash Flow Comparison	
Synthetic Fixed vs. Fixed Rate Debt	
<u>Cash Flow to Date</u>	
Synthetic Fixed =	\$57,400,066
Fixed Rate =	\$67,585,149
<u>Assumptions:</u>	
- Fixed rate debt issued at 4.93% in Mar-07 (estimated TE rate - Bloomberg)	
- 'Synthetic' includes swap cash flow + interest + fees to date	

Note: This page is intentionally left blank.



# Exhibit "D"

## IRVINE RANCH WATER DISTRICT AP DISBURSEMENTS AND VOIDS FOR MAR 2022

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
425269	3-Mar-22	Arbogast, Ryan P	33.05	IRWD Check	Reconciled
425270	3-Mar-22	Kulick, Michael	242.00	IRWD Check	Reconciled
425271	3-Mar-22	Nicholson, Darin	101.00	IRWD Check	Reconciled
425272	3-Mar-22	Perez, Rodolfo (Rudy)	343.00	IRWD Check	Reconciled
425273	3-Mar-22	Spangenberg, Carl W (Carl)	622.63	IRWD Check	Reconciled
425274	3-Mar-22	ORANGE COUNTY BUSINESS COUNCIL	5,000.00	IRWD Check	Reconciled
425275	3-Mar-22	8X8 INC	10,524.53	IRWD Check	Reconciled
425276	3-Mar-22	ABM INDUSTRY GROUPS, LLC	24,516.09	IRWD Check	Reconciled
425277	3-Mar-22	ACCUSOURCE, INC.	178.84	IRWD Check	Reconciled
425278	3-Mar-22	ADS CORP.	2,325.00	IRWD Check	Reconciled
425279	3-Mar-22	AECOM TECHNICAL SERVICES, INC.	153,703.03	IRWD Check	Reconciled
425280	3-Mar-22	AIRGAS, INC.	142.96	IRWD Check	Reconciled
425281	3-Mar-22	ALAN SMITH POOL PLASTERING, INC	1,310.90	IRWD Check	Reconciled
425282	3-Mar-22	ALL AMERICAN ASPHALT	1,186.18	IRWD Check	Reconciled
425283	3-Mar-22	ALLIANCE APPRAISAL, LLC	3,000.00	IRWD Check	Reconciled
425284	3-Mar-22	ALLIANCE RESOURCE CONSULTING LLC	6,000.00	IRWD Check	Reconciled
425285	3-Mar-22	AMAZON CAPITAL SERVICES, INC.	909.77	IRWD Check	Reconciled
425286	3-Mar-22	AMERICAN TRUCK AND TRAILER OF SANTA ANA	1,334.99	IRWD Check	Reconciled
425287	3-Mar-22	AMWINS GROUP BENEFITS LLC	3,629.10	IRWD Check	Reconciled
425288	3-Mar-22	ANTHONY N. LARSEN	550.00	IRWD Check	Reconciled
425289	3-Mar-22	APCO GRAPHICS INC	266.18	IRWD Check	Reconciled
425290	3-Mar-22	AT&T	384.61	IRWD Check	Reconciled
425291	3-Mar-22	AT&T	56.60	IRWD Check	Reconciled
425292	3-Mar-22	AT&T	711.16	IRWD Check	Reconciled
425293	3-Mar-22	ATLAS INTEGRATED SYSTEMS INC.	4,560.84	IRWD Check	Reconciled
425294	3-Mar-22	AUTOZONE PARTS, INC.	1,240.76	IRWD Check	Reconciled
425295	3-Mar-22	BAVCO BACKFLOW APPARATUS & VALVE COMPANY	170.98	IRWD Check	Reconciled
425296	3-Mar-22	BOFA SECURITIES, INC.	6,250.96	IRWD Check	Reconciled
425297	3-Mar-22	BRIGHT MARKET, LLC	1,431.00	IRWD Check	Reconciled
425299	3-Mar-22	C WELLS PIPELINE MATERIALS INC	6,886.31	IRWD Check	Reconciled
425300	3-Mar-22	CALIFORNIA BARRICADE RENTAL, INC.	9,462.50	IRWD Check	Reconciled
425301	3-Mar-22	CALIFORNIA GATE AND ENTRY SYSTEMS	838.55	IRWD Check	Reconciled
425302	3-Mar-22	CANON SOLUTIONS AMERICA, INC.	32.82	IRWD Check	Reconciled
425303	3-Mar-22	CAPTIVE AUDIENCE MARKETING INC.	79.00	IRWD Check	Reconciled
425304	3-Mar-22	CAROLLO ENGINEERS, INC	14,940.00	IRWD Check	Reconciled
425305	3-Mar-22	CDW GOVERNMENT LLC	4,476.24	IRWD Check	Reconciled
425306	3-Mar-22	CHELOLETTY ENGINEERING	1,744.10	IRWD Check	Reconciled
425307	3-Mar-22	CHO DESIGN ASSOCIATES, INC	800.00	IRWD Check	Reconciled
425308	3-Mar-22	CLARKE MOSQUITO CONTROL PRODUCTS, INC.	37,041.36	IRWD Check	Reconciled
425309	3-Mar-22	COAST PACIFIC BUILDERS INC	304.07	IRWD Check	Reconciled
425310	3-Mar-22	COASTAL OCCUPATIONAL MEDICAL GROUP, INC.	1,226.33	IRWD Check	Reconciled
425311	3-Mar-22	COLONIAL LIFE & ACCIDENT INSURANCE CO.	652.98	IRWD Check	Reconciled
425312	3-Mar-22	COMMERCIAL SCAFFOLDING OF CA, INC.	13,410.30	IRWD Check	Reconciled
425313	3-Mar-22	CONSTELLATION NEWENERGY, INC.	77,287.76	IRWD Check	Reconciled
425314	3-Mar-22	COUNTY OF ORANGE	78,265.94	IRWD Check	Reconciled
425315	3-Mar-22	COX COMMUNICATIONS, INC.	262.72	IRWD Check	Reconciled
425316	3-Mar-22	D & H WATER SYSTEMS INC.	2,019.45	IRWD Check	Reconciled
425317	3-Mar-22	DAVIS FARR LLP	2,650.00	IRWD Check	Reconciled
425318	3-Mar-22	DELL MARKETING LP	97,397.60	IRWD Check	Reconciled
425319	3-Mar-22	DEPARTMENT OF HOUSING & COMMUNITY DEVELOPMENT	2,023.21	IRWD Check	Reconciled
425320	3-Mar-22	DIRECTV INC	146.99	IRWD Check	Reconciled
425321	3-Mar-22	DISTRICT ONE WEST BA 153, LLC	256.19	IRWD Check	Reconciled
425322	3-Mar-22	DPR CONSTRUCTION	743.72	IRWD Check	Negotiable
425323	3-Mar-22	DUDEK	6,077.50	IRWD Check	Reconciled
425324	3-Mar-22	DUDLEY RIDGE WATER DISTRICT	16,910.51	IRWD Check	Reconciled
425325	3-Mar-22	DXP ENTERPRISES, INC.	13,763.76	IRWD Check	Reconciled
425326	3-Mar-22	EAST ORANGE COUNTY WATER DISTRICT	3,399.67	IRWD Check	Reconciled
425327	3-Mar-22	ENTERPRISE HOLDINGS, INC.	7,000.00	IRWD Check	Reconciled
425328	3-Mar-22	ENVIRONMENTAL EXPRESS INC	567.45	IRWD Check	Reconciled
425329	3-Mar-22	ENVIRONMENTAL RESOURCE ASSOCIATES	173.88	IRWD Check	Reconciled
425330	3-Mar-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	5,223.75	IRWD Check	Reconciled
425331	3-Mar-22	EVERETT DOREY LLP	2,921.50	IRWD Check	Reconciled
425332	3-Mar-22	EXECUTIVE LIGHTING & ELECTRIC	3,685.96	IRWD Check	Reconciled
425333	3-Mar-22	FASTBLUE COMMUNICATIONS INC.	1,917.00	IRWD Check	Reconciled
425334	3-Mar-22	FEDEX	308.25	IRWD Check	Reconciled
425335	3-Mar-22	FERGUSON ENTERPRISES, LLC	19,859.58	IRWD Check	Reconciled
425336	3-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	6,597.64	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
425337	3-Mar-22	FIRE EXTINGUISHING SAFETY & SERVICE	503.86	IRWD Check	Reconciled
425338	3-Mar-22	FISHER SCIENTIFIC COMPANY LLC	7,812.98	IRWD Check	Reconciled
425339	3-Mar-22	FLUID SOUND, INC.	301.28	IRWD Check	Reconciled
425340	3-Mar-22	FRONTIER CALIFORNIA INC.	290.73	IRWD Check	Reconciled
425341	3-Mar-22	FUSCOE ENGINEERING, INC.	8,881.00	IRWD Check	Reconciled
425342	3-Mar-22	GANAHL LUMBER CO.	3,825.61	IRWD Check	Reconciled
425343	3-Mar-22	GARY BALE REDI-MIX CONCRETE, INC.	824.83	IRWD Check	Reconciled
425344	3-Mar-22	GEORGE T. HALL CO., INC.	21,092.07	IRWD Check	Reconciled
425345	3-Mar-22	GHAI, ASTHA	1,015.66	IRWD Check	Reconciled
425346	3-Mar-22	GOLDMAN, SACHS & CO. LLC	12,602.74	IRWD Check	Reconciled
425347	3-Mar-22	GRAINGER	10,672.18	IRWD Check	Reconciled
425348	3-Mar-22	GRAYBAR ELECTRIC COMPANY	536.67	IRWD Check	Reconciled
425349	3-Mar-22	GSE CONSTRUCTION CO., INC	54,546.10	IRWD Check	Reconciled
425350	3-Mar-22	GUY L WARDEN & SONS	1,069.93	IRWD Check	Reconciled
425351	3-Mar-22	HACH COMPANY	3,975.63	IRWD Check	Reconciled
425352	3-Mar-22	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	50.88	IRWD Check	Reconciled
425353	3-Mar-22	HAZEN AND SAWYER	8,026.25	IRWD Check	Reconciled
425354	3-Mar-22	HDR ENGINEERING INC	6,995.00	IRWD Check	Reconciled
425355	3-Mar-22	HELPMATES STAFFING SERVICES LLC	1,828.80	IRWD Check	Reconciled
425356	3-Mar-22	HI-LINE INC	309.98	IRWD Check	Reconciled
425357	3-Mar-22	HILL BROTHERS CHEMICAL COMPANY	14,547.25	IRWD Check	Reconciled
425358	3-Mar-22	HOME DEPOT USA INC	453.54	IRWD Check	Reconciled
425359	3-Mar-22	HOWDEN USA COMPANY	22,285.93	IRWD Check	Reconciled
425360	3-Mar-22	INDUSTRIAL METAL SUPPLY CO	1,885.38	IRWD Check	Reconciled
425361	3-Mar-22	INFOSEND, INC.	38,076.02	IRWD Check	Reconciled
425362	3-Mar-22	INNOVATIVE MACHINE TOOL REPAIR LLC	898.75	IRWD Check	Reconciled
425363	3-Mar-22	IRVINE PACIFIC	665.82	IRWD Check	Reconciled
425364	3-Mar-22	IRVINE PIPE & SUPPLY INC	1,725.30	IRWD Check	Reconciled
425365	3-Mar-22	IRWD-PETTY CASH CUSTODIAN	1,171.51	IRWD Check	Reconciled
425366	3-Mar-22	JAMBOREE SMOG	116.00	IRWD Check	Negotiable
425367	3-Mar-22	JCI JONES CHEMICALS INC	10,287.73	IRWD Check	Reconciled
425368	3-Mar-22	KAESER COMPRESSORS, INC.	2,673.93	IRWD Check	Reconciled
425369	3-Mar-22	KB HOMES	880.33	IRWD Check	Negotiable
425370	3-Mar-22	KIMBALL MIDWEST	1,253.41	IRWD Check	Reconciled
425371	3-Mar-22	LA HABRA FENCE COMPANY INC	9,016.00	IRWD Check	Reconciled
425372	3-Mar-22	LABELLE-MARVIN INC	9,962.00	IRWD Check	Reconciled
425373	3-Mar-22	LAGUNA BEACH COUNTY WATER DISTRICT	9,071.47	IRWD Check	Reconciled
425374	3-Mar-22	LANDCARE HOLDINGS, INC.	94,636.30	IRWD Check	Reconciled
425375	3-Mar-22	LEIGHTON CONSULTING, INC.	2,074.30	IRWD Check	Reconciled
425376	3-Mar-22	LENNAR HOMES OF CALIFORNIA, INC.	928.26	IRWD Check	Reconciled
425377	3-Mar-22	LIEBERT CASSIDY WHITMORE	487.50	IRWD Check	Reconciled
425378	3-Mar-22	LILLESTRAND LEADERSHIP CONSULTING, INC.	16,600.00	IRWD Check	Reconciled
425379	3-Mar-22	LINDE GAS & EQUIPMENT INC.	1,743.60	IRWD Check	Reconciled
425380	3-Mar-22	MARK THOMAS & COMPANY, INC.	1,044.19	IRWD Check	Reconciled
425381	3-Mar-22	MARQUES CARVALHAES SLIVA, JACQUELINE	708.96	IRWD Check	Reconciled
425382	3-Mar-22	MC FADDEN-DALE INDUSTRIAL	35.51	IRWD Check	Reconciled
425383	3-Mar-22	MERRIMAC PETROLEUM, INC.	60,380.16	IRWD Check	Reconciled
425384	3-Mar-22	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	1,950.22	IRWD Check	Reconciled
425385	3-Mar-22	MUTUAL PROPANE	356.74	IRWD Check	Reconciled
425386	3-Mar-22	NATIONAL READY MIXED CONCRETE SALES, LLC	1,780.08	IRWD Check	Reconciled
425387	3-Mar-22	NEWPORT BAY CONSERVANCY	35.00	IRWD Check	Reconciled
425388	3-Mar-22	NMG GEOTECHNICAL INC	6,598.20	IRWD Check	Reconciled
425389	3-Mar-22	O'DONNELL CONSTRUCTION, INC	1,255.82	IRWD Check	Reconciled
425390	3-Mar-22	O'REILLY AUTO ENTERPRISES, LLC	20.26	IRWD Check	Reconciled
425391	3-Mar-22	O.C. SUPERIOR CUSTOM CLEANING	712.00	IRWD Check	Reconciled
425392	3-Mar-22	OLIN CORPORATION	44,813.94	IRWD Check	Reconciled
425393	3-Mar-22	ONYX PAVING COMPANY INC.	19,744.00	IRWD Check	Reconciled
425394	3-Mar-22	ORACLE AMERICA, INC.	367.04	IRWD Check	Reconciled
425395	3-Mar-22	ORACLE APPLICATIONS USERS GROUP	1,095.00	IRWD Check	Reconciled
425396	3-Mar-22	ORANGE COUNTY AUTO PARTS CO	1,951.13	IRWD Check	Reconciled
425397	3-Mar-22	ORANGE COUNTY FIRE AUTHORITY	202.00	IRWD Check	Reconciled
425398	3-Mar-22	ORRICK, HERRINGTON & SUTCLIFFE LLP	30,000.00	IRWD Check	Reconciled
425399	3-Mar-22	PACIFIC COAST BOLT CORP	932.08	IRWD Check	Reconciled
425400	3-Mar-22	PACIFIC PARTS & CONTROLS INC	1,198.10	IRWD Check	Reconciled
425401	3-Mar-22	PAPER DEPOT DOCUMENT DESTRUCTION LLC	300.00	IRWD Check	Reconciled
425402	3-Mar-22	PARADA PAINTING INC	3,000.00	IRWD Check	Reconciled
425403	3-Mar-22	PARKSIDE COMM ASSOC	1,755.36	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
425404	3-Mar-22	PASCAL & LUDWIG CONSTRUCTORS	37,741.03	IRWD Check	Reconciled
425405	3-Mar-22	PASCAL & LUDWIG CONSTRUCTORS	1,986.37	IRWD Check	Reconciled
425406	3-Mar-22	PATRIOT PAVING INC.	1,373.00	IRWD Check	Reconciled
425407	3-Mar-22	PPG INDUSTRIES SALES, INC.	118.59	IRWD Check	Reconciled
425408	3-Mar-22	PREFERRED PAVING CO	1,303.22	IRWD Check	Reconciled
425409	3-Mar-22	PSOMAS	14,530.00	IRWD Check	Reconciled
425410	3-Mar-22	QUADIENT FINANCE USA, INC.	2,000.00	IRWD Check	Reconciled
425411	3-Mar-22	R.F. MACDONALD CO.	960.00	IRWD Check	Reconciled
425412	3-Mar-22	RAM AIR ENGINEERING INC	11,694.34	IRWD Check	Reconciled
425413	3-Mar-22	REFRIGERATION SUPPLIES DISTRIBUTOR	3,365.78	IRWD Check	Reconciled
425414	3-Mar-22	RICHARD C. SLADE & ASSOCIATES LLC	14,100.93	IRWD Check	Reconciled
425415	3-Mar-22	RLG ENTERPRISES, INC	547.96	IRWD Check	Reconciled
425416	3-Mar-22	ROBERTSON, CHRISTOPHER	313.82	IRWD Check	Reconciled
425417	3-Mar-22	SAFETY-KLEEN SYSTEMS, INC	307.50	IRWD Check	Reconciled
425418	3-Mar-22	SANTA ANA BLUE PRINT	2,488.38	IRWD Check	Reconciled
425419	3-Mar-22	SANTA MARGARITA FORD	841.38	IRWD Check	Reconciled
425420	3-Mar-22	SCHINDLER ELEVATOR CORPORATION	236.62	IRWD Check	Reconciled
425421	3-Mar-22	SHAMROCK SUPPLY CO INC	622.06	IRWD Check	Reconciled
425422	3-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	3,600.00	IRWD Check	Reconciled
425423	3-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	127.82	IRWD Check	Reconciled
425424	3-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	201,810.17	IRWD Check	Reconciled
425425	3-Mar-22	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	217.79	IRWD Check	Reconciled
425426	3-Mar-22	SPARKLETT'S	172.29	IRWD Check	Reconciled
425427	3-Mar-22	STANTEC CONSULTING SERVICES INC.	33,454.85	IRWD Check	Reconciled
425428	3-Mar-22	STETSON ENGINEERS INC.	10,977.00	IRWD Check	Reconciled
425429	3-Mar-22	T.E. ROBERTS, INC.	15,678.82	IRWD Check	Reconciled
425430	3-Mar-22	TANKVISIONS, INC	30.00	IRWD Check	Reconciled
425431	3-Mar-22	TAWEKJIAN, MEHRAN	300.00	IRWD Check	Reconciled
425432	3-Mar-22	TETRA TECH, INC	8,862.50	IRWD Check	Reconciled
425433	3-Mar-22	THE IRVINE COMPANY LLC	993.08	IRWD Check	Reconciled
425434	3-Mar-22	THOMPSON & PHIPPS INC	3,097.15	IRWD Check	Reconciled
425435	3-Mar-22	TK ELEVATOR CORPORATION	218.38	IRWD Check	Reconciled
425436	3-Mar-22	TRAFFIC MANAGEMENT, INC	6,684.50	IRWD Check	Reconciled
425437	3-Mar-22	TREE OF LIFE NURSERY	106.68	IRWD Check	Reconciled
425438	3-Mar-22	UNITED PARCEL SERVICE INC	75.37	IRWD Check	Reconciled
425439	3-Mar-22	VERIZON WIRELESS SERVICES LLC	14,869.14	IRWD Check	Reconciled
425440	3-Mar-22	VERTECH INDUSTRIAL SYSTEMS, LLC	8,628.75	IRWD Check	Reconciled
425441	3-Mar-22	VIDO ARTUKOVICH & SON INC./ VIDMAR INC A JV	1,588.08	IRWD Check	Reconciled
425442	3-Mar-22	VIDO ARTUKOVICH & SON, INC./ VIDMAR, INC. A JV	725.33	IRWD Check	Reconciled
425443	3-Mar-22	VULCAN MATERIALS COMPANY	1,547.38	IRWD Check	Reconciled
425444	3-Mar-22	WANG, SHUJUN	34.22	IRWD Check	Negotiable
425445	3-Mar-22	WARD, WILLIAM P JR.	1,351.80	IRWD Check	Reconciled
425446	3-Mar-22	WASTE MANAGEMENT COLLECTIONS AND RECYCLING, INC.	2,520.18	IRWD Check	Reconciled
425447	3-Mar-22	WAXIE'S ENTERPRISES, INC	2,350.54	IRWD Check	Reconciled
425448	3-Mar-22	WECK LABORATORIES INC	174.00	IRWD Check	Reconciled
425449	3-Mar-22	WEST COAST SAFETY SUPPLY INC	2,619.82	IRWD Check	Reconciled
425450	10-Mar-22	Breiter, Michelle	23.52	IRWD Check	Reconciled
425451	10-Mar-22	Hatch, Lauren	288.00	IRWD Check	Reconciled
425452	10-Mar-22	Pan, Jenny W (Jenny)	112.11	IRWD Check	Reconciled
425453	10-Mar-22	Reinhart, Douglas J	309.96	IRWD Check	Negotiable
425454	10-Mar-22	Swan, Peer	80.90	IRWD Check	Negotiable
425455	10-Mar-22	Withers, John B	618.10	IRWD Check	Negotiable
425456	10-Mar-22	8X8 INC	10,524.85	IRWD Check	Reconciled
425457	10-Mar-22	ABM INDUSTRY GROUPS, LLC	34,442.09	IRWD Check	Reconciled
425458	10-Mar-22	ADVANCED CALIBRATION DESIGNS INC	1,559.00	IRWD Check	Reconciled
425459	10-Mar-22	AECOM TECHNICAL SERVICES, INC.	55,120.00	IRWD Check	Reconciled
425460	10-Mar-22	AIR TECHNOLOGY LABORATORIES	289.00	IRWD Check	Reconciled
425461	10-Mar-22	AIRGAS, INC.	4,205.23	IRWD Check	Reconciled
425462	10-Mar-22	AM CONSERVATION GROUP, INC.	198.55	IRWD Check	Reconciled
425463	10-Mar-22	AMAZON CAPITAL SERVICES, INC.	3,269.16	IRWD Check	Reconciled
425464	10-Mar-22	AMERICAN WATER WORKS ASSOC	11,750.00	IRWD Check	Reconciled
425465	10-Mar-22	ANDERSON, SHIRLY	57.70	IRWD Check	Negotiable
425466	10-Mar-22	ARAG NORTH AMERICA, INC.	415.00	IRWD Check	Reconciled
425467	10-Mar-22	ARDURRA GROUP, INC.	29,280.00	IRWD Check	Reconciled
425468	10-Mar-22	ASSEMBLED PRODUCTS CORPORATION	1,114.61	IRWD Check	Reconciled
425469	10-Mar-22	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA	37,135.44	IRWD Check	Reconciled
425470	10-Mar-22	AT&T	4,515.16	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
425471	10-Mar-22	ATLAS INTEGRATED SYSTEMS INC.	22,097.72	IRWD Check	Reconciled
425472	10-Mar-22	AUTOZONE PARTS, INC.	394.34	IRWD Check	Reconciled
425473	10-Mar-22	BATTERIES PLUS AND BATTERIES PLUS BULBS	1,791.68	IRWD Check	Reconciled
425474	10-Mar-22	BATTERY SYSTEMS INC	2,827.86	IRWD Check	Reconciled
425475	10-Mar-22	BAVCO BACKFLOW APPARATUS & VALVE COMPANY	119.40	IRWD Check	Reconciled
425476	10-Mar-22	BERGLAS-SCHOBERT, MOUREEN	144.34	IRWD Check	Reconciled
425477	10-Mar-22	BEST BUY BUSINESS ADVANTAGE ACCOUNT	1,292.89	IRWD Check	Reconciled
425478	10-Mar-22	BEST DRILLING AND PUMP, INC.	140,376.75	IRWD Check	Reconciled
425479	10-Mar-22	BIOMAGIC INC	9,006.02	IRWD Check	Reconciled
425480	10-Mar-22	BLOOMBERG FINANCE LP	13,605.00	IRWD Check	Reconciled
425481	10-Mar-22	BSI SERVICES AND SOLUTIONS (WEST) INC.	50,750.00	IRWD Check	Reconciled
425482	10-Mar-22	C WELLS PIPELINE MATERIALS INC	1,325.33	IRWD Check	Reconciled
425483	10-Mar-22	CALIFORNIA BARRICADE RENTAL, INC.	13,185.00	IRWD Check	Reconciled
425484	10-Mar-22	CALIFORNIA NEWSPAPERS PARTNERSHIP	6,456.59	IRWD Check	Reconciled
425485	10-Mar-22	CANON SOLUTIONS AMERICA, INC.	4,436.72	IRWD Check	Reconciled
425486	10-Mar-22	CANON SOLUTIONS AMERICA, INC.	16.85	IRWD Check	Reconciled
425487	10-Mar-22	CAPTIVE AUDIENCE MARKETING INC.	79.00	IRWD Check	Reconciled
425488	10-Mar-22	CAREERS IN GOVERNMENT, INC.	2,700.00	IRWD Check	Reconciled
425489	10-Mar-22	CART-AWAY CONCRETE SYSTEMS, INC.	328.69	IRWD Check	Reconciled
425490	10-Mar-22	CDW GOVERNMENT LLC	14,925.08	IRWD Check	Reconciled
425491	10-Mar-22	CHAIREL CUSTOM HAY, INC.	911.50	IRWD Check	Reconciled
425492	10-Mar-22	CHEM TECH INTERNATIONAL INC	5,894.91	IRWD Check	Reconciled
425493	10-Mar-22	CHEMPACK & ENVIRONMENTAL, LLC	1,150.00	IRWD Check	Reconciled
425494	10-Mar-22	CITY OF IRVINE	29,231.90	IRWD Check	Reconciled
425495	10-Mar-22	CITY OF ORANGE	232.41	IRWD Check	Reconciled
425496	10-Mar-22	CLA-VAL COMPANY	4,919.15	IRWD Check	Reconciled
425497	10-Mar-22	CLEAN ENERGY	5,482.82	IRWD Check	Reconciled
425498	10-Mar-22	COASTAL OCCUPATIONAL MEDICAL GROUP, INC.	704.45	IRWD Check	Reconciled
425499	10-Mar-22	CONSTELLATION NEWENERGY, INC.	72,393.56	IRWD Check	Reconciled
425500	10-Mar-22	CORELOGIC INC	6,399.98	IRWD Check	Reconciled
425501	10-Mar-22	COX COMMUNICATIONS, INC.	278.78	IRWD Check	Reconciled
425502	10-Mar-22	CULLIGAN OF SANTA ANA	20,000.00	IRWD Check	Reconciled
425503	10-Mar-22	CV TECHNOLOGY, INC.	10,300.00	IRWD Check	Reconciled
425504	10-Mar-22	D & H WATER SYSTEMS INC.	336.11	IRWD Check	Reconciled
425505	10-Mar-22	DAS, BISWA	597.67	IRWD Check	Reconciled
425506	10-Mar-22	DCS MANAGEMENT LLC	148.44	IRWD Check	Reconciled
425507	10-Mar-22	DEALERS SERVICE COMPANY, INC	3,926.75	IRWD Check	Reconciled
425508	10-Mar-22	DEPARTMENT OF CONSUMER AFFAIRS	250.00	IRWD Check	Reconciled
425509	10-Mar-22	DEX MEDIA, INC.	41.00	IRWD Check	Reconciled
425510	10-Mar-22	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY	4,305.20	IRWD Check	Reconciled
425511	10-Mar-22	DUDEK	11,340.56	IRWD Check	Reconciled
425512	10-Mar-22	EHS INTERNATIONAL, INC	1,045.50	IRWD Check	Reconciled
425513	10-Mar-22	EMD MILLIPORE CORP.	5,016.25	IRWD Check	Reconciled
425514	10-Mar-22	ENVIRONMENTAL RESOURCE ASSOCIATES	673.67	IRWD Check	Reconciled
425515	10-Mar-22	ENVIRONMENTAL SCIENCE ASSOCIATES	7,210.44	IRWD Check	Reconciled
425516	10-Mar-22	EQUALTOX, LLC	12,750.00	IRWD Check	Reconciled
425517	10-Mar-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	3,973.75	IRWD Check	Reconciled
425518	10-Mar-22	EVOQUA WATER TECHNOLOGIES LLC	357.48	IRWD Check	Reconciled
425519	10-Mar-22	EXCEL PAVING CO.	1,625.24	IRWD Check	Reconciled
425520	10-Mar-22	EXECUTIVE LIGHTING & ELECTRIC	1,116.31	IRWD Check	Reconciled
425521	10-Mar-22	FACTORY MUTUAL INSURANCE COMPANY	20,000.00	IRWD Check	Reconciled
425522	10-Mar-22	FARRELL & ASSOCIATES	107.73	IRWD Check	Reconciled
425523	10-Mar-22	FEDEX	374.88	IRWD Check	Reconciled
425524	10-Mar-22	FERGUSON ENTERPRISES, LLC	7,011.94	IRWD Check	Reconciled
425525	10-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	180.35	IRWD Check	Reconciled
425526	10-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	85.52	IRWD Check	Reconciled
425527	10-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	917.76	IRWD Check	Reconciled
425528	10-Mar-22	FISHER SCIENTIFIC COMPANY LLC	9,149.74	IRWD Check	Reconciled
425529	10-Mar-22	FLEET SOLUTIONS LLC	5,759.20	IRWD Check	Reconciled
425530	10-Mar-22	FUSCOE ENGINEERING, INC.	598.00	IRWD Check	Reconciled
425531	10-Mar-22	GCI CONSTRUCTION, INC.	54,240.45	IRWD Check	Reconciled
425532	10-Mar-22	GI ENDURANT LLC	32,725.00	IRWD Check	Reconciled
425533	10-Mar-22	GRAINGER	5,030.58	IRWD Check	Reconciled
425534	10-Mar-22	GUIDA SURVEYING INC.	2,794.25	IRWD Check	Reconciled
425535	10-Mar-22	HACH COMPANY	1,609.41	IRWD Check	Reconciled
425536	10-Mar-22	HARBOR TRUCK BODIES, INC.	7,693.37	IRWD Check	Reconciled
425537	10-Mar-22	HARRINGTON INDUSTRIAL PLASTICS LLC	11,912.12	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
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425538	10-Mar-22	HDR ENGINEERING INC	98,155.50	IRWD Check	Reconciled
425539	10-Mar-22	HELPMATES STAFFING SERVICES	3,957.60	IRWD Check	Reconciled
425540	10-Mar-22	HELPMATES STAFFING SERVICES LLC	2,742.52	IRWD Check	Reconciled
425541	10-Mar-22	HILL BROTHERS CHEMICAL COMPANY	7,691.96	IRWD Check	Negotiable
425542	10-Mar-22	HOME DEPOT USA INC	481.73	IRWD Check	Reconciled
425543	10-Mar-22	IDEA HALL	5,000.00	IRWD Check	Reconciled
425544	10-Mar-22	INDUSTRIAL METAL SUPPLY CO	2,213.95	IRWD Check	Reconciled
425545	10-Mar-22	INFOSEND, INC.	59,920.33	IRWD Check	Reconciled
425546	10-Mar-22	IRON MOUNTAIN INFORMATION MANAGEMENT INC	676.61	IRWD Check	Reconciled
425547	10-Mar-22	IRVINE PACIFIC	305.88	IRWD Check	Reconciled
425548	10-Mar-22	IRVINE PIPE & SUPPLY INC	2,650.71	IRWD Check	Reconciled
425549	10-Mar-22	IRWD-PETTY CASH CUSTODIAN	873.34	IRWD Check	Reconciled
425550	10-Mar-22	JCI JONES CHEMICALS INC	4,691.81	IRWD Check	Reconciled
425551	10-Mar-22	JIG CONSULTANTS	3,345.00	IRWD Check	Reconciled
425552	10-Mar-22	JPR SYSTEMS INC	4,302.00	IRWD Check	Reconciled
425553	10-Mar-22	KAZARIANS & ASSOCIATES, INC.	4,882.50	IRWD Check	Reconciled
425554	10-Mar-22	KIM, MELISSA	45.31	IRWD Check	Reconciled
425555	10-Mar-22	KIMBALL MIDWEST	852.73	IRWD Check	Reconciled
425556	10-Mar-22	KUTAK ROCK LLP	3,596.00	IRWD Check	Reconciled
425557	10-Mar-22	LANA BECKETT	697.00	IRWD Check	Reconciled
425558	10-Mar-22	LANDCARE HOLDINGS, INC.	101,819.71	IRWD Check	Reconciled
425559	10-Mar-22	LAW OFFICE OF ATOOSA VAKILI	4,460.00	IRWD Check	Reconciled
425560	10-Mar-22	LAW OFFICE OF ATOOSA VAKILI	1,643.46	IRWD Check	Reconciled
425561	10-Mar-22	LAW OFFICE OF ATOOSA VAKILI	4,000.00	IRWD Check	Reconciled
425562	10-Mar-22	LINDE GAS & EQUIPMENT INC.	1,597.23	IRWD Check	Reconciled
425563	10-Mar-22	LINDSAY POLIC CONSULTING, INC.	8,200.00	IRWD Check	Reconciled
425564	10-Mar-22	MARK ENTERPRISES TECHNOLOGIES LLC	84,505.75	IRWD Check	Reconciled
425565	10-Mar-22	MBK ENGINEERS	6,484.00	IRWD Check	Reconciled
425566	10-Mar-22	MC MASTER CARR SUPPLY CO	763.44	IRWD Check	Reconciled
425567	10-Mar-22	MEGGER	448.93	IRWD Check	Reconciled
425568	10-Mar-22	MEL UNDERWOOD WATER TRUCKS & EQUIPMENT	960.00	IRWD Check	Reconciled
425569	10-Mar-22	MERCER (US) INC.	5,418.81	IRWD Check	Reconciled
425570	10-Mar-22	MICHAEL BAKER INTERNATIONAL, INC.	2,640.00	IRWD Check	Reconciled
425571	10-Mar-22	MICROSOFT CORPORATION	20.00	IRWD Check	Reconciled
425573	10-Mar-22	MISSION COMMUNICATIONS, LLC	581.40	IRWD Check	Reconciled
425574	10-Mar-22	MORRISROE, EDWARD	433.14	IRWD Check	Reconciled
425575	10-Mar-22	NATIONAL READY MIXED CONCRETE SALES, LLC	1,467.58	IRWD Check	Reconciled
425576	10-Mar-22	NEILSON CONSTRUCTION INC	1,413.63	IRWD Check	Reconciled
425577	10-Mar-22	NMG GEOTECHNICAL INC	9,186.00	IRWD Check	Reconciled
425578	10-Mar-22	NV5, INC.	27,640.00	IRWD Check	Reconciled
425579	10-Mar-22	O'REILLY AUTO ENTERPRISES, LLC	818.48	IRWD Check	Reconciled
425580	10-Mar-22	O.C. SUPERIOR CUSTOM CLEANING	3,600.00	IRWD Check	Reconciled
425581	10-Mar-22	OCTA	962.00	IRWD Check	Reconciled
425582	10-Mar-22	OLIN CORPORATION	35,289.89	IRWD Check	Reconciled
425583	10-Mar-22	OPENDOOR LABS INC	42.88	IRWD Check	Negotiable
425584	10-Mar-22	ORANGE COUNTY FIRE AUTHORITY	202.00	IRWD Check	Reconciled
425585	10-Mar-22	ORANGE COUNTY FIRE AUTHORITY	1,116.00	IRWD Check	Negotiable
425586	10-Mar-22	ORANGE COUNTY FIRE AUTHORITY	1,581.00	IRWD Check	Reconciled
425587	10-Mar-22	ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT	249.92	IRWD Check	Reconciled
425588	10-Mar-22	PACIFIC HYDROTECH CORPORATION	29,333.97	IRWD Check	Reconciled
425589	10-Mar-22	PACIFIC HYDROTECH CORPORATION	872,469.53	IRWD Check	Reconciled
425590	10-Mar-22	PACIFIC HYDROTECH CORPORATION	16,585.48	IRWD Check	Reconciled
425591	10-Mar-22	PACIFIC PARTS & CONTROLS INC	2,775.52	IRWD Check	Reconciled
425592	10-Mar-22	PARKHOUSE TIRE INC	4,032.81	IRWD Check	Reconciled
425593	10-Mar-22	PAULUS ENGINEERING, INC.	70,633.97	IRWD Check	Reconciled
425594	10-Mar-22	PELLETIER & ASSOCIATES, INC.	390.00	IRWD Check	Reconciled
425595	10-Mar-22	PENN ARCHIVE SERVICES	1,279.04	IRWD Check	Reconciled
425596	10-Mar-22	PFM ASSET MANAGEMENT LLC	4,000.00	IRWD Check	Reconciled
425597	10-Mar-22	POLYDYNE INC	63,734.13	IRWD Check	Reconciled
425598	10-Mar-22	PSOMAS	1,100.00	IRWD Check	Reconciled
425599	10-Mar-22	PULTE GROUP	957.22	IRWD Check	Reconciled
425600	10-Mar-22	PYRO-COMM SYSTEMS INC	985.00	IRWD Check	Reconciled
425601	10-Mar-22	QUADIENT LEASING USA, INC.	3,265.46	IRWD Check	Reconciled
425602	10-Mar-22	QUALITY ENVIRONMENTAL CONTAINERS	12,124.38	IRWD Check	Reconciled
425603	10-Mar-22	REACH EMPLOYEE ASSISTANCE INC	1,066.80	IRWD Check	Reconciled
425604	10-Mar-22	RED WING SHOE STORE	2,713.32	IRWD Check	Reconciled
425605	10-Mar-22	RENTOKIL NORTH AMERICA, INC	12,090.00	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

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425606	10-Mar-22	RODNEY HARMSWORTH ASSOCIATES, INC.	2,500.00	IRWD Check	Reconciled
425607	10-Mar-22	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT	74,274.41	IRWD Check	Reconciled
425608	10-Mar-22	SADDLEBACK SURVEYS, INC.	4,344.00	IRWD Check	Reconciled
425609	10-Mar-22	SANTIAGO AQUEDUCT COMMISSION	254,426.00	IRWD Check	Reconciled
425610	10-Mar-22	SECURITAS SECURITY SERVICES USA, INC.	59,090.86	IRWD Check	Reconciled
425611	10-Mar-22	SERRANO WATER DISTRICT	7,357.16	IRWD Check	Reconciled
425612	10-Mar-22	SHEA HOMES LIMITED PARTNERSHIP	297.13	IRWD Check	Reconciled
425613	10-Mar-22	SHOETERIA	198.78	IRWD Check	Reconciled
425614	10-Mar-22	SJD&B, INC.	2,342.05	IRWD Check	Reconciled
425615	10-Mar-22	SMRECEK, PETER	40.85	IRWD Check	Reconciled
425616	10-Mar-22	SMT AUTOMOTIVE LLC	131.56	IRWD Check	Reconciled
425617	10-Mar-22	SOUTH COAST WATER DISTRICT	937.17	IRWD Check	Reconciled
425618	10-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	153,821.29	IRWD Check	Reconciled
425619	10-Mar-22	SOUTHERN COUNTIES LUBRICANTS LLC	4,308.34	IRWD Check	Reconciled
425620	10-Mar-22	SOUTHWEST VALVE & EQUIPMENT INC	45,437.25	IRWD Check	Reconciled
425621	10-Mar-22	SPARKLETT'S	134.83	IRWD Check	Reconciled
425622	10-Mar-22	SUN TSENG, LI JU	335.86	IRWD Check	Negotiable
425623	10-Mar-22	SUNSHINE SUPPLY COMPANY, INC.	2,797.19	IRWD Check	Reconciled
425624	10-Mar-22	SUSAN A. SIROTA	4,755.00	IRWD Check	Reconciled
425625	10-Mar-22	TAIT ENVIRONMENTAL SERVICES, INC.	1,202.50	IRWD Check	Reconciled
425626	10-Mar-22	TEKDRAULICS	22,758.43	IRWD Check	Reconciled
425627	10-Mar-22	TETRA TECH, INC	22,250.00	IRWD Check	Reconciled
425628	10-Mar-22	THOMPSON & PHIPPS INC	16,413.27	IRWD Check	Reconciled
425629	10-Mar-22	TIC-OFFICE PROPERTIES	102.03	IRWD Check	Reconciled
425630	10-Mar-22	TIC-SPECTRUM OFFICE	617.78	IRWD Check	Reconciled
425631	10-Mar-22	TRAFFIC MANAGEMENT, INC	850.00	IRWD Check	Reconciled
425632	10-Mar-22	TRI POINTE HOMES, INC.	1,782.72	IRWD Check	Negotiable
425633	10-Mar-22	TRIPAC MARKETING INC	246.01	IRWD Check	Reconciled
425634	10-Mar-22	TSAO, MICHAEL	18.40	IRWD Check	Negotiable
425635	10-Mar-22	U.S. GAIN - A DIVISION OF U.S. VENTURE, INC.	282.45	IRWD Check	Reconciled
425636	10-Mar-22	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA	5,066.41	IRWD Check	Reconciled
425637	10-Mar-22	UNISON SOLUTIONS, INC	3,014.89	IRWD Check	Reconciled
425638	10-Mar-22	UNITED PARCEL SERVICE INC	170.92	IRWD Check	Reconciled
425639	10-Mar-22	USA WASTE OF CALIFORNIA, INC.	525.00	IRWD Check	Reconciled
425640	10-Mar-22	VAUGHAN'S INDUSTRIAL REPAIR CO INC	11,488.96	IRWD Check	Reconciled
425641	10-Mar-22	VERIZON WIRELESS SERVICES LLC	7,884.28	IRWD Check	Reconciled
425642	10-Mar-22	VO, LUC	136.68	IRWD Check	Reconciled
425643	10-Mar-22	VWR INTERNATIONAL, LLC	483.55	IRWD Check	Reconciled
425644	10-Mar-22	WASTE MANAGEMENT COLLECTIONS AND RECYCLING, INC.	5,560.45	IRWD Check	Reconciled
425645	10-Mar-22	WATERSMART SOFTWARE INC	15,174.99	IRWD Check	Reconciled
425646	10-Mar-22	WECK LABORATORIES INC	6,806.50	IRWD Check	Reconciled
425647	10-Mar-22	WEST COAST SAFETY SUPPLY INC	32,530.02	IRWD Check	Reconciled
425648	10-Mar-22	WEST YOST & ASSOCIATES, INC.	1,088.50	IRWD Check	Reconciled
425649	10-Mar-22	WESTAMERICA COMMUNICATIONS, INC.	637.50	IRWD Check	Reconciled
425650	10-Mar-22	WESTERN AV	9,842.96	IRWD Check	Reconciled
425651	10-Mar-22	WILLARD, DEBORAH	763.68	IRWD Check	Reconciled
425652	10-Mar-22	WISCONSIN STATE LABORATORY OF HYGIENE	355.00	IRWD Check	Reconciled
425653	10-Mar-22	WORKFORCE SAFETY LLC	6,000.00	IRWD Check	Reconciled
425654	10-Mar-22	YU, YIMING	180.08	IRWD Check	Reconciled
425655	10-Mar-22	PERS LONG TERM CARE	612.63	IRWD Check	Reconciled
425656	10-Mar-22	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	3,337.58	IRWD Check	Reconciled
425657	10-Mar-22	FRANCHISE TAX BOARD	1,170.64	IRWD Check	Reconciled
425658	10-Mar-22	LAW OFFICE OF ATOOSA VAKILI	700.00	IRWD Check	Reconciled
425659	17-Mar-22	Colston, James	88.25	IRWD Check	Reconciled
425660	17-Mar-22	Moeder, Jacob J (Jacob)	135.00	IRWD Check	Reconciled
425661	17-Mar-22	A&Y ASPHALT CONTRACTORS, INC.	5,642.00	IRWD Check	Reconciled
425662	17-Mar-22	ABSOLUTE STANDARDS, INC.	1,438.75	IRWD Check	Reconciled
425663	17-Mar-22	ACCUSTANDARD INC	426.01	IRWD Check	Reconciled
425664	17-Mar-22	ACE INDUSTRIES, INC.	4,016.47	IRWD Check	Reconciled
425665	17-Mar-22	AIRGAS, INC.	138.66	IRWD Check	Reconciled
425666	17-Mar-22	ALSTON & BIRD LLP	31,464.57	IRWD Check	Reconciled
425667	17-Mar-22	AMAZON CAPITAL SERVICES, INC.	1,897.60	IRWD Check	Reconciled
425668	17-Mar-22	ARCADIS U.S., INC.	948.72	IRWD Check	Reconciled
425669	17-Mar-22	AT&T	1,869.36	IRWD Check	Reconciled
425670	17-Mar-22	AT&T	5,005.20	IRWD Check	Reconciled
425671	17-Mar-22	AUTOZONE PARTS, INC.	352.23	IRWD Check	Reconciled
425672	17-Mar-22	B & K ELECTRIC WHOLESALE	1,177.99	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
425673	17-Mar-22	BARROT, YVONNE	33.85	IRWD Check	Reconciled
425674	17-Mar-22	BEE EMERGENCY RESPONSE TEAM	175.00	IRWD Check	Reconciled
425675	17-Mar-22	BENJAMIN PETER DEMAYO	1,225.00	IRWD Check	Reconciled
425676	17-Mar-22	BLUEBEAM, INC	4,768.00	IRWD Check	Reconciled
425677	17-Mar-22	BOOT WORLD, INC.	214.08	IRWD Check	Reconciled
425678	17-Mar-22	BROWN AND CALDWELL	18,594.57	IRWD Check	Reconciled
425679	17-Mar-22	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC	718.55	IRWD Check	Reconciled
425680	17-Mar-22	C WELLS PIPELINE MATERIALS INC	3,814.35	IRWD Check	Reconciled
425681	17-Mar-22	CALIFORNIA BARRICADE RENTAL, INC.	10,940.00	IRWD Check	Reconciled
425682	17-Mar-22	CANNON CORPORATION	7,752.50	IRWD Check	Reconciled
425683	17-Mar-22	CANON FINANCIAL SERVICES, INC	8,343.52	IRWD Check	Reconciled
425684	17-Mar-22	CANON SOLUTIONS AMERICA, INC.	845.62	IRWD Check	Reconciled
425685	17-Mar-22	CDW GOVERNMENT LLC	508.42	IRWD Check	Reconciled
425686	17-Mar-22	CHARLES P CROWLEY COMPANY INC	1,221.04	IRWD Check	Reconciled
425687	17-Mar-22	CIMARRON ENERGY, INC	1,508.50	IRWD Check	Reconciled
425688	17-Mar-22	CLIFFORD MORIYAMA	4,000.00	IRWD Check	Reconciled
425689	17-Mar-22	COASTAL OCCUPATIONAL MEDICAL GROUP, INC.	60.00	IRWD Check	Reconciled
425690	17-Mar-22	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	21,401.00	IRWD Check	Reconciled
425691	17-Mar-22	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	560.30	IRWD Check	Reconciled
425692	17-Mar-22	CONSTELLATION NEWENERGY, INC.	30,191.13	IRWD Check	Reconciled
425693	17-Mar-22	CORELOGIC INC	26.16	IRWD Check	Reconciled
425694	17-Mar-22	CR & R INCORPORATED	427.30	IRWD Check	Reconciled
425695	17-Mar-22	DEMARIA ELECTRIC MOTOR SERVICES, INC.	19,756.36	IRWD Check	Reconciled
425696	17-Mar-22	DRAKE TRAFFIC CONTROL SERVICES INC	3,490.00	IRWD Check	Reconciled
425697	17-Mar-22	DUDEK	1,480.00	IRWD Check	Reconciled
425698	17-Mar-22	ENDRESS AND HAUSER INC	13,667.66	IRWD Check	Reconciled
425699	17-Mar-22	ENTERPRISE HOLDINGS, INC.	6,975.00	IRWD Check	Reconciled
425700	17-Mar-22	EVERETT DOREY LLP	3,382.00	IRWD Check	Reconciled
425701	17-Mar-22	FERGUSON ENTERPRISES, LLC	3,559.19	IRWD Check	Reconciled
425702	17-Mar-22	FIONA HUTTON & ASSOCIATES, INC.	6,411.25	IRWD Check	Reconciled
425703	17-Mar-22	FIRST CHOICE SERVICES	1,505.88	IRWD Check	Reconciled
425704	17-Mar-22	FISHER SCIENTIFIC COMPANY LLC	2,461.02	IRWD Check	Reconciled
425705	17-Mar-22	FLUID SOUND, INC.	2,568.79	IRWD Check	Reconciled
425706	17-Mar-22	FOUGHT, CYNTHIA J.	2,733.34	IRWD Check	Reconciled
425707	17-Mar-22	FRONTIER CALIFORNIA INC.	58.59	IRWD Check	Reconciled
425708	17-Mar-22	GEI CONSULTANTS INC	5,607.10	IRWD Check	Reconciled
425709	17-Mar-22	GEIGER BROS	383.27	IRWD Check	Reconciled
425710	17-Mar-22	GI ENDURANT LLC	8,077.21	IRWD Check	Reconciled
425711	17-Mar-22	GM SAGER CONSTRUCTION CO,INC.	43,400.00	IRWD Check	Reconciled
425712	17-Mar-22	GRAINGER	4,658.27	IRWD Check	Reconciled
425713	17-Mar-22	GRAYBAR ELECTRIC COMPANY	15,109.05	IRWD Check	Reconciled
425714	17-Mar-22	HAAKER EQUIPMENT COMPANY	354.47	IRWD Check	Reconciled
425715	17-Mar-22	HACH COMPANY	5,390.51	IRWD Check	Reconciled
425716	17-Mar-22	HANNA INSTRUMENTS UNITED STATES, INC	513.97	IRWD Check	Reconciled
425717	17-Mar-22	HARRINGTON INDUSTRIAL PLASTICS LLC	157.95	IRWD Check	Reconciled
425718	17-Mar-22	HELPMATES STAFFING SERVICES LLC	3,975.60	IRWD Check	Reconciled
425719	17-Mar-22	HI-LINE INC	278.69	IRWD Check	Reconciled
425720	17-Mar-22	HILL BROTHERS CHEMICAL COMPANY	7,545.18	IRWD Check	Negotiable
425721	17-Mar-22	HOME DEPOT USA INC	32.26	IRWD Check	Reconciled
425722	17-Mar-22	HUMANA INSURANCE COMPANY	65.30	IRWD Check	Reconciled
425723	17-Mar-22	HWANG, WHEIJEAN	53.98	IRWD Check	Reconciled
425724	17-Mar-22	IMPERIAL SPRINKLER SUPPLY, INC.	122.27	IRWD Check	Reconciled
425725	17-Mar-22	INDUSTRIAL SURPLUS AND SALVAGE	16,135.56	IRWD Check	Reconciled
425726	17-Mar-22	INNOVATIVE MACHINE TOOL REPAIR LLC	2,025.31	IRWD Check	Reconciled
425727	17-Mar-22	INTEGRITY MUNICIPAL SERVICES LLC	1,978.30	IRWD Check	Reconciled
425728	17-Mar-22	INTERNATIONAL PUBLIC MANAGEMENT ASSOCIATION-HR	1,005.00	IRWD Check	Reconciled
425729	17-Mar-22	IRVINE PIPE & SUPPLY INC	5,901.21	IRWD Check	Reconciled
425730	17-Mar-22	JONSET LLC	836.00	IRWD Check	Reconciled
425731	17-Mar-22	KAN VENTURES, INC	6,500.00	IRWD Check	Reconciled
425732	17-Mar-22	KIMBALL MIDWEST	199.35	IRWD Check	Reconciled
425733	17-Mar-22	KRONICK MOSKOVITZ TIEDEMANN & GIRARD	50,081.67	IRWD Check	Reconciled
425734	17-Mar-22	LA HABRA FENCE COMPANY INC	23,996.00	IRWD Check	Reconciled
425735	17-Mar-22	LABWORKS, LLC	21,000.00	IRWD Check	Reconciled
425736	17-Mar-22	LANDCARE HOLDINGS, INC.	3,839.75	IRWD Check	Reconciled
425737	17-Mar-22	LEE & RO, INC.	25,605.86	IRWD Check	Reconciled
425738	17-Mar-22	LINDE GAS & EQUIPMENT INC.	1,598.83	IRWD Check	Reconciled
425739	17-Mar-22	LUBRICATION ENGINEERS, INC.	2,428.22	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
425740	17-Mar-22	MAP COMMUNICATIONS, INC.	603.54	IRWD Check	Reconciled
425741	17-Mar-22	MARK KADESH	10,200.00	IRWD Check	Reconciled
425742	17-Mar-22	MBC AQUATIC SCIENCES, INC.	1,400.00	IRWD Check	Reconciled
425743	17-Mar-22	MC FADDEN-DALE INDUSTRIAL	291.36	IRWD Check	Reconciled
425744	17-Mar-22	MC MASTER CARR SUPPLY CO	183.64	IRWD Check	Reconciled
425745	17-Mar-22	MEGGER	448.93	IRWD Check	Reconciled
425746	17-Mar-22	METTLER-TOLEDO RAININ, LLC	3,595.83	IRWD Check	Reconciled
425747	17-Mar-22	MILES CHEMICAL COMPANY, INC.	5,836.36	IRWD Check	Reconciled
425748	17-Mar-22	MUTUAL PROPANE	89.06	IRWD Check	Reconciled
425749	17-Mar-22	NEW DIMENSION GENERAL CONSTRUCTION	85,846.40	IRWD Check	Reconciled
425750	17-Mar-22	NEWPORT WINDOW MAINTENANCE INC	2,745.00	IRWD Check	Reconciled
425751	17-Mar-22	OCTA	1,868.00	IRWD Check	Reconciled
425752	17-Mar-22	OLIN CORPORATION	22,284.23	IRWD Check	Reconciled
425753	17-Mar-22	ONESOURCE DISTRIBUTORS LLC	5,012.00	IRWD Check	Reconciled
425754	17-Mar-22	ORANGE COUNTY AUTO PARTS CO	590.09	IRWD Check	Reconciled
425755	17-Mar-22	ORANGE COUNTY FIRE AUTHORITY	68.00	IRWD Check	Reconciled
425756	17-Mar-22	ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT	3,342.70	IRWD Check	Reconciled
425757	17-Mar-22	PACIFIC HYDROTECH CORPORATION	17,592.45	IRWD Check	Reconciled
425758	17-Mar-22	PACIFIC HYDROTECH CORPORATION	14,761.51	IRWD Check	Reconciled
425759	17-Mar-22	PACIFIC HYDROTECH CORPORATION	614,725.33	IRWD Check	Reconciled
425760	17-Mar-22	PACIFIC PARTS & CONTROLS INC	6,677.79	IRWD Check	Reconciled
425761	17-Mar-22	PARK, MICHELLE	20.66	IRWD Check	Negotiable
425762	17-Mar-22	PAYNE & FEARS LLP	1,590.00	IRWD Check	Reconciled
425763	17-Mar-22	PERKINELMER HEALTH SCIENCES INC	406.80	IRWD Check	Reconciled
425764	17-Mar-22	PETRUSSE-NORRIS PAINTING, INC.	9,643.20	IRWD Check	Reconciled
425765	17-Mar-22	PINNACLE TOWERS LLC	842.76	IRWD Check	Reconciled
425766	17-Mar-22	POLYDYNE INC	62,557.50	IRWD Check	Reconciled
425767	17-Mar-22	PRIME CONTROLS COMPANY INC	9,991.68	IRWD Check	Reconciled
425768	17-Mar-22	PSOMAS	26,060.00	IRWD Check	Reconciled
425769	17-Mar-22	QUINTANA, WATTS & HARTMANN, LLC	5,150.00	IRWD Check	Reconciled
425770	17-Mar-22	R.F. MACDONALD CO.	5,646.84	IRWD Check	Reconciled
425771	17-Mar-22	RAM AIR ENGINEERING INC	71,580.19	IRWD Check	Reconciled
425772	17-Mar-22	RED WING SHOE STORE	348.02	IRWD Check	Reconciled
425773	17-Mar-22	REFRIGERATION SUPPLIES DISTRIBUTOR	701.46	IRWD Check	Reconciled
425774	17-Mar-22	RELIANCE STANDARD LIFE INSURANCE COMPANY	31,436.75	IRWD Check	Reconciled
425775	17-Mar-22	RELIANCE STANDARD LIFE INSURANCE COMPANY	31,436.75	IRWD Check	Reconciled
425776	17-Mar-22	ROLL RITE	741.04	IRWD Check	Reconciled
425777	17-Mar-22	SHON, MYOUNGJI	31.60	IRWD Check	Reconciled
425778	17-Mar-22	SIMPLE BUT NEEDED, INC.	3,750.00	IRWD Check	Negotiable
425779	17-Mar-22	SITEONE LANDSCAPE SUPPLY, LLC	1,520.40	IRWD Check	Reconciled
425780	17-Mar-22	SOLAG DEVELOPMENT PARTNERS	61.65	IRWD Check	Reconciled
425781	17-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	251,389.09	IRWD Check	Reconciled
425782	17-Mar-22	SOUTHERN CALIFORNIA GAS COMPANY	19,649.40	IRWD Check	Negotiable
425783	17-Mar-22	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	86.27	IRWD Check	Reconciled
425784	17-Mar-22	STRADLING YOCCA CARLSON & RAUTH	280.00	IRWD Check	Reconciled
425785	17-Mar-22	SUKLE ADVERTISING INC.	67,001.60	IRWD Check	Reconciled
425786	17-Mar-22	TASSIN SCIENTIFIC SERVICES, LLC.	1,259.25	IRWD Check	Reconciled
425787	17-Mar-22	THE IRVINE COMPANY LLC	1,817.33	IRWD Check	Negotiable
425788	17-Mar-22	THERMO ELECTRON NORTH AMERICA LLC	30,630.84	IRWD Check	Reconciled
425789	17-Mar-22	THOMPSON & PHIPPS INC	2,326.86	IRWD Check	Reconciled
425790	17-Mar-22	UNITED HEALTHCARE INSURANCE COMPANY	324.22	IRWD Check	Reconciled
425791	17-Mar-22	UNITED PARCEL SERVICE INC	49.90	IRWD Check	Reconciled
425792	17-Mar-22	UNITED SITE SERVICES OF CALIFORNIA INC	739.95	IRWD Check	Reconciled
425793	17-Mar-22	UNITED WATER WORKS, INC.	900.00	IRWD Check	Reconciled
425794	17-Mar-22	UNIVAR SOLUTIONS USA INC.	10,461.90	IRWD Check	Reconciled
425795	17-Mar-22	V&A CONSULTING ENGINEERS	3,640.50	IRWD Check	Reconciled
425796	17-Mar-22	VAUGHAN'S INDUSTRIAL REPAIR CO INC	4,662.15	IRWD Check	Reconciled
425797	17-Mar-22	VEOLIA NORTH AMERICA, INC.	1,547.80	IRWD Check	Reconciled
425798	17-Mar-22	VIDO ARTUKOVICH & SON, INC./VIDMAR, INC. A JV	95,124.15	IRWD Check	Reconciled
425799	17-Mar-22	VIDO ARTUKOVICH & SON, INC./VIDMAR, INC. A JV	5,006.53	IRWD Check	Reconciled
425800	17-Mar-22	VULCAN MATERIALS COMPANY	1,521.78	IRWD Check	Reconciled
425801	17-Mar-22	VWR INTERNATIONAL, LLC	709.57	IRWD Check	Reconciled
425802	17-Mar-22	WALTERS WHOLESale ELECTRIC	853.47	IRWD Check	Reconciled
425803	17-Mar-22	WANG, XIPING	41.46	IRWD Check	Reconciled
425804	17-Mar-22	WAXIE'S ENTERPRISES, INC	2,588.54	IRWD Check	Reconciled
425805	17-Mar-22	WECK LABORATORIES INC	178.00	IRWD Check	Reconciled
425806	17-Mar-22	WEST YOST & ASSOCIATES, INC.	19,253.00	IRWD Check	Negotiable



**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
425807	17-Mar-22	WEST, STARLA	63.95	IRWD Check	Negotiable
425808	17-Mar-22	WIN-911 SOFTWARE	2,030.00	IRWD Check	Reconciled
425809	17-Mar-22	WIRELESS WATCHDOGS, LLC	4,100.00	IRWD Check	Reconciled
425810	17-Mar-22	WORKFORCE SAFETY LLC	1,500.00	IRWD Check	Reconciled
425811	22-Mar-22	OCEAN HEIGHTS MAINTENANCE ASSOCIATION	2,945.16	IRWD Check	Negotiable
425812	22-Mar-22	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	2,635.00	IRWD Check	Reconciled
425813	24-Mar-22	Collazo, Carlos C (Carlos)	1,875.37	IRWD Check	Reconciled
425814	24-Mar-22	Hall, William P (William)	288.00	IRWD Check	Reconciled
425815	24-Mar-22	Kanady, Jacob	115.00	IRWD Check	Reconciled
425816	24-Mar-22	Sosa, Ives (Ives)	969.74	IRWD Check	Reconciled
425817	24-Mar-22	ACE INDUSTRIES, INC.	4,123.83	IRWD Check	Reconciled
425818	24-Mar-22	AGILENT TECHNOLOGIES, INC.	15,369.09	IRWD Check	Reconciled
425819	24-Mar-22	AIRGAS, INC.	439.98	IRWD Check	Reconciled
425820	24-Mar-22	ALEXANDER'S CONTRACT SERVICES, INC.	128,662.89	IRWD Check	Reconciled
425821	24-Mar-22	ALL AMERICAN ASPHALT	8,749.55	IRWD Check	Reconciled
425822	24-Mar-22	AMAYA SOLUTIONS INC.	7,729.88	IRWD Check	Reconciled
425823	24-Mar-22	AMAZON CAPITAL SERVICES, INC.	10,509.47	IRWD Check	Reconciled
425824	24-Mar-22	AMERICAN GEOTECHNICAL, INC.	7,072.50	IRWD Check	Reconciled
425825	24-Mar-22	AMETEK BROOKFIELD	242.97	IRWD Check	Reconciled
425826	24-Mar-22	ANTHEM BLUE CROSS	23.52	IRWD Check	Reconciled
425827	24-Mar-22	ANTUNOVICH, JANESEA	2.06	IRWD Check	Negotiable
425828	24-Mar-22	APPLIED ENGINEERING CONCEPTS	20,625.00	IRWD Check	Reconciled
425829	24-Mar-22	ARMORCAST PRODUCTS COMPANY	37,027.19	IRWD Check	Reconciled
425830	24-Mar-22	AT&T	99.30	IRWD Check	Reconciled
425831	24-Mar-22	AT&T	5,867.33	IRWD Check	Reconciled
425832	24-Mar-22	AUTOZONE PARTS, INC.	4,081.30	IRWD Check	Reconciled
425833	24-Mar-22	AVIAT U.S., INC	13,027.00	IRWD Check	Reconciled
425834	24-Mar-22	BATTERIES PLUS AND BATTERIES PLUS BULBS	2,594.25	IRWD Check	Reconciled
425835	24-Mar-22	BRUCE HADLEY NEWELL	1,250.00	IRWD Check	Reconciled
425836	24-Mar-22	C WELLS PIPELINE MATERIALS INC	20,562.62	IRWD Check	Reconciled
425837	24-Mar-22	CALIFORNIA BARRICADE RENTAL, INC.	7,340.56	IRWD Check	Reconciled
425838	24-Mar-22	CAROLLO ENGINEERS, INC	12,780.00	IRWD Check	Reconciled
425839	24-Mar-22	CDW GOVERNMENT LLC	13,619.00	IRWD Check	Reconciled
425840	24-Mar-22	CHEM TECH INTERNATIONAL INC	7,682.85	IRWD Check	Reconciled
425841	24-Mar-22	CHEMPACK & ENVIRONMENTAL, LLC	9,200.00	IRWD Check	Reconciled
425842	24-Mar-22	CITY OF IRVINE	1,956.98	IRWD Check	Reconciled
425843	24-Mar-22	CITY OF NEWPORT BEACH	2,374.79	IRWD Check	Reconciled
425844	24-Mar-22	CITY OF TUSTIN	250.00	IRWD Check	Reconciled
425845	24-Mar-22	CLARKE MOSQUITO CONTROL PRODUCTS, INC.	2,182.90	IRWD Check	Reconciled
425846	24-Mar-22	COASTAL OCCUPATIONAL MEDICAL GROUP, INC.	325.00	IRWD Check	Negotiable
425847	24-Mar-22	COELLO, RALPH	1,750.02	IRWD Check	Reconciled
425848	24-Mar-22	CONSERV CONSTRUCTION INC.	3,180.00	IRWD Check	Reconciled
425849	24-Mar-22	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	560.30	IRWD Check	Reconciled
425850	24-Mar-22	CONSTELLATION NEWENERGY, INC.	29,772.30	IRWD Check	Reconciled
425851	24-Mar-22	COTTONS POINT DESIGN, INC.	1,177.08	IRWD Check	Reconciled
425852	24-Mar-22	COUNTY OF ORANGE	153.37	IRWD Check	Negotiable
425853	24-Mar-22	D & H WATER SYSTEMS INC.	3,966.50	IRWD Check	Reconciled
425854	24-Mar-22	DATA CLEAN CORPORATION	559.00	IRWD Check	Reconciled
425855	24-Mar-22	DIRECTV INC	146.99	IRWD Check	Reconciled
425856	24-Mar-22	DRAEGER, INC.	3,613.28	IRWD Check	Reconciled
425857	24-Mar-22	DRAKE TRAFFIC CONTROL SERVICES INC	7,130.00	IRWD Check	Reconciled
425858	24-Mar-22	EAGLE PRINT DYNAMICS	1,160.40	IRWD Check	Reconciled
425859	24-Mar-22	EATON CORPORATION	7,557.98	IRWD Check	Reconciled
425860	24-Mar-22	EMD MILLIPORE CORP.	1,941.05	IRWD Check	Reconciled
425861	24-Mar-22	ENVIRONMENTAL EXPRESS INC	567.87	IRWD Check	Reconciled
425862	24-Mar-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	5,101.75	IRWD Check	Reconciled
425863	24-Mar-22	FARRELL & ASSOCIATES	154.28	IRWD Check	Reconciled
425864	24-Mar-22	FARVILI, NEGAR	11.01	IRWD Check	Negotiable
425865	24-Mar-22	FEDEX	264.43	IRWD Check	Reconciled
425866	24-Mar-22	FERGUSON ENTERPRISES, LLC	4,290.94	IRWD Check	Reconciled
425867	24-Mar-22	FIREHOSEDIRECT.COM	892.82	IRWD Check	Reconciled
425868	24-Mar-22	FIRST CHOICE SERVICES	1,122.37	IRWD Check	Reconciled
425869	24-Mar-22	FISHER SCIENTIFIC COMPANY LLC	11,412.77	IRWD Check	Reconciled
425870	24-Mar-22	FRONTIER CALIFORNIA INC.	619.21	IRWD Check	Reconciled
425871	24-Mar-22	FUSCOE ENGINEERING, INC.	1,978.50	IRWD Check	Reconciled
425872	24-Mar-22	GARZA INDUSTRIES, INC	1,963.85	IRWD Check	Reconciled
425873	24-Mar-22	GCI CONSTRUCTION, INC.	14,250.00	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
425874	24-Mar-22	GLOBAL TEST SUPPLY, LLC	4,026.32	IRWD Check	Reconciled
425875	24-Mar-22	GRAINGER	3,360.25	IRWD Check	Reconciled
425876	24-Mar-22	GRANICUS, LLC	1,909.64	IRWD Check	Reconciled
425877	24-Mar-22	GRAYBAR ELECTRIC COMPANY	484.82	IRWD Check	Reconciled
425878	24-Mar-22	HACH COMPANY	1,466.27	IRWD Check	Reconciled
425879	24-Mar-22	HADRONEX, INC.	1,100.91	IRWD Check	Reconciled
425880	24-Mar-22	HELPMATES STAFFING SERVICES	3,264.00	IRWD Check	Reconciled
425881	24-Mar-22	HELPMATES STAFFING SERVICES LLC	4,983.48	IRWD Check	Reconciled
425882	24-Mar-22	HI-LINE INC	1,383.76	IRWD Check	Reconciled
425883	24-Mar-22	HILL BROTHERS CHEMICAL COMPANY	14,850.69	IRWD Check	Negotiable
425884	24-Mar-22	HINSILBLON LTD	25,340.00	IRWD Check	Negotiable
425885	24-Mar-22	HOME DEPOT USA INC	814.27	IRWD Check	Reconciled
425886	24-Mar-22	HOWDEN USA COMPANY	46,789.88	IRWD Check	Reconciled
425887	24-Mar-22	HUNTER, CHASITY	199.27	IRWD Check	Reconciled
425888	24-Mar-22	IDEXX DISTRIBUTION, INC	8,669.79	IRWD Check	Reconciled
425889	24-Mar-22	INDUSTRIAL METAL SUPPLY CO	2,231.63	IRWD Check	Reconciled
425890	24-Mar-22	INFOSEND, INC.	21,202.39	IRWD Check	Reconciled
425891	24-Mar-22	INNOVATIVE MACHINE TOOL REPAIR LLC	5,235.41	IRWD Check	Reconciled
425892	24-Mar-22	INTEGRITY MUNICIPAL SERVICES LLC	2,575.00	IRWD Check	Reconciled
425893	24-Mar-22	IRONRIDGE AT PORTOLA HILLS COMMUNITY ASSOCIATION	3,703.83	IRWD Check	Negotiable
425894	24-Mar-22	IRVINE PIPE & SUPPLY INC	378.03	IRWD Check	Reconciled
425895	24-Mar-22	IRWD-PETTY CASH CUSTODIAN	1,041.74	IRWD Check	Reconciled
425896	24-Mar-22	JCI JONES CHEMICALS INC	4,221.06	IRWD Check	Negotiable
425897	24-Mar-22	JUST ENERGY SOLUTIONS INC.	181.40	IRWD Check	Reconciled
425898	24-Mar-22	KNOWBE4 INC.	11,040.00	IRWD Check	Reconciled
425899	24-Mar-22	LAGUNA BEACH COUNTY WATER DISTRICT	3,834.18	IRWD Check	Negotiable
425900	24-Mar-22	LANDCARE HOLDINGS, INC.	1,224.10	IRWD Check	Reconciled
425901	24-Mar-22	LEIGHTON CONSULTING, INC.	115.20	IRWD Check	Reconciled
425902	24-Mar-22	LEUNG NG, KWOK	184.96	IRWD Check	Negotiable
425903	24-Mar-22	LINDE GAS & EQUIPMENT INC.	26.28	IRWD Check	Reconciled
425904	24-Mar-22	LSA ASSOCIATES INC	1,822.93	IRWD Check	Reconciled
425905	24-Mar-22	MBK ENGINEERS	735.00	IRWD Check	Reconciled
425906	24-Mar-22	MC FADDEN-DALE INDUSTRIAL	331.91	IRWD Check	Reconciled
425907	24-Mar-22	MC MASTER CARR SUPPLY CO	140.40	IRWD Check	Reconciled
425908	24-Mar-22	MCCALL'S METERS, INC.	3,326.28	IRWD Check	Negotiable
425909	24-Mar-22	MCCROMETER, INC.	5,078.27	IRWD Check	Reconciled
425910	24-Mar-22	MERRIMAC PETROLEUM, INC.	46,058.20	IRWD Check	Reconciled
425911	24-Mar-22	MICROSOFT CORPORATION	498.45	IRWD Check	Reconciled
425912	24-Mar-22	MILES CHEMICAL COMPANY, INC.	5,950.64	IRWD Check	Reconciled
425913	24-Mar-22	N1 CRITICAL TECHNOOGIES, INC	11,429.89	IRWD Check	Reconciled
425914	24-Mar-22	NCH CORPORATION	374.92	IRWD Check	Reconciled
425915	24-Mar-22	NEW DIMENSION GENERAL CONSTRUCTION	3,844.38	IRWD Check	Reconciled
425916	24-Mar-22	NOV PROCESS & FLOW TECHNOLOGIES US, INC.	10,376.07	IRWD Check	Reconciled
425917	24-Mar-22	NV5, INC.	6,553.75	IRWD Check	Reconciled
425918	24-Mar-22	O'REILLY AUTO ENTERPRISES, LLC	247.78	IRWD Check	Reconciled
425919	24-Mar-22	OBEST, PAUL	28.22	IRWD Check	Negotiable
425920	24-Mar-22	OLIN CORPORATION	30,839.29	IRWD Check	Reconciled
425921	24-Mar-22	ONESOURCE DISTRIBUTORS LLC	3,441.50	IRWD Check	Reconciled
425922	24-Mar-22	ORACLE AMERICA, INC.	247,294.93	IRWD Check	Reconciled
425923	24-Mar-22	ORANGE COUNTY AUTO PARTS CO	456.41	IRWD Check	Reconciled
425924	24-Mar-22	ORIGIN CONSULTING LLC	7,895.00	IRWD Check	Reconciled
425925	24-Mar-22	PACIFIC PARTS & CONTROLS INC	821.73	IRWD Check	Reconciled
425926	24-Mar-22	PARKHOUSE TIRE INC	2,486.87	IRWD Check	Reconciled
425927	24-Mar-22	PAUL A. RUELAS	125.00	IRWD Check	Reconciled
425928	24-Mar-22	PERKINELMER HEALTH SCIENCES INC	14,436.00	IRWD Check	Reconciled
425929	24-Mar-22	QUINN COMPANY	22,391.25	IRWD Check	Reconciled
425930	24-Mar-22	RAM AIR ENGINEERING INC	33,091.63	IRWD Check	Reconciled
425931	24-Mar-22	REAL WATER CONSULTANTS INC.	4,740.00	IRWD Check	Reconciled
425932	24-Mar-22	RED WING SHOE STORE	650.00	IRWD Check	Reconciled
425933	24-Mar-22	RENTOKIL NORTH AMERICA, INC	5,026.00	IRWD Check	Reconciled
425934	24-Mar-22	RESOURCE TRENDS, INC.	2,500.00	IRWD Check	Reconciled
425935	24-Mar-22	RICHARD C. SLADE & ASSOCIATES LLC	8,418.77	IRWD Check	Negotiable
425936	24-Mar-22	RINCON TRUCK CENTER INC.	2,688.21	IRWD Check	Reconciled
425937	24-Mar-22	RLG ENTERPRISES, INC	168.98	IRWD Check	Reconciled
425938	24-Mar-22	ROBERTS ROOFING INC	8,950.00	IRWD Check	Reconciled
425939	24-Mar-22	ROH, YONGJIN	155.50	IRWD Check	Negotiable
425940	24-Mar-22	ROSEN LAW OFFICES, APC	250,000.00	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
425941	24-Mar-22	SANTA ANA BLUE PRINT	391.71	IRWD Check	Reconciled
425942	24-Mar-22	SANTA MARGARITA FORD	417.07	IRWD Check	Reconciled
425943	24-Mar-22	SCHULER CONSTRUCTORS, INC.	7,395.00	IRWD Check	Reconciled
425944	24-Mar-22	SCOTT EQUIPMENT INCORPORATED	593.33	IRWD Check	Reconciled
425945	24-Mar-22	SEAL ANALYTICAL INC	570.15	IRWD Check	Reconciled
425946	24-Mar-22	SELECT TRENCHLESS PIPELINES INC	2,359.06	IRWD Check	Reconciled
425947	24-Mar-22	SHAMROCK SUPPLY CO INC	448.67	IRWD Check	Reconciled
425948	24-Mar-22	SHOETERIA	417.70	IRWD Check	Reconciled
425949	24-Mar-22	SOUTH COAST WATER DISTRICT	937.17	IRWD Check	Reconciled
425950	24-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	75.09	IRWD Check	Reconciled
425951	24-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	67,198.76	IRWD Check	Reconciled
425952	24-Mar-22	SOUTHERN CALIFORNIA GAS COMPANY	11,396.20	IRWD Check	Negotiable
425953	24-Mar-22	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	187.71	IRWD Check	Negotiable
425954	24-Mar-22	SPECTRUM CONSTRUCTION GROUP INC	1,022.42	IRWD Check	Reconciled
425955	24-Mar-22	SUEZ TREATMENT SOLUTIONS INC.	10,733.11	IRWD Check	Reconciled
425956	24-Mar-22	SUN, CHENCHEN	27.61	IRWD Check	Reconciled
425957	24-Mar-22	SYNAGRO-WWT, INC.	138,699.66	IRWD Check	Reconciled
425958	24-Mar-22	TAWEKJIAN, MEHRAN	350.00	IRWD Check	Reconciled
425959	24-Mar-22	THIAGARAJAH, RENGAL	1,250.00	IRWD Check	Negotiable
425960	24-Mar-22	THOMPSON & PHIPPS INC	6,428.92	IRWD Check	Reconciled
425961	24-Mar-22	TOTAL RESOURCE MANAGEMENT, INC	3,485.00	IRWD Check	Reconciled
425962	24-Mar-22	TRAFFIC MANAGEMENT, INC	4,008.00	IRWD Check	Reconciled
425963	24-Mar-22	TRAN, ERIK	186.34	IRWD Check	Negotiable
425964	24-Mar-22	TROUTMAN, RANDY	68.86	IRWD Check	Negotiable
425965	24-Mar-22	UCT, LLC	292.21	IRWD Check	Reconciled
425966	24-Mar-22	ULINE INC	626.45	IRWD Check	Reconciled
425967	24-Mar-22	UNITED PARCEL SERVICE INC	117.19	IRWD Check	Reconciled
425968	24-Mar-22	UNITED SITE SERVICES OF CALIFORNIA INC	273.82	IRWD Check	Reconciled
425969	24-Mar-22	UNITED WATER WORKS, INC.	48,107.51	IRWD Check	Reconciled
425970	24-Mar-22	UNIVAR SOLUTIONS USA INC.	10,199.60	IRWD Check	Reconciled
425971	24-Mar-22	US BANK NAT'L ASSOCIATION NORTH DAKOTA	68,992.16	IRWD Check	Reconciled
425972	24-Mar-22	VANTAGE UTILITY SERVICES, LLC	1,561.35	IRWD Check	Reconciled
425973	24-Mar-22	WALTERS WHOLESALE ELECTRIC	2,763.41	IRWD Check	Reconciled
425974	24-Mar-22	WANG, NING-LAN	40.00	IRWD Check	Reconciled
425975	24-Mar-22	WAXIE'S ENTERPRISES, INC	285.27	IRWD Check	Reconciled
425976	24-Mar-22	WECK LABORATORIES INC	3,483.00	IRWD Check	Reconciled
425977	24-Mar-22	WEST COAST SAFETY SUPPLY INC	4,370.37	IRWD Check	Reconciled
425978	24-Mar-22	WEST COAST SAND & GRAVEL INC.	1,223.84	IRWD Check	Reconciled
425979	24-Mar-22	WEST YOST & ASSOCIATES, INC.	15,470.25	IRWD Check	Reconciled
425980	24-Mar-22	WESTAMERICA COMMUNICATIONS, INC.	600.00	IRWD Check	Reconciled
425981	24-Mar-22	WORKFORCE SAFETY LLC	6,000.00	IRWD Check	Reconciled
425982	25-Mar-22	PERS LONG TERM CARE	612.63	IRWD Check	Reconciled
425983	25-Mar-22	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	3,360.47	IRWD Check	Negotiable
425984	25-Mar-22	ARAG NORTH AMERICA, INC.	415.00	IRWD Check	Negotiable
425985	31-Mar-22	Cotton, Derrien	208.92	IRWD Check	Negotiable
425986	31-Mar-22	Mori, Richard K (Rich)	21.29	IRWD Check	Reconciled
425987	31-Mar-22	Nash, Joel	137.48	IRWD Check	Negotiable
425988	31-Mar-22	Orozco, Gustavo A (Gus)	192.00	IRWD Check	Negotiable
425989	31-Mar-22	ION WAVE TECHNOLOGIES, INC.	22,900.00	IRWD Check	Negotiable
425990	31-Mar-22	ACCUSTANDARD INC	69.42	IRWD Check	Negotiable
425991	31-Mar-22	ACE INDUSTRIES, INC.	3,710.00	IRWD Check	Negotiable
425992	31-Mar-22	ADS CORP.	11,972.00	IRWD Check	Negotiable
425993	31-Mar-22	AECOM TECHNICAL SERVICES, INC.	191,215.00	IRWD Check	Negotiable
425994	31-Mar-22	AFLAC	2,087.42	IRWD Check	Negotiable
425995	31-Mar-22	AGILENT TECHNOLOGIES, INC.	288.88	IRWD Check	Negotiable
425996	31-Mar-22	AIRGAS, INC.	4,095.17	IRWD Check	Negotiable
425997	31-Mar-22	ALLIANCE RESOURCE CONSULTING LLC	6,625.00	IRWD Check	Negotiable
425998	31-Mar-22	AMAZON CAPITAL SERVICES, INC.	2,073.67	IRWD Check	Negotiable
425999	31-Mar-22	AMETEK BROOKFIELD	1,724.62	IRWD Check	Negotiable
426000	31-Mar-22	AMWINS GROUP BENEFITS LLC	3,629.10	IRWD Check	Negotiable
426001	31-Mar-22	ANTHONY N. LARSEN	550.00	IRWD Check	Negotiable
426002	31-Mar-22	AQUA BEN CORPORATION	48,211.20	IRWD Check	Negotiable
426003	31-Mar-22	ARI, SUHA	228.55	IRWD Check	Negotiable
426004	31-Mar-22	ASHFORD, WALT	321.00	IRWD Check	Negotiable
426005	31-Mar-22	ASSEMBLED PRODUCTS CORPORATION	340.30	IRWD Check	Negotiable
426006	31-Mar-22	ASSOCIATION OF CALIFORNIA WATER AGENCIES	2,000.00	IRWD Check	Negotiable
426007	31-Mar-22	AT&T	709.83	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
426008	31-Mar-22	AUTOZONE PARTS, INC.	372.02	IRWD Check	Negotiable
426009	31-Mar-22	BATTERY SYSTEMS INC	822.25	IRWD Check	Negotiable
426010	31-Mar-22	BAVCO BACKFLOW APPARATUS & VALVE COMPANY	5,114.33	IRWD Check	Negotiable
426011	31-Mar-22	BIO-ACOUSTICAL CORP.	600.00	IRWD Check	Negotiable
426012	31-Mar-22	C WELLS PIPELINE MATERIALS INC	5,535.66	IRWD Check	Negotiable
426013	31-Mar-22	CALIFORNIA BARRICADE RENTAL, INC.	14,622.50	IRWD Check	Negotiable
426014	31-Mar-22	CANON SOLUTIONS AMERICA, INC.	14.40	IRWD Check	Negotiable
426015	31-Mar-22	CDW GOVERNMENT LLC	282.52	IRWD Check	Negotiable
426016	31-Mar-22	CESENA, DANNIE	13.47	IRWD Check	Negotiable
426017	31-Mar-22	CHAIREL CUSTOM HAY, INC.	9,144.09	IRWD Check	Negotiable
426018	31-Mar-22	CHEM TECH INTERNATIONAL INC	9,913.44	IRWD Check	Negotiable
426019	31-Mar-22	COASTAL OCCUPATIONAL MEDICAL GROUP, INC.	296.30	IRWD Check	Negotiable
426020	31-Mar-22	COASTLINE EQUIPMENT COMPANY	649.13	IRWD Check	Negotiable
426021	31-Mar-22	COLONIAL LIFE & ACCIDENT INSURANCE CO.	652.98	IRWD Check	Negotiable
426022	31-Mar-22	CONSTELLATION NEWENERGY, INC.	41,847.60	IRWD Check	Negotiable
426023	31-Mar-22	CONTROL LABORATORIES, INC.	225.00	IRWD Check	Negotiable
426024	31-Mar-22	COTTONS POINT DESIGN, INC.	1,177.08	IRWD Check	Negotiable
426025	31-Mar-22	COUNTY OF ORANGE	460.11	IRWD Check	Negotiable
426026	31-Mar-22	COX COMMUNICATIONS, INC.	3,588.04	IRWD Check	Negotiable
426027	31-Mar-22	CV TECHNOLOGY, INC.	28,925.07	IRWD Check	Negotiable
426028	31-Mar-22	DAYTON CERTIFIED WELDING, INC.	5,200.00	IRWD Check	Negotiable
426029	31-Mar-22	DEBEVER, BAS	16.53	IRWD Check	Negotiable
426030	31-Mar-22	DELL MARKETING LP	4,504.84	IRWD Check	Negotiable
426031	31-Mar-22	DILYTICS INC	3,900.00	IRWD Check	Negotiable
426032	31-Mar-22	DIRECTV INC	146.99	IRWD Check	Negotiable
426033	31-Mar-22	DOPUDJA & WELLS CONSULTING INC.	1,200.00	IRWD Check	Negotiable
426034	31-Mar-22	DOUGLAS ENVIRONMENTAL GROUP INC	1,625.00	IRWD Check	Negotiable
426035	31-Mar-22	DRAKE TRAFFIC CONTROL SERVICES INC	3,590.00	IRWD Check	Negotiable
426036	31-Mar-22	EAST ORANGE COUNTY WATER DISTRICT	3,425.91	IRWD Check	Negotiable
426037	31-Mar-22	EMD MILLIPORE CORP.	1,477.51	IRWD Check	Negotiable
426038	31-Mar-22	ENVIRONMENTAL EXPRESS INC	1,136.00	IRWD Check	Negotiable
426039	31-Mar-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	1,722.00	IRWD Check	Negotiable
426040	31-Mar-22	EVOQUA WATER TECHNOLOGIES LLC	620.80	IRWD Check	Negotiable
426041	31-Mar-22	EXECUTIVE LIGHTING & ELECTRIC	1,319.46	IRWD Check	Negotiable
426042	31-Mar-22	FEDEX	565.07	IRWD Check	Negotiable
426043	31-Mar-22	FERGUSON ENTERPRISES, LLC	1,628.19	IRWD Check	Negotiable
426044	31-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	6,340.51	IRWD Check	Negotiable
426045	31-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	85.52	IRWD Check	Negotiable
426046	31-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	888.56	IRWD Check	Negotiable
426047	31-Mar-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	180.35	IRWD Check	Negotiable
426048	31-Mar-22	FIORI, JOE	68.35	IRWD Check	Negotiable
426049	31-Mar-22	FIRE EXTINGUISHING SAFETY & SERVICE	754.84	IRWD Check	Negotiable
426050	31-Mar-22	FISHER SCIENTIFIC COMPANY LLC	1,623.39	IRWD Check	Negotiable
426051	31-Mar-22	FRONTIER CALIFORNIA INC.	290.73	IRWD Check	Negotiable
426052	31-Mar-22	FULLER TRUCK ACCESSORIES	1,142.15	IRWD Check	Negotiable
426053	31-Mar-22	GANAHL LUMBER CO.	3,880.16	IRWD Check	Negotiable
426054	31-Mar-22	GARY BALE REDI-MIX CONCRETE, INC.	867.93	IRWD Check	Negotiable
426055	31-Mar-22	GLOBAL TEST SUPPLY, LLC	3,772.00	IRWD Check	Negotiable
426056	31-Mar-22	GRAINGER	6,315.32	IRWD Check	Negotiable
426057	31-Mar-22	GREGORY, DOUGLAS	33.44	IRWD Check	Negotiable
426058	31-Mar-22	GSRP ST SOLAR I LLC	12,200.17	IRWD Check	Negotiable
426059	31-Mar-22	GUDKOVA, GANNA	44.71	IRWD Check	Negotiable
426060	31-Mar-22	GUO, FEN	1,299.14	IRWD Check	Negotiable
426061	31-Mar-22	HAAKER EQUIPMENT COMPANY	982.22	IRWD Check	Negotiable
426062	31-Mar-22	HACH COMPANY	4,990.96	IRWD Check	Negotiable
426063	31-Mar-22	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	50.88	IRWD Check	Negotiable
426064	31-Mar-22	HDR ENGINEERING INC	19,156.50	IRWD Check	Negotiable
426065	31-Mar-22	HELPMATES STAFFING SERVICES LLC	2,301.02	IRWD Check	Negotiable
426066	31-Mar-22	HI-LINE INC	440.47	IRWD Check	Negotiable
426067	31-Mar-22	HILL BROTHERS CHEMICAL COMPANY	10,500.61	IRWD Check	Negotiable
426068	31-Mar-22	HOME DEPOT USA INC	1,144.56	IRWD Check	Negotiable
426069	31-Mar-22	HOROWITZ, ADAM	336.85	IRWD Check	Negotiable
426070	31-Mar-22	HSG INC	2,010.00	IRWD Check	Negotiable
426071	31-Mar-22	ILAND INTERNET SOLUTION CORPORATION	8,194.57	IRWD Check	Negotiable
426072	31-Mar-22	INFOSEND, INC.	29,597.24	IRWD Check	Negotiable
426073	31-Mar-22	INTERPRO SOLUTIONS, LLC.	45,572.80	IRWD Check	Negotiable
426074	31-Mar-22	IRVINE PACIFIC	240.92	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
426075	31-Mar-22	IRVINE PIPE & SUPPLY INC	5,463.56	IRWD Check	Negotiable
426076	31-Mar-22	JALLI, MEHDI	31.94	IRWD Check	Negotiable
426077	31-Mar-22	JAMBOREE SMOG	58.00	IRWD Check	Negotiable
426078	31-Mar-22	JONSET LLC	224.00	IRWD Check	Negotiable
426079	31-Mar-22	KB HOMES	283.87	IRWD Check	Negotiable
426080	31-Mar-22	KILL-N-BUGS TERMITE AND PEST CONTROL SERVICES	4,620.00	IRWD Check	Negotiable
426081	31-Mar-22	KRONICK MOSKOVITZ TIEDEMANN & GIRARD	11,499.18	IRWD Check	Negotiable
426082	31-Mar-22	LEIGHTON CONSULTING, INC.	663.50	IRWD Check	Negotiable
426083	31-Mar-22	LENNAR HOMES OF CALIFORNIA, INC.	2,570.47	IRWD Check	Negotiable
426084	31-Mar-22	LIFT-IT MANUFACTURING CO., INC.	6,060.91	IRWD Check	Negotiable
426085	31-Mar-22	LIM, JONGWON	50.00	IRWD Check	Negotiable
426086	31-Mar-22	LINDE GAS & EQUIPMENT INC.	1,987.38	IRWD Check	Negotiable
426087	31-Mar-22	LORD, DENNY	17.27	IRWD Check	Negotiable
426088	31-Mar-22	LYONS, ROBERT AND NANCY	162.41	IRWD Check	Negotiable
426089	31-Mar-22	MALOFF, SCOTT	25.67	IRWD Check	Negotiable
426090	31-Mar-22	MANSKE, BARBARA	488.36	IRWD Check	Negotiable
426091	31-Mar-22	MBC AQUATIC SCIENCES, INC.	1,400.00	IRWD Check	Negotiable
426092	31-Mar-22	MBK ENGINEERS	13,131.50	IRWD Check	Negotiable
426093	31-Mar-22	MC FADDEN-DALE INDUSTRIAL	91.85	IRWD Check	Negotiable
426094	31-Mar-22	MCCROMETER, INC.	2,725.11	IRWD Check	Negotiable
426095	31-Mar-22	MILES CHEMICAL COMPANY, INC.	5,937.17	IRWD Check	Negotiable
426096	31-Mar-22	MINASYAN, SEROB	63.88	IRWD Check	Negotiable
426097	31-Mar-22	MISSION COMMUNICATIONS, LLC	1,162.80	IRWD Check	Negotiable
426098	31-Mar-22	MYERS & SONS HI-WAY SAFETY, INC.	3,511.20	IRWD Check	Negotiable
426099	31-Mar-22	NATURALWELL, LLC	2,117.50	IRWD Check	Negotiable
426100	31-Mar-22	O'REILLY AUTO ENTERPRISES, LLC	214.92	IRWD Check	Negotiable
426101	31-Mar-22	OLIN CORPORATION	26,581.00	IRWD Check	Negotiable
426102	31-Mar-22	ONESOURCE DISTRIBUTORS LLC	16,499.03	IRWD Check	Negotiable
426103	31-Mar-22	ORANGE COUNTY PRODUCE	661.12	IRWD Check	Negotiable
426104	31-Mar-22	ORANGE COUNTY SANITATION DISTRICT	52,753.11	IRWD Check	Negotiable
426105	31-Mar-22	ORANGE LINE OIL COMPANY	2,870.75	IRWD Check	Negotiable
426106	31-Mar-22	PACIFIC COAST BOLT CORP	6,816.29	IRWD Check	Negotiable
426107	31-Mar-22	PACIFIC MECHANICAL SUPPLY	473.60	IRWD Check	Negotiable
426108	31-Mar-22	PACIFIC STAR CHEMICAL, LLC	2,661.53	IRWD Check	Negotiable
426109	31-Mar-22	PARKER HANNIFIN CORPORATION	11,012.33	IRWD Check	Negotiable
426110	31-Mar-22	PARKHOUSE TIRE INC	3,372.17	IRWD Check	Negotiable
426111	31-Mar-22	PAULUS ENGINEERING, INC.	100,480.06	IRWD Check	Negotiable
426112	31-Mar-22	PAYMENTUS GROUP INC.	71,835.64	IRWD Check	Negotiable
426113	31-Mar-22	PERKINELMER HEALTH SCIENCES INC	639.94	IRWD Check	Negotiable
426114	31-Mar-22	PMC ENGINEERING LLC.	763.55	IRWD Check	Negotiable
426115	31-Mar-22	PRIME CONTROLS COMPANY INC	13,240.04	IRWD Check	Negotiable
426116	31-Mar-22	PRONTO GYM SERVICES, INC.	398.82	IRWD Check	Negotiable
426117	31-Mar-22	RAM AIR ENGINEERING INC	10,094.54	IRWD Check	Negotiable
426118	31-Mar-22	REAL WATER CONSULTANTS INC.	26,307.00	IRWD Check	Negotiable
426119	31-Mar-22	REFRIGERATION SUPPLIES DISTRIBUTOR	873.20	IRWD Check	Negotiable
426120	31-Mar-22	RLG ENTERPRISES, INC	1,170.00	IRWD Check	Negotiable
426121	31-Mar-22	SAFETY-KLEEN SYSTEMS, INC	242.50	IRWD Check	Negotiable
426122	31-Mar-22	SANTA ANA BLUE PRINT	1,310.95	IRWD Check	Negotiable
426123	31-Mar-22	SANTA MARGARITA FORD	1,365.72	IRWD Check	Negotiable
426124	31-Mar-22	SCHINDLER ELEVATOR CORPORATION	3,476.71	IRWD Check	Negotiable
426125	31-Mar-22	SEAL ANALYTICAL INC	49,483.06	IRWD Check	Negotiable
426126	31-Mar-22	SHAMROCK SUPPLY CO INC	167.02	IRWD Check	Negotiable
426127	31-Mar-22	SHEN, DERRICK	15.01	IRWD Check	Negotiable
426128	31-Mar-22	SI TESTING	11,746.50	IRWD Check	Negotiable
426129	31-Mar-22	SMITH SYSTEM DRIVER IMPROVEMENT INSTITUTE, INC.	1,615.85	IRWD Check	Negotiable
426130	31-Mar-22	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	3,734.86	IRWD Check	Negotiable
426131	31-Mar-22	SOUTH ORANGE COUNTY REGIONAL CHAMBERS OF COMMERCE	2,500.00	IRWD Check	Negotiable
426132	31-Mar-22	SOUTHERN CALIFORNIA EDISON COMPANY	505,634.99	IRWD Check	Reconciled
426133	31-Mar-22	SOUTHERN CALIFORNIA GAS COMPANY	5,357.47	IRWD Check	Negotiable
426134	31-Mar-22	SPARKLETTS	215.86	IRWD Check	Negotiable
426135	31-Mar-22	STANTEC CONSULTING SERVICES INC.	21,450.00	IRWD Check	Negotiable
426136	31-Mar-22	STREAKWAVE WIRELESS, INC.	741.68	IRWD Check	Negotiable
426137	31-Mar-22	TETRA TECH, INC	73,976.45	IRWD Check	Negotiable
426138	31-Mar-22	THOMPSON & PHIPPS INC	7,004.69	IRWD Check	Negotiable
426139	31-Mar-22	TITUS INDUSTRIAL GROUP, INC.	12,799.46	IRWD Check	Negotiable
426140	31-Mar-22	TK ELEVATOR CORPORATION	436.78	IRWD Check	Negotiable
426141	31-Mar-22	TONY DEMARIA ELECTRIC, INC (DBA TDE)	11,600.00	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR MAR 2022**

<b>CHECK OR ELECTRONIC #</b>	<b>PAYMENT DATE</b>	<b>SUPPLIERS</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
426142	31-Mar-22	TRAFFIC MANAGEMENT, INC	4,882.00	IRWD Check	Negotiable
426143	31-Mar-22	UNITED PARCEL SERVICE INC	197.45	IRWD Check	Negotiable
426144	31-Mar-22	USA WASTE OF CALIFORNIA, INC.	1,319.77	IRWD Check	Negotiable
426145	31-Mar-22	VERIZON WIRELESS SERVICES LLC	19,638.31	IRWD Check	Negotiable
426146	31-Mar-22	VWR INTERNATIONAL, LLC	2,675.83	IRWD Check	Negotiable
426147	31-Mar-22	WAXIE'S ENTERPRISES, INC	1,488.03	IRWD Check	Negotiable
426148	31-Mar-22	WEST YOST & ASSOCIATES, INC.	22,328.00	IRWD Check	Negotiable
426149	31-Mar-22	WOODARD & CURRAN INC	8,380.31	IRWD Check	Negotiable
426150	31-Mar-22	WOODBRIIDGE LAURELS	202.03	IRWD Check	Negotiable
426151	31-Mar-22	YOUNG KANG AND ANTHONY KANG	140.50	IRWD Check	Negotiable
<b>SUB-TOTAL CHECK DISBURSEMENTS</b>			<b>10,633,937.20</b>		
14810	2-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	1,513.45	IRWD Wire	Negotiable
14811	2-Mar-22	CALPERS	250,357.29	IRWD Wire	Negotiable
14812	11-Mar-22	CALPERS	584,988.49	IRWD Wire	Negotiable
14813	11-Mar-22	CALPERS	3,537.54	IRWD Wire	Negotiable
14814	11-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	11,910.69	IRWD Wire	Negotiable
14815	11-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	5,486.96	IRWD Wire	Negotiable
14816	11-Mar-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	11,427.55	IRWD Wire	Negotiable
14817	11-Mar-22	U.S. BANK NATIONAL ASSOCIATION	2,068.42	IRWD Wire	Negotiable
14818	11-Mar-22	BANK OF AMERICA	561.70	IRWD Wire	Negotiable
14819	14-Mar-22	WELLS FARGO BANK, N.A.	6,148.19	IRWD Wire	Negotiable
14820	14-Mar-22	EMPLOYMENT DEVELOPMENT DEPARTMENT	18,091.38	IRWD Wire	Negotiable
14821	14-Mar-22	EMPOWER RETIREMENT, LLC	189,065.35	IRWD Wire	Negotiable
14822	14-Mar-22	INTERNAL REVENUE SERVICE	228,016.22	IRWD Wire	Negotiable
14823	14-Mar-22	FRANCHISE TAX BOARD	71,274.98	IRWD Wire	Negotiable
14824	14-Mar-22	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	3,024.08	IRWD Wire	Negotiable
14825	14-Mar-22	CALPERS	250,311.99	IRWD Wire	Negotiable
14826	14-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	1,722.42	IRWD Wire	Negotiable
14827	14-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	4,584.75	IRWD Wire	Negotiable
14828	14-Mar-22	CITIGROUP GLOBAL MARKETS INC.	838,188.39	IRWD Wire	Negotiable
14829	14-Mar-22	MERRILL LYNCH CAPITAL SERVICES, INC	838,188.39	IRWD Wire	Negotiable
14830	14-Mar-22	CALPERS	1,387.34	IRWD Wire	Negotiable
14831	14-Mar-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	1,041.67	IRWD Wire	Negotiable
14832	14-Mar-22	U.S. BANK NATIONAL ASSOCIATION	686.20	IRWD Wire	Negotiable
14833	14-Mar-22	SUMITOMO MITSUI BANKING CORPORATION	5,112.88	IRWD Wire	Negotiable
14834	15-Mar-22	ORANGE COUNTY SANITATION DISTRICT	2,126,762.77	IRWD Wire	Negotiable
14835	21-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	4,596.98	IRWD Wire	Negotiable
14836	21-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	8,775.22	IRWD Wire	Negotiable
14837	21-Mar-22	TAKIMOTO, TAKASHI	15.90	IRWD Wire	Negotiable
14838	23-Mar-22	YU, AMY	287.36	IRWD Wire	Negotiable
14839	28-Mar-22	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	827,576.13	IRWD Wire	Negotiable
14840	28-Mar-22	INTERNAL REVENUE SERVICE	232,791.12	IRWD Wire	Negotiable
14841	28-Mar-22	FRANCHISE TAX BOARD	72,389.91	IRWD Wire	Negotiable
14842	28-Mar-22	EMPOWER RETIREMENT, LLC	194,523.52	IRWD Wire	Negotiable
14843	28-Mar-22	EMPLOYMENT DEVELOPMENT DEPARTMENT	18,122.64	IRWD Wire	Negotiable
14844	28-Mar-22	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	3,024.08	IRWD Wire	Negotiable
14845	28-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	4,478.11	IRWD Wire	Negotiable
14846	28-Mar-22	CHARD SNYDER & ASSOCIATES, INC.	5,294.58	IRWD Wire	Negotiable
14847	28-Mar-22	BANK OF AMERICA MERRILL LYNCH	92,666.73	IRWD Wire	Negotiable
14848	28-Mar-22	CALPERS	250,673.54	IRWD Wire	Negotiable
14849	30-Mar-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	6,042.82	IRWD Wire	Negotiable
14850	30-Mar-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	4,483.70	IRWD Wire	Negotiable
14851	30-Mar-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	5,975.27	IRWD Wire	Negotiable
14852	31-Mar-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	33,891.57	IRWD Wire	Negotiable
14853	31-Mar-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	8,310.44	IRWD Wire	Negotiable
<b>SUB-TOTAL ELECTRONIC DISBURSEMENTS</b>			<b>7,229,378.71</b>		
<b>SUB-TOTAL AP CHECK AND ELECTRONIC DISBURSEMENTS</b>			<b>17,863,315.91</b>		
425298	3-Mar-22	BRINTON, DENNIS	2,090.11	IRWD Check	Voided
425572	10-Mar-22	MILLER, EDISON	85.14	IRWD Check	Voided
<b>SUB-TOTAL CHECK AND ELECTRONIC DISBURSEMENTS ISSUED AND VOIDED IN MARCH 2022</b>			<b>2,175.25</b>		
<b>TOTAL AP DISBURSEMENTS AND VOIDS FOR MARCH 2022</b>			<b>17,865,491.16</b>		

Exhibit "E"

**MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS**

**March  
2022**

	AMOUNT	VENDOR	PURPOSE
3/11/2022	1,075,319.72	BANK OF AMERICA	ACH Payments for Payroll
3/25/2022	1,085,113.65	BANK OF AMERICA	ACH Payments for Payroll
	<u><u>\$2,160,433.37</u></u>		

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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-MAR-22 to 31-MAR-22

NAME	CHECK NO.	CHECK DATE	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Cotton, Derrien	425985	31-Mar-22	208.92	Other(Misc)	Quarterly Supervisor/Manager lunch meeting
Hall, William	425814	24-Mar-22	288.00	Certification Renewal	Cross Connection Specialist - Backflow Prevention Device Tester
Hatch, Lauren	425451	10-Mar-22	288.00	Certification Renewal	Cross Connection Specialist - Backflow Prevention Device Tester
Kanady, Jacob	425815	24-Mar-22	115.00	Other(Misc)	Safety shoe allowance
Kulick, Michael	425270	3-Mar-22	192.00	Membership Renewal	CWEA membership
Moeder, Jacob	425660	17-Mar-22	110.00	Membership Renewal	U.S. Society on Dams (USSD) membership
Nicholson, Darin	425271	3-Mar-22	101.00	Certification Renewal	CWEA Electrical/Instrumentation Technician Grade III
Orozco, Gustavo	425988	31-Mar-22	192.00	Membership Renewal	CWEA membership
Pan, Jenny	425452	10-Mar-22	112.11	Other(Misc)	Retirement lunch for Denise To-Nguyen
Perez, Rodolfo	425272	3-Mar-22	192.00	Membership Renewal	CWEA membership
Reinhart, Doug	425453	10-Mar-22	252.28	Lodging	ACWA Fall Conference, Pasadena, CA - Nov. 30, 2021
Spangenberg, Carl	425273	3-Mar-22	239.79	Lodging	AMTA 2022 Membrane Tech Conference, Las Vegas, NV - Feb. 22, 2022
Spangenberg, Carl	425276	3-Mar-22	239.79	Lodging	AMTA 2022 Membrane Tech Conference, Las Vegas, NV - Feb. 23, 2022
Withers, John	425455	10-Mar-22	252.28	Lodging	ACWA Fall Conference, Pasadena, CA - Nov. 30, 2021
Withers, John	425455	10-Mar-22	252.28	Lodging	ACWA Fall Conference, Pasadena, CA - Dec. 01, 2021
<b>Total Amount:</b>			<b>\$3,035.45</b>		

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April 25, 2022  
Prepared by: L. Srader  
Submitted by: T. Mitcham  
Approved by: Paul A. Cook *PCA*

## CONSENT CALENDAR

### ADOPTION OF REVISED IRWD SCHEDULE OF POSITIONS AND SALARY RATE RANGES

#### SUMMARY:

As a participant in the California Public Employees' Retirement System (CalPERS), IRWD is required to maintain its Schedule of Positions and Salary Rate Ranges to reflect the positions and salary ranges within IRWD. Staff recommends that the Board adopt a resolution rescinding Resolution No. 2021-27 and revising IRWD's Schedule of Positions and Salary Rate Ranges.

#### BACKGROUND:

Periodic review of current budgeted positions has determined the need for additional adjustments to the District's Schedule of Positions and Salary Rate Ranges. Staff recommends the Board adopt a revised District Schedule of Positions and Salary Rate Ranges to incorporate the following change:

- Title change for Senior Public Affairs Specialist position (29.N) to that of Digital Communications Specialist (29.N). This change will better reflect the duties of the position.

When a change such as this is made, CalPERS requires that each employment position and pay rate be identified in a publicly available pay schedule (CalPERS Regulations, 2 CCR 570.5). Staff recommend the Board adopt a resolution adopting the proposed changes to the IRWD Salary Grade Schedules, provided as Exhibit "A" (which supersedes Resolution No. 2021-27), effective April 25, 2022.

#### FISCAL IMPACTS:

There are sufficient funds included in the Fiscal Year 2021-22 Operating Budget, approved by the Board on April 26, 2021, to accommodate this change.

#### ENVIRONMENTAL COMPLIANCE:

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

#### COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2022 -

RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
IRVINE RANCH WATER DISTRICT RESCINDING  
RESOLUTION NO. 2021-27 AND ADOPTING A REVISED  
SCHEDULE OF POSITIONS AND SALARY RATE  
RANGES

LIST OF EXHIBITS:

- Exhibit "A" – Resolution of the Board of Directors of the Irvine Ranch Water District adopting  
a new Schedule of Positions and Salary Rate Ranges  
Exhibit "B" – Salary Grade Schedule

EXHIBIT "A"

RESOLUTION NO. 2022 – 8

RESOLUTION OF THE BOARD OF DIRECTORS  
OF IRVINE RANCH WATER DISTRICT,  
SUPERSEDING RESOLUTION NO. 2021-27 AND  
ADOPTING A REVISED SCHEDULE OF POSITIONS  
AND SALARY RATE RANGES

The Board of Directors of Irvine Ranch Water District, by adoption of Resolution No. 2021-27 on December 13, 2021, established a Schedule of Positions and Salary Rate Ranges of the Irvine Ranch Water District; and

The Board of Directors of Irvine Ranch Water District have reviewed the Schedule of Positions and Salary Rate Ranges and desires to make revisions thereto.

The Board of Directors of Irvine Ranch Water District does hereby resolve, determine and order as follows:

Section 1. That the Schedule of Positions and Salary Rate Ranges adopted by Resolution No. 2021-27 on December 13, 2021, is hereby superseded effective April 25, 2022.

Section 2. That the Schedule of Positions and Salary Rate Ranges for the Irvine Ranch Water District as set forth in Exhibit "B" attached to this Resolution, and as effective April 25, 2022, for all classifications, is hereby approved and adopted.

ADOPTED, SIGNED and APPROVED on April 25, 2022.

\_\_\_\_\_  
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:

By: \_\_\_\_\_  
Claire Hervey Collins, General Counsel  
Hansen Bridgett LLP

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## EXHIBIT "B"

Schedule "A"

**IRVINE RANCH WATER DISTRICT**  
**MONTHLY SALARY GRADE SCHEDULE**

**Managers, Exempt Supervisors, Confidential & Exempt Employees**

**Effective April 25, 2022**

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
<b><u>NON-EXEMPT</u></b>			
Salary Grade U1.N	\$3,165	\$3,924	\$4,120
Salary Grade U2.N	\$3,234	\$4,032	\$4,234
Salary Grade U3.N	\$3,302	\$4,143	\$4,350
Salary Grade U4.N	\$3,363	\$4,264	\$4,477
Salary Grade U5.N	\$3,440	\$4,381	\$4,601
Salary Grade U6.N	\$3,507	\$4,509	\$4,735
Salary Grade U7.N	\$3,577	\$4,634	\$4,867
Salary Grade U8.N	\$3,655	\$4,767	\$5,005
Salary Grade U9.N	\$3,724	\$4,898	\$5,146
Salary Grade U10.N	\$3,802	\$5,033	\$5,283
Salary Grade U11.N	\$3,876	\$5,161	\$5,416
Salary Grade U12.N	\$3,952	\$5,313	\$5,579
Salary Grade U13.N	\$4,026	\$5,464	\$5,740
Salary Grade U14.N	\$4,117	\$5,619	\$5,901
Salary Grade U15.N	\$4,205	\$5,768	\$6,056
Salary Grade U16.N	\$4,305	\$5,930	\$6,225
Salary Grade U17.N	\$4,396	\$6,078	\$6,382
Salary Grade U18.N	\$4,492	\$6,241	\$6,555
Salary Grade U19.N	\$4,595	\$6,398	\$6,721
Safety Assistant			
Salary Grade U20.N	\$4,717	\$6,606	\$6,937
Salary Grade U21.N	\$4,852	\$6,805	\$7,148
Salary Grade U22.N	\$4,984	\$7,020	\$7,371
Executive Secretary			

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
Human Resources Assistant			
Salary Grade U23.N	\$5,116	\$7,232	\$7,592
Salary Grade U24.N	\$5,261	\$7,457	\$7,831
Salary Grade U25.N	\$5,399	\$7,686	\$8,073
Human Resources Technician			
Salary Grade U26.N	\$5,566	\$7,916	\$8,313
Executive Assistant			
Salary Grade U27.N	\$5,726	\$8,149	\$8,555
Salary Grade U28.N	\$5,894	\$8,390	\$8,811
Salary Grade U29.N	\$6,070	\$8,634	\$9,067
Administrative Assistant Safety Specialist			
Salary Grade U30.N	\$6,253	\$8,890	\$9,335
Salary Grade U31.N	\$6,439	\$9,157	\$9,615
Human Resources Analyst			
Salary Grade U32.N	\$6,623	\$9,428	\$9,899
Salary Grade U33.N	\$6,817	\$9,702	\$10,188
Network Administrator User Support Administrator			
Salary Grade U34.N	\$7,020	\$9,970	\$10,471
Salary Grade U35.N	\$7,231	\$10,270	\$10,784



	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
<b>EXEMPT</b>			
Salary Grade U1.E	\$5,090	\$6,539	\$6,866
Salary Grade U2.E	\$5,260	\$6,793	\$7,133
Salary Grade U3.E	\$5,428	\$7,046	\$7,401
Salary Grade U4.E	\$5,598	\$7,317	\$7,682
Salary Grade U5.E	\$5,768	\$7,588	\$7,968
Salary Grade U6.E	\$5,967	\$7,882	\$8,277
Salary Grade U7.E	\$6,158	\$8,174	\$8,581
Salary Grade U8.E	\$6,359	\$8,493	\$8,918
Salary Grade U9.E	\$6,553	\$8,805	\$9,243
Salary Grade U10.E	\$6,770	\$9,138	\$9,594
Asset Systems Analyst Assistant Engineer Customer Service Supervisor Development Services Supervisor Management Analyst Public Affairs Analyst Senior Public Affairs Specialist			
Salary Grade U11.E	\$6,988	\$9,475	\$9,951
Purchasing Supervisor			
Salary Grade U12.E	\$7,214	\$9,840	\$10,329
Environmental Compliance Analyst Financial Analyst Regulatory Compliance Administrator Senior Accountant Senior Water Efficiency Analyst Water Efficiency Supervisor			
Salary Grade U13.E	\$7,448	\$10,196	\$10,705
Communications Analyst/Deputy PIO GIS Supervisor Legislative Analyst Right of Way Agent Senior Human Resources Analyst Treasury Analyst Water Resources Planner			
Salary Grade U14.E	\$7,689	\$10,589	\$11,118
Accounting Supervisor			

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
Associate Engineer District Secretary QA/QC Compliance Adminstrator			
Salary Grade U15.E	\$7,934	\$10,986	\$11,533
Applications Analyst Automation Programmer Laboratory Supervisor Senior Regulatory Compliance Administrator Senior SCADA Network Administrator Senior Network Administrator			
Salary Grade U16.E	\$8,199	\$11,400	\$11,972
Salary Grade U17.E	\$8,460	\$11,820	\$12,409
Construction Inspection Manager Customer Service Manager Engineer Facilities/Fleet Manager Purchasing Manager Safety Manager Senior Energy and Water Resources Planner			
Salary Grade U18.E	\$8,735	\$12,270	\$12,882
Collection Systems Manager Community Relations Manager Construction Services Manager Cybersecurity Analyst Electrical and Instrumentation Manager Field Services Manager Natural Resources Manager Public Affairs Manager Regulatory Compliance Manager Senior Applications Analyst Senior Applications Developer Senior Database Administrator Water Efficiency Manager Water Quality Manager			
Salary Grade U19.E	\$9,011	\$12,723	\$13,361
Manager of Risk & Contracts Administration Mechanical Services Manager Recycled Water Development Manager Treasury Manager Water Resources Manager			

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
Salary Grade U20.E Automation Manager Operations Manager Reliability Engineer Senior Engineer User Support Manager	\$9,292	\$13,196	\$13,854
Salary Grade U21.E Controller Manager of Strategic Planning and Analysis	\$9,575	\$13,672	\$14,356
Salary Grade U22.E Applications Manager Network and Cybersecurity Manager Principal Engineer	\$9,882	\$14,180	\$14,890
Salary Grade U23.E	\$10,195	\$14,694	\$15,429
Salary Grade U24.E Engineering Manager	\$10,472	\$15,286	\$16,048
Salary Grade U25.E	\$10,795	\$15,863	\$16,656
Salary Grade U26.E	\$11,288	\$16,702	\$17,537
Salary Grade U27.E Director of Field Operations Director of Human Resources Director of Information Services Director of Maintenance Director of Strategic Communications & Advocacy/ Deputy General Counsel Director of Recycling Operations Director of Safety & Security Director of Water Quality & Regulatory Compliance Director of Water Resources Treasurer/Director of Risk Management	\$11,804	\$17,588	\$18,466
Salary Grade U28.E	\$12,347	\$18,513	\$19,438
Salary Grade U29.E	\$12,911	\$19,493	\$20,467
Salary Grade U30.E Executive Director of Finance Executive Director of Technical Services Executive Director of Operations Executive Director of Water Policy	\$13,507	\$20,529	\$21,554
Salary Grade U31.E	\$14,179	\$21,693	\$22,776

	<b>MINIMUM</b>	<b>MAXIMUM</b>	<b>EXCEPTIONAL PERFORMANCE TOP OF RANGE</b>
Salary Grade U32.E	\$14,889	\$22,928	\$24,075
Salary Grade U33.E	\$15,630	\$24,230	\$25,441
Salary Grade U34.E	\$16,414	\$25,605	\$28,322
General Manager			

**IRVINE RANCH WATER DISTRICT**  
**MONTHLY SALARY GRADE SCHEDULE**  
**Non-Exempt Supervisors Unit**  
**Effective April 25, 2022**

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
<b><u>NON-EXEMPT</u></b>			
Salary Grade S26.N	\$5,566	\$7,916	\$8,313
Salary Grade S27.N	\$5,726	\$8,149	\$8,555
Salary Grade S28.N	\$5,894	\$8,390	\$8,811
Salary Grade S29.N	\$6,070	\$8,634	\$9,067
Salary Grade S30.N	\$6,253	\$8,890	\$9,335
Salary Grade S31.N Facilities Services Supervisor Fleet Supervisor	\$6,439	\$9,157	\$9,615
Salary Grade S32.N Collection Systems Supervisor Mechanical Services Supervisor	\$6,623	\$9,428	\$9,899
Salary Grade S33.N Cross Connection Supervisor Water Maintenance Supervisor	\$6,817	\$9,702	\$10,188
Salary Grade S34.N Construction Inspection Supervisor Automation Supervisor Electrical Supervisor Instrumentation Supervisor Water Monitoring Supervisor	\$7,020	\$9,970	\$10,471
Salary Grade S35.N Operations Supervisor	\$7,231	\$10,270	\$10,784

**IRVINE RANCH WATER DISTRICT**  
**MONTHLY SALARY GRADE SCHEDULE**  
**General Employees Unit**  
**Effective April 25, 2022**

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
<b><u>NON-EXEMPT</u></b>			
Salary Grade 1.N	\$3,159	\$3,917	\$4,113
Salary Grade 2.N	\$3,227	\$4,024	\$4,225
Salary Grade 3.N	\$3,297	\$4,136	\$4,342
Salary Grade 4.N	\$3,357	\$4,255	\$4,467
Salary Grade 5.N	\$3,431	\$4,373	\$4,593
Salary Grade 6.N	\$3,500	\$4,500	\$4,725
Office Assistant Mail Coordinator			
Salary Grade 7.N	\$3,568	\$4,625	\$4,857
Salary Grade 8.N	\$3,648	\$4,758	\$4,996
Salary Grade 9.N	\$3,719	\$4,889	\$5,132
Salary Grade 10.N	\$3,793	\$5,021	\$5,270
Salary Grade 11.N	\$3,867	\$5,152	\$5,407
Material Control Clerk I Utility Worker			
Salary Grade 12.N	\$3,944	\$5,301	\$5,569
Salary Grade 13.N	\$4,018	\$5,455	\$5,725
Customer Service Specialist I Support Specialist			
Salary Grade 14.N	\$4,109	\$5,607	\$5,888
Salary Grade 15.N	\$4,197	\$5,757	\$6,046
Collection Systems Technician I Office Specialist			
Salary Grade 16.N	\$4,295	\$5,919	\$6,213
Accounting Clerk Customer Service Field Technician Metering Systems Technician I			

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
<hr/>			
Water Maintenance Technician I			
Salary Grade 17.N	\$4,386	\$6,065	\$6,367
<hr/>			
Customer Service Specialist II			
Salary Grade 18.N	\$4,482	\$6,229	\$6,539
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Material Control Clerk II Senior Support Specialist			
Salary Grade 19.N	\$4,585	\$6,387	\$6,706
<hr/>			
Development Services Specialist Purchasing Coordinator Senior Office Specialist			
Salary Grade 20.N	\$4,708	\$6,591	\$6,922
<hr/>			
Collection Systems Technician II Engineering Technician I GIS Technician I Operator I Senior Accounting Clerk			
Salary Grade 21.N	\$4,840	\$6,791	\$7,133
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Collection Systems CCTV Technician Customer Service Specialist III Senior Customer Service Field Technician			
Salary Grade 22.N	\$4,974	\$7,005	\$7,357
<hr/>			
Facilities Services Technician Maintenance Mechanic Metering Systems Technician II Risk Assistant Senior Purchasing Coordinator Vehicle/Equipment Mechanic Water Maintenance Technician II			
Salary Grade 23.N	\$5,104	\$7,217	\$7,577
<hr/>			
Senior Water Efficiency Field Technician			
Salary Grade 24.N	\$5,249	\$7,444	\$7,815
<hr/>			
Buyer Public Affairs Assistant Recycled Water Specialist Water Loss Prevention Specialist Wetlands Specialist			
Salary Grade 25.N	\$5,387	\$7,672	\$8,057

	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
Engineering Technician II GIS Technician II Senior Collection Systems CCTV Technician Senior Collection Systems Technician			
Salary Grade 26.N	\$5,553	\$7,901	\$8,294
Cross Connection Specialist Metering Systems Technician III Water Efficiency Specialist Water Maintenance Technician III Water Resources Specialist			
Salary Grade 27.N	\$5,715	\$8,132	\$8,538
Accountant Operator II Senior Facilities Services Technician Senior Maintenance Mechanic Senior Water Loss Prevention Specialist Senior Vehicle/Equipment Maintenance Mechanic			
Salary Grade 28.N	\$5,882	\$8,374	\$8,794
Automation Technician Construction Inspector Electrical Technician Instrumentation Technician Landscape Contracts Administrator Scientist			
Salary Grade 29.N	\$6,057	\$8,618	\$9,047
Engineering Technician III Digital Communications Specialist GIS Technician III Operator III Senior Buyer Senior Recycled Water Specialist Senior Wetlands Specialist			
Salary Grade 30.N	\$6,241	\$8,872	\$9,318
Graphic Design Specialist Risk Analyst Senior Electrical Technician Senior Instrumentation Technician			
Salary Grade 31.N	\$6,424	\$9,140	\$9,594
Information Services Coordinator			




	MINIMUM	MAXIMUM	EXCEPTIONAL PERFORMANCE TOP OF RANGE
Payroll Administrator Recycled Water Project Specialist Senior Construction Inspector Senior Water Efficiency Specialist			
Salary Grade 32.N Asset Maintenance Coordinator Automation Specialist Environmental Compliance Specialist Process Specialist Senior Scientist Wetlands Scientist	\$6,610	\$9,409	\$9,880
Salary Grade 33.N Operations Coordinator Water Efficiency Analyst	\$6,803	\$9,683	\$10,166
Salary Grade 34.N	\$7,005	\$9,951	\$10,449
Salary Grade 35.N	\$7,216	\$10,249	\$10,762

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April 25, 2022

Prepared by: J. Moeder / R. Mori

Submitted by: K. Burton

Approved by: Paul A. Cook 

## ACTION CALENDAR

### ORANGE HEIGHTS ZONE 5 TO 6 AND ZONE C+ TO E PUMP STATIONS AND ZONE 6 RESERVOIR CONSULTANT SELECTION

#### SUMMARY:

The Irvine Community Development Company (ICDC) is developing the Orange Heights development (formerly Santiago Hills II) located in the City of Orange along Santiago Canyon Road between the 261 Toll Road and Jamboree Road. The Sub-Area Master Plan for the development identifies the need for a new Zone 5 to 6 domestic water pump station, Zone C+ to E recycled water pump station, and a Zone 6 domestic water reservoir. Staff developed the design of these facilities in 2016 before ICDC postponed the schedule for this development and is now restarting the engineering contracts for design of these facilities. Staff recommends the Board:

- Authorize the General Manager to execute a Professional Services Agreement with Lee & Ro in the amount of \$602,000 for engineering design services for the Zone 5 to 6 and Zone C+ to E Pump Stations project, and
- Authorize the General Manager to execute a Professional Services Agreement with Tetra Tech in the amount of \$484,000 for engineering design services for the Orange Heights Zone 6 Reservoir project.

#### BACKGROUND:

The proposed Zone 5 to 6 and Zone C+ to E pump stations, which will be located next to the existing Zone 5 to 8 pump station along Santiago Canyon Road, will supply domestic water and recycled water to the new development. The proposed Zone 5 to 6 domestic water pump station will supply the proposed 2.4-million-gallon (MG) Zone 6 domestic water reservoir that will serve the development. The proposed Zone C+ to E recycled water pump station will directly feed the entire development through a closed loop system.

In 2016, when ICDC was actively advancing development, staff separated the IRWD facility improvements into two design contracts: 1) the Zone 5 to 6 and Zone C+ to E Pump Stations Project, and 2) the Zone 6 Reservoir Project. IRWD contracted with Lee & Ro for the new pump stations and with Kleinfelder for the reservoir. Both consultants progressed design activities until November 2016 when ICDC halted its development plans, and staff stopped the design of both projects. The pump station design was stopped at the 30 percent completion level, and the reservoir design was stopped at the 60 percent completion level.

In February 2022, ICDC notified staff that development of the Santiago Hills II area, now called Orange Heights, is being restarted. To meet ICDC's aggressive schedule for the development, ICDC requested that IRWD's facilities be completed and online by September 2025.

Consultant Selection:

Staff contacted Lee & Ro and Tetra Tech to negotiate a scope of work and fee to complete the design of the pump stations and reservoir, respectively. The Lee & Ro design team that worked on the project in 2016 is still intact and is ready to continue the project. Staff did not contact Kleinfelder as it has lost key staff members since working on the project in 2016 and has not worked on recent IRWD reservoir projects. Tetra Tech has recently completed the design of the 3.7 MG Zone 1 and the 1.3 MG Fleming reservoirs. It has performed well on both projects and is ready to complete the project in accordance with the required completion schedule.

Lee & Ro and Tetra Tech submitted proposals to complete the designs. Staff negotiated both proposals with the respective consultants and confirmed that the scopes of work and fees are consistent with other recently completed pump station and reservoir projects. Staff recommends the Board authorize the General Manager to execute Professional Services Agreements in the amount of \$602,000 with Lee & Ro for the design of Zone 5 to 6 and Zone C+ to E pump stations and in the amount of \$484,000 with Tetra Tech for the design of the Zone 6 Reservoir.

Design and Construction Schedule:

Staff anticipates that the project will be designed and constructed according to the following schedule:

Notice of Award (Anticipated)	April 26, 2022
Kick-Off Meeting	May 2022
Updated Basis of Design Report	June 2022
Final Plans Approved	March 2023
Construction Notice of Award	May 2023
Construction Completion – Pump Stations	March 2025
Construction Completion – Reservoir	April 2025

FISCAL IMPACTS:

The Zone 5 to 6 Pump Station and Zone C+ to E Pump Station, Projects 07136 and 07139, and the Zone 6 Reservoir Project, Project 07138, are included in the FY 2021-22 Capital Budget. The existing budgets are sufficient to fund the recommendations presented herein.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In compliance with CEQA, the California Public Resources Code Section 21000 et. seq., and per the California CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3, as lead agency, the City of Orange filed a Notice of Determination with the County of Orange on November 8, 2005. On July 12, 2016, the City of Orange adopted an Addendum to Santiago Hills Environmental Impact Report (EIR) to address changes in the development since certification, including the construction of the Zone 5 to 6 and Zone C+ to E Pump Station and Zone 6 Reservoir.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on April 19, 2022.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH LEE & RO IN THE AMOUNT OF \$602,000 FOR ENGINEERING DESIGN SERVICES FOR THE ORANGE HEIGHTS ZONE 5 TO 6 AND ZONE C+ TO E PUMP STATIONS, PROJECTS 07136 AND 07139; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH TETRA TECH IN THE AMOUNT OF \$484,000 FOR ENGINEERING DESIGN SERVICES FOR THE ORANGE HEIGHTS ZONE 6 RESERVOIR, PROJECT 07138.

LIST OF EXHIBITS:

Exhibit "A" – Lee & Ro Scope of Work and Fee Proposal  
Exhibit "B" – Tetra Tech Scope of Work and Fee Proposal

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March 30, 2022

Mr. Richard Mori, PE  
 Irvine Ranch Water District  
 15600 Sand Canyon Avenue  
 Irvine, Ca 92618

**Subject: IRWD Santiago Hills Zone 5 to 6 and Zone C+ to E Booster Pump Stations**

**(Rev 2)**

Dear Mr. Mori:

The project has a PDR that has already gone through several preliminary reviews with IRWD. Due to the more than five years that have passed since the PDR was issued, IRWD will re-review the PDR and it is anticipated that LEE + RO will receive minor comments to the PDR from IRWD. LEE + RO will incorporate the comments into the PDR and re-issue as final. Other elements of the PDR will have to be updated and or reviewed, such as the cost estimates, upsizing of the generator to feed both the recycled and potable water BPS, and include updated Zone C+ Tank information since it is now constructed and as-builts are available.

Below is preliminary anticipated schedule showing engineering design through bidding. The schedule will be further refined in the Final PDR.

**Preliminary Schedule**

Major Task Anticipated Milestones	Completion After NTP (Calendar Days)	Start	Finish	Duration (Calendar Days)
Contract NTP	0	05/02/22	05/02/22	1
Variance NTP	1	05/03/22	05/03/22	1
Kick-Off-Meeting	8	05/10/22	05/10/22	1
Receive Draft PDR Comments	20	05/02/22	05/22/22	20
Prepare Final PDR	40	05/02/22	06/11/22	40
Prepare & Issue 60%	98	06/12/22	08/08/22	57
Receive 60% Design Comments	119	08/09/22	08/29/22	20
Prepare & Issue 90%	165	08/30/22	10/14/22	45
Receive 90% Design Comments	186	10/15/22	11/04/22	20
Prepare & Issue 100%	213	11/05/22	12/01/22	26
Receive 100% Design Comments	229	12/02/22	12/17/22	15
Prepare & Issue Final	248	12/18/22	01/05/23	18
Contracts Issue Bid Release	263	01/06/23	01/20/23	14
Construction Bids Due	284	01/21/23	02/10/23	20

The anticipated drawings are as follows:

<b>GENERAL</b>		
<b>SHEET</b>	<b>DWG #</b>	<b>DESCRIPTIONS</b>
1	G-1	TITLE SHEET
2	G-2	LOCATION & VICINITY MAPS & DRAWING INDEX
3	G-3	GENERAL NOTES - 1
4	G-4	GENERAL NOTES - 2
5	G-5	SYMBOLS & ABBREVIATIONS
<b>DEMOLITION</b>		
6	D-1	SITE DEMOLITION PLAN
<b>CIVIL</b>		
7	C-1	YARD PIPING PLAN
8	C-2	PAVING AND GRADING PLAN
9	C-3	WALL AND SIGNAGE PLAN
10	C-4	CIVIL DETAILS - 1
11	C-5	CIVIL DETAILS - 2
12	C-6	CIVIL DETAILS - 3
<b>ARCHITECTURAL</b>		
13	A-1	ARCHITECTURAL ABBREVIATIONS, NOTES , & SCHEDULES
14	A-2	ARCHITECTURAL FLOOR PLAN
15	A-3	ARCHITECTURAL ROOF PLAN
16	A-4	ARCHITECTURAL ELEVATIONS - 1
17	A-5	ARCHITECTURAL ELEVATIONS - 2
18	A-6	ARCHITECTURAL DETAIL - 1
19	A-7	ARCHITECTURAL DETAIL - 2
<b>STRUCTURAL</b>		
20	S-1	STRUCTURAL ABBREVIATIONS & NOTES
21	S-2	STRUCTURAL FLOOR PLAN
22	S-3	STRUCTURAL ROOF FRAMING PLAN
23	S-4	STRUCTURAL - SURGE TANK FOUNDATION PLAN & DETAILS
24	S-5	STRUCTURAL SECTIONS - 1
25	S-6	STRUCTURAL SECTIONS - 2
26	S-7	STRUCTURAL DETAILS - 1
27	S-8	STRUCTURAL DETAILS - 2
28	S-9	STRUCTURAL DETAILS - 3
29	S-10	STRUCTURAL DETAILS - 4
30	S-11	STRUCTURAL DETAILS - 5
31	S-12	STRUCTURAL DETAILS - 6
<b>MECHANICAL</b>		
32	M-1	MECHANICAL MATERIALS LIST & GENERAL NOTES
33	M-2	MECHANICAL FLOOR PLAN
34	M-3	MECHANICAL SECTIONS - 1
35	M-4	MECHANICAL SECTIONS - 2
36	M-5	MECHANICAL SECTIONS - 3
37	M-6	SURGE TANK(S) PLAN
38	M-7	SURGE TANK(S) SECTION AND DETAILS
39	M-8	MECHANICAL DETAILS - 1
40	M-9	MECHANICAL DETAILS - 2



41	M-10	MECHANICAL DETAILS - 3
42	M-11	MECHANICAL DETAILS - 4
<b>PLUMBING</b>		
43	P-1	DRAINAGE PLAN
44	P-2	RESTROOM PLAN AND SECTIONS
<b>HVAC</b>		
45	HVAC-1	HVAC PLAN
46	HVAC-2	HVAC SCHEDULE
47	HVAC-3	HVAC DETAILS
<b>ELECTRICAL</b>		
48	E-1	ELECTRICAL SYMBOLS & ABBREVIATIONS
49	E-2	ELECTRICAL OVERALL SITE PLAN
50	E-3	ELECTRICAL ENLARGE SITE PLAN (SURGE TANK(S))
51	E-4	ELECTRICAL POWER PLAN
52	E-5	ELECTRICAL CONTROL AND SIGNAL PLAN
53	E-6	ELECTRICAL SINGLE LINE DIAGRAM
54	E-7	ELECTRICAL PANEL ELEVATIONS
55	E-8	ELECTRICAL CABLE AND CONDUIT SCHEDULE - 1
56	E-9	ELECTRICAL CABLE AND CONDUIT SCHEDULE - 2
57	E-10	ELECTRICAL GROUNDING & LIGHTING PLAN
58	E-11	ELECTRICAL LIGHTING SCHEDULE
59	E-12	ELECTRICAL DETAILS - 1
60	E-13	ELECTRICAL DETAILS - 2
61	E-14	CONTROL SCHEMATIC - VARIABLE SPEED PUMPS
62	E-15	CONTROL SCHEMATIC - CONSTANT SPEED PUMPS
63	E-16	CONTROL SCHEMATIC - VENTILATION FANS
64	E-17	PLC PANEL LAYOUT
65	E-18	CONTROL PANEL POWER WIRING - 1
66	E-19	CONTROL PANEL POWER WIRING - 2
67	E-20	CONTROL PANEL I/O WIRING - 1
68	E-21	CONTROL PANEL I/O WIRING - 2
69	E-22	CONTROL PANEL I/O WIRING - 3
70	E-23	CONTROL PANEL I/O WIRING - 4
71	E-24	CONTROL PANEL I/O WIRING - 5
72	E-25	CONTROL PANEL I/O WIRING - 6
73	E-26	CONTROL PANEL I/O WIRING - 7
74	E-27	CONTROL PANEL I/O WIRING - 8
75	E-28	CONTROL PANEL I/O WIRING - 9
76	E-29	CONTROL PANEL I/O WIRING - 10
77	E-30	CONTROL PANEL I/O WIRING - 11
78	E-31	CONTROL PANEL I/O WIRING - 12
79	E-32	UPS PANEL POWER DISTRIBUTION AND CONTROLS
80	E-33	COMMUNICATION EQUIPMENT DETAILS
<b>INSTRUMENTATION</b>		
81	I-1	INSTRUMENTATION SYMBOLS & ABBREVIATIONS
82	I-2	PROCESS INSTRUMENTATION DIAGRAM - DOMESTIC WATER PUMPS
83	I-3	PROCESS INSTRUMENTATION DIAGRAM - RECYCLED WATER PUMPS
84	I-4	PROCESS INSTRUMENTATION DIAGRAM - PUMP STATION GENERAL
85	I-5	PROCESS INSTRUMENTATION DIAGRAM - SURGE TANK(S)

86	I-6	PROCESS INSTRUMENTATION DIAGRAM - GENERATOR
87	I-7	COMMUNICATION BLOCK DIAGRAM
88	I-8	INSTRUMENTATION DETAILS - 1
89	I-9	INSTRUMENTATION DETAILS - 2

**SCOPE OF WORK**

Task 1 Project Management

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

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

Meeting/Workshop
1. General project management and design development meetings (meetings as needed and assumes most meetings will be conducted virtually in TEAMS).
2. Site Visits (assumes 2 site visits)
3. Coordination activities with jurisdictional agencies and project stakeholders including, but not limited to, City of Orange Fire Department, The Irvine Company, Southern California Edison (assumes 1 meeting per agency)
4. Preliminary Design Workshop
5. Present the 60% design, discuss IRWD’s comments, and discuss how the outstanding items were addressed
6. Present the 90% design, discuss IRWD’s comments, and discuss how the outstanding items were addressed
7. Present the 100% design, discuss IRWD’s comments, and discuss how the outstanding items were addressed

- C. Quality Assurance/Quality Control. The Engineer shall develop and implement proven QA/QC measures throughout the project to ensure ongoing and consistent quality control throughout all project phases. As part of the QA/QC measures, the Engineer shall capture comments from review

meetings and submittals and thoroughly check the work product to ensure that comments are addressed.

Task 2 Preliminary Design

The Engineer shall perform the following subtasks as part of the preliminary design phase. The subtasks shall be documented and compiled into a Preliminary Design Report (PDR) as summarized below.

- A. Electrical and Controls. The PDR will be modified to have the emergency generator resized to feed both the recycled and potable water BPS.
- B. Project Schedule. The Engineer shall prepare an updated project schedule, which shall include detailed schedules for both design and construction activities. The schedule shall include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule shall be prepared in Microsoft Project.
- C. Opinion of Probable Construction Cost. The Engineer shall prepare an updated detailed and itemized opinion of probable construction cost for the proposed facilities.
- D. Preliminary Design Report (PDR).

LEE + RO will incorporate the comments to the PDR and re-issue as final. Upon resolution and incorporation of review comments, one (1) electronic copy in PDF shall be submitted. PDR assumptions:

- i. It is anticipated that no significant changes are included in the 2022 SAMP report, and this proposal assumes no changes will be required to the PDR's hydraulic appendices and the surge study appendices. As such, any changes required to the hydraulics or surge study can be done, but at added cost.
- ii. The Site Master Plan preferred layout has previously been agreed to by all parties. We anticipate only minor modifications to the plans to reissue into the Final PDR.
- iii. We anticipate having to repackage and pickup only minor comments to the Draft PDR issued in 2017.
- iv. Work still to be completed by subconsultants includes geotechnical report, potholing, and survey. This work will commence shortly after the new NTP is received, and will not be included in the PDR, but information will be included in the 60% design. The previous hydraulic surge study was finalized in 2016 and also completed by one of our subconsultants. We do not anticipate making any changes to Appendix B-1 (*Hydraulic Analysis Technical Memorandum*) and B-2 (*Santiago Hills Zone 5 to 6 Domestic Water Booster Pump Station Pressure Surge Analysis TM and Zone C+ to E BPS Pressure Surge Analysis TM prepared by Flow Science, Inc.*). As such, any changes required can be done, but at added cost.

Task 3 Final Design

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

- A. Project Manual. The Engineer shall prepare a Project Manual in standard IRWD format. IRWD's front end documents shall be utilized, and the Engineer shall assess IRWD's documents to determine any needed supplemental general/special provisions that should be added to comply with IRWD's general provisions and front-end requirements. The Project Manual shall describe the allowable shutdown durations and sequencing associated with any connections and tie-ins to existing IRWD facilities. The Project Manual shall also include the IRWD General Technical Specifications, modifications thereto, and any project specific technical specifications. It is incumbent upon the selected Engineer to familiarize themselves with IRWD's standards, use the standards as a starting point, and modify them as needed for the project.
- B. Construction Plans. The Engineer shall prepare detailed construction drawings in the latest version of AutoCAD and using NCS V4.0 layering standards, on 22-inch x 34-inch sheets utilizing IRWD's standard border template. Separate sheets with sheet index/location map/legend, general notes, index map, construction notes, condensed profiles, phasing, and detail connections shall be included. Construction notes shall be used (callouts on the plans are not allowed) on all construction drawings. Existing IRWD utilities shall be identified on the plan view by as-built plan set number with the pipeline material and IRWD pressure zone labeled. The index map shall include sheet legend, final alignment, valve locations, surrounding streets, and significant project site locations. Construction plans shall be prepared using the NAVD 88 and NAD 83 survey standards.
- C. Utility Research. The Engineer shall review the existing information and identify the location of existing underground utilities and/or other physical features in the immediate vicinity of the proposed facilities and appurtenances. Information on utilities including material, size, horizontal and vertical locations shall be identified. The Engineer shall include budget to pothole four (4) existing utilities.
- D. Electrical/Instrumentation. The Engineer shall prepare an operational scheme including P&IDs, single line diagrams, PLC loop drawings, control equipment list, and method of integrating the proposed facilities into IRWD's existing SCADA system. Prior to this process, the Engineer shall meet with IRWD electrical/automation staff to incorporate IRWD's standard operations, PLC and SCADA programming, and equipment tagging requirements into the design. The Engineer shall develop and provide the operational scheme and functional descriptions (in plain English) for District review and approval.
- E. SCE Final Service Plan. The Engineer shall coordinate with SCE early in the design process to obtain the Final Service Plan, which shall be inserted in the appendix of the Project Manual. This task shall include the coordination efforts necessary to communicate the project requirements, address any comments from SCE, and implement all requirements into the project design.
- F. Project Schedule. The Engineer shall maintain and consistently update the project schedule, which shall include detailed schedules for both design and construction activities. The schedule shall include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule shall be prepared in Microsoft Project.

- G. Opinion of Probable Construction Cost. The Engineer shall prepare a detailed and itemized opinion of probable construction cost for the proposed facilities, which shall be updated and submitted with each of the design deliverables.
- H. Architectural Renderings. The Engineer shall prepare architectural renderings of the site based on the preferred site plan with different building material/color options. The renderings shall depict the pump station building and all exterior facilities located on the site. The renderings shall include, at a minimum, a bird's eye view and a view from each direction of the site including the proposed building(s) and all site improvements. The building options shall include the use of only noncombustible materials, evaluation of up to three (3) different roof styles (e.g. parapet, gable, sloped, etc.) with closed eaves, and analysis of three (3) different types of architectural treatment using CMU block.
- I. Geotechnical Investigation. The Engineer shall conduct a geotechnical investigation to adequately characterize the conditions at the proposed pump station site. Performance of a geotechnical subsurface evaluation consisting of the excavation, logging and sampling of two small-diameter borings up to approximately 30 feet below adjacent grades or to refusal (whichever is shallower). Borings will be backfilled with a cement bentonite grout in accordance with the boring permit. Excess drill cuttings will be spread thinly in suitable areas onsite. The following tasks, at a minimum, shall be conducted as part of the geotechnical investigation:
- a. Perform a geotechnical reconnaissance to observe site conditions and to locate exploratory borings.
  - b. Conduct soil borings necessary to observe, test and classify soils, and monitor groundwater. The number, location, and depth of borings shall be adequate to characterize the soils to at least five feet below any proposed structure, pipeline invert, or pump cans.
  - c. Collect soil samples for testing as needed based on Engineer's professional judgment.
  - d. Plot the location of all soil borings on a map and attach the map to the Geotechnical Report. Include complete logs of the soil profiles in the report.
  - e. Conduct laboratory tests of selected samples to evaluate moisture content, density, gradation, Atterberg limits, consolidation, shear resistance, expansion, R-value, corrosivity, and/or other criteria as recommended by the geotechnical engineer or requested by the structural engineer for the structural design.
  - f. Prepare a geotechnical report presenting findings, conclusions, and recommendations for the design and construction of the proposed facilities. The report shall include, at a minimum, (1) groundwater presence and levels, (2) construction dewatering requirements, (3) pipe bedding requirements, (4) trench shoring requirements, (5) settlement potential, (6) excavability of soils, (7) location of rock, (8) backfill suitability, and (9) backfill compaction. The report shall emphasize specific concerns regarding construction methods and the integrity of pipelines, pavements, and structures. The report shall make recommendations regarding the design of facilities. Recommendations shall include (1) active, at-rest, passive and dynamic earth pressures, (2) foundation type, (3) allowable bearing pressure, (4) coefficient of friction between the foundation and soils/subgrade, (5) foundation design data, (6) settlement potential, (7) pipe bedding, (8) maximum cut slope requirements, (9) structural needs, (10) groundwater dewatering well(s) design criteria, and/or (11) other standard design criteria.
  - g. One (1) electronic copy of the Geotechnical Report shall be provided as a PDF.

J. Topographic Mapping. The Engineer shall conduct appropriate surveying for the proposed facilities including, but not limited, to the following:

- Establish survey ground control using NAD83 coordinates and NAVD88 county benchmark elevations,
- Provide contour mapping at 10 scale with 1-ft contours, and
- Field locate and add obscured surface features for all areas of the project.

The Engineer shall establish horizontal and vertical control and shall provide topographic maps to be used in the construction drawings for the proposed facilities and to facilitate preparation of detailed plans. An electronic copy of the topographic maps shall be provided to IRWD.

K. Permits. The Engineer shall make applications and secure all permits with appropriate agencies. The permit acquisition process shall be initiated as early as practical to avoid project delay. Copies of completed permits and approvals shall be inserted in the Appendix of the Project Manual. IRWD will reimburse the Engineer for actual permit fees without surcharge. At a minimum, IRWD anticipates the following.

- a. Fire Master Plan. The Santiago Hills Zone 5 Reservoir is equipped with a Reservoir Management System (RMS) that utilizes liquid sodium hypochlorite and aqueous ammonia. The City of Orange Fire Department previously reviewed and issued a Fire Master Plan for the facility. IRWD anticipates updating the Fire Master Plan to account for the new improvements, including modifications to the site access. The Engineer shall review and update the existing Fire Master Plan and secure the approval of the City of Orange Fire Department.

L. Final Design Deliverables. Deliverables shall be made as follows:

- a. Each major deliverable will include one electronic copy.
- b. The final design submittal will include One (1) full size final stamped and signed reproducible plan set on bond and one (1) original signed Project Manual for District's signatures.

M. Addenda Preparation and Pre-Bid Meeting. During the bidding period, the Engineer shall assist with providing information and clarification of bid documents to prospective bidders. This shall include the preparation of addenda including revisions to the design plans and specifications and assistance with addressing bidder questions. At a minimum, addenda preparation activities shall include:

- Plan Revisions: The Engineer shall budget twenty (20) hours of appropriate staff time for plan revisions to the construction drawings.
- Specification Revisions: The Engineer shall budget fifteen (15) hours of appropriate staff time for revisions or additions to the project specifications.
- Bidder Questions: The Engineer shall budget fifteen (15) hours of appropriate staff time to address and respond to bidder questions.
- Pre-Bid Meeting: During the bidding period, the Engineer shall attend one (1) two-hour pre-bid meeting that will be conducted by IRWD. This may include a site visit with potential bidding contractors.

LEE & RO will provide the above services per the enclosed Fee Breakdown Exhibit for a not to exceed amount of \$602,000.

If you have any questions, please call me at (858) 332-4284.

Sincerely,

A handwritten signature in cursive script that reads "Eric D. Lovering". The signature is fluid and includes a long, sweeping underline.

Eric Lovering, P.E.  
Chief Engineer

Enclosures – Exhibit 1: Fee Breakdown  
Exhibit: FY 2021-2022 Hourly Billing Rate Schedule A  
Exhibit: FY 2022 Other Direct Costs (ODC) Billing Schedule

**Exhibit 1: FEE BREAKDOWN**  
**Santiago Hills Zone 5 to 6 and Zone C+ to E Booster Pump Stations**

TASK NO.	ENGINEERING CLASSIFICATIONS: E8 Managing Eng, E7 Supervising Eng, E6 Principal Eng, E5 Senior Eng, E3 Associate Engineer, T4 Designer, T3 Associate Designer, A2 Word Processor II (See Billing Rate Schedule for Entire Labor Classifications).	LEE & RO Hours per Labor Category								Total Hours	Labor Cost	Other Direct Costs (ODCs)	Subs	TOTAL FEES
		E8	E7	E6	E5	E3	T4	T3	A2					
		Billing Rates (\$/Hour)												
PROJECT TASK DESCRIPTION		\$283	\$257	\$238	\$214	\$179	\$155	\$138	\$136	1.00				
<b>1</b>	<b>Project Management</b>													
1.A	Weekly / Monthly Status Reports	26				16				10	52	\$11,582		\$11,582
1.B	Meetings and Workshops													
1.B.1	General Project Management and Design Development Meetings	24				24					48	\$11,088	\$100	\$11,188
1.B.2	Site Visits	2		10		10					22	\$4,736	\$300	\$5,036
1.B.3	Coordination Meetings with Agencies and Stakeholders		16			16					32	\$6,976	\$150	\$7,126
1.B.4	Preliminary Design Workshop	4				4					8	\$1,848	\$100	\$1,948
1.B.5	60% Design Review	4				4					8	\$1,848	\$100	\$1,948
1.B.6	90% Design Review	4				4					8	\$1,848	\$100	\$1,948
1.B.7	100% Design Review	4				4					8	\$1,848	\$100	\$1,948
1.C	QA/QC	40	60	40						24	164	\$39,524	\$100	\$39,624
	<b>SUBTOTAL TASK 1 - PROJECT MANAGEMENT</b>	<b>108</b>	<b>76</b>	<b>50</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>350</b>	<b>\$81,298</b>	<b>\$1,050</b>	<b>\$0</b>	<b>\$82,348</b>
<b>2</b>	<b>Preliminary Design</b>													
2.A	Electrical and Controls	2		16						12	30	\$6,030		\$6,030
2.B	Project Schedule	4			16						20	\$4,556		\$4,556
2.C	Opinion of Probable Construction Cost	2	4	4	4	12					26	\$5,550		\$5,550
2.D	Preliminary Design Report (PDR)	24		60		60	36			16	196	\$39,568	\$350	\$39,918
	<b>SUBTOTAL TASK 2 - PRELIMINARY DESIGN</b>	<b>32</b>	<b>4</b>	<b>80</b>	<b>20</b>	<b>72</b>	<b>36</b>	<b>12</b>	<b>16</b>	<b>272</b>	<b>\$55,704</b>	<b>\$350</b>	<b>\$0</b>	<b>\$56,054</b>
<b>3</b>	<b>Final Design</b>													
3.A	Project Manual	36		36		42				36	150	\$31,170		\$31,170
3.B	Construction Plans	60	60	250		300	200	250			1,120	\$211,100		\$211,100
3.C	Utility Research					16	4				20	\$3,484	\$5,500	\$8,984
3.D	Electrical/Instrumentation	24	40	50		250	150	200			714	\$124,572		\$124,572
3.E	SCE Final Service Plan	2	2		20						24	\$5,360		\$5,360
3.F	Project Schedule	5			12						17	\$3,983		\$3,983
3.G	Opinion of Probable Construction Cost	4		4		12					20	\$4,232		\$4,232
3.H	Architectural Renderings			8		18	60				86	\$14,426		\$14,426
2.I	Geotechnical Investigation	2				4					6	\$1,282	\$21,000	\$22,282
2.J	Topographic Mapping	2				4					6	\$1,282	\$11,500	\$12,782
2.K	Permits					16					16	\$2,864	\$600	\$3,464
2.L	Final Design Deliverables					40					40	\$7,160	\$1,208	\$8,368
3.M	Addenda Preparation and Pre-Bid Meeting	4		16		40	5				65	\$12,875		\$12,875
	<b>SUBTOTAL TASK 3 - FINAL DESIGN</b>	<b>139</b>	<b>102</b>	<b>364</b>	<b>32</b>	<b>742</b>	<b>419</b>	<b>450</b>	<b>36</b>	<b>2,284</b>	<b>\$423,790</b>	<b>\$1,808</b>	<b>\$38,000</b>	<b>\$463,598</b>
	<b>TOTAL NOT TO EXCEED</b>	<b>279</b>	<b>182</b>	<b>494</b>	<b>52</b>	<b>896</b>	<b>455</b>	<b>462</b>	<b>86</b>	<b>2,906</b>	<b>\$ 560,792</b>	<b>\$ 3,208</b>	<b>\$ 38,000</b>	<b>\$ 602,000</b>



**LEE & RO, Inc.**  
**FY 2021 -2022 HOURLY BILLING RATE SCHEDULE - A**

**(Effective From November 1, 2021 to October 31, 2022)**

PERSONNEL CLASSIFICATION			BILLING RATES (\$/HOUR)
<b>ENGINEERS</b>			
Engineer 8	E8	Managing Engineer	\$283
Engineer 7	E7	Supervising Engineer	\$257
Engineer 6	E6	Principal Engineer	\$238
Engineer 5	E5	Senior Engineer	\$214
Engineer 4	E4	Engineer	\$199
Engineer 3	E3	Associate Engineer	\$179
Engineer 2	E2	Assistant Engineer	\$155
Engineer 1	E1	Junior Engineer	\$138
<b>CAD / DESIGNERS</b>			
Designer 6	T6	Principal Designer	\$199
Designer 5	T5	Principal Designer	\$179
Designer 4	T4	Principal Designer	\$155
Designer 3	T3	Principal Designer	\$138
Designer 2	T2	Principal Designer	\$116
Designer 1	T1	Principal Designer	\$97
<b>FIELD PROFESSIONALS</b>			
Field Professional 5	F5	Senior Resident Engineer	\$214
Field Professional 4	F4	Resident Engineer	\$199
Field Professional 3	F3	Senior Inspector	\$179
Field Professional 2	F2	Inspector	\$155
Field Professional 1	F1	Assistant Inspector	\$138
<b>ADMINISTRATIVE</b>			
Administrative 4	A4	Senior Contract Manager	\$152
Administrative 3	A3	Contract Manager	\$141
Administrative 2	A2	Senior Word Processor	\$136
Administrative 1	A1	Word Processor / Admin. Assistant	\$121

## LEE + RO

### FY 2022 Other Direct Cost (ODC) Billing Rate Schedule

(Effective from November 1, 2021 to October 31, 2022)

Automobile Mileage	IRS Published Rate
In-house Reproduction	\$0.08 / sheet (8.5 x 11 Bond B & W) \$0.20 / sheet (8.5 x 11 Bond Color) \$0.15 / sheet (11 x 17 Bond B & W) \$0.50 / sheet (11 x 17 Color) \$1.25 / sheet (24 x 36 Bond)
Mylar Original Drawing	\$8.00 / sheet (24 x 36 or 22 x 34)
Computers & Work Stations	No Charge
Subconsultant Mark-up	Subconsultant Invoice Amount Plus 5%, Unless Client Specifies Otherwise
Bulk Reproduction by Outside Printing Firm	Invoice amount plus 10% Handling Charge
Overnight Mailing, Air Fare, Project-Specific Software, Equipment Rental, etc.	At Cost

# EXHIBIT "B"



March 24, 2022

Transmitted via E-mail: Moeder@irwd.com  
Cho@irwd.com

Jacob M. Moeder, P.E.  
Engineering Manager, Dams & Storage  
Irvine Ranch Water District  
15600 Sand Canyon Ave.  
Irvine, CA 92618

**Reference: Proposal to Provide Engineering Services for the Santiago Hills (Orange Heights)  
Zone 6 Domestic Water Reservoir Project**

Dear Mr. Moeder,

Tetra Tech is pleased to submit our proposal for engineering design services for the Santiago Hills (Orange Heights) Zone 6 Domestic Water Reservoir Project. [We value the relationship that has been built with IRWD on our past reservoir projects, the 1.3 MG Fleming Zone 8 and the 3.7 MG Zone 1 Reservoirs.](#) It is our desire to once again provide the same consistently diligent and faithful service to the District.

## PROJECT BACKGROUND

IRWD's Santiago Hills (Orange Heights) Zone 6 Domestic Water Reservoir Project will support the new Irvine Community Development (ICDC) Santiago Hills II (SHII) development. The Irvine Company is now calling this development Orange Heights instead of Santiago Hills II development. Based on peak water and fire flow demands identified in the Santiago Hills II Sub Area Master Plan Update, a total volume of 2.4 million gallons (MG) will be needed to support the development. A new domestic water reservoir will be constructed, which will be fed by a new Zone 5-6 pump station that will be constructed at the site of the existing Zone 5 and Zone C+ reservoirs.

The general improvements that are associated with the Santiago Hills (Orange Heights) Zone 6 Reservoir include:

- New 2.4 MG buried concrete reservoir with a high water level (HWL) of 892 feet located at the northeast portion of the SHII Development;
- Reservoir appurtenances including internal tank mixer, chlorine analyzer, and reservoir subdrain system;
- New 12-inch diameter reservoir inlet, outlet, overflow and drainage pipelines, including isolation valve vault;
- On-site pipelines, including water main, storm drain and sewer main for future Reservoir Management System (RMS);
- Site improvements, including access road (alignment by others) from the development to the reservoir and provisions for installation for future RMS; and
- Electrical service and telemetry.

Kleinfelder was selected by IRWD to perform the design of the reservoir. The preferred reservoir location was selected by ICDC, Kleinfelder and the District. Kleinfelder submitted the Final Preliminary Design Report for the project on November 1, 2016. Kleinfelder submitted the 60% design of the Zone 6 Reservoir Project on November 17, 2016. The 60% design was not distributed for review by IRWD. IRWD informed Kleinfelder that the project was to be put on hold indefinitely as a result of a delay in beginning construction on the Santiago Hills II Development by ICDC. IRWD has requested Tetra Tech to prepare a proposal to pick up the design of the previously placed-on-hold Kleinfelder design.

## KEY PROJECT ISSUES

IRWD has provided Tetra Tech with Kleinfelder's Final Preliminary Design Report (PDR) and their 60% plans. Based on our review of this information, Tetra Tech has identified the following as the key project issues that will need to be resolved to allow for the preparation of the final plans and specifications:

- IRWD will provide topographic mapping that was used by Kleinfelder in its preparation of the plans. Included will be the mapping horizontal and vertical control.
- IRWD will provide the CADD file from Kleinfelder, including coordinates for the access road alignment, pipe alignments and reservoir location.
- Confirmation of additional geotechnical boring. Based on the latitude and longitude of the center of the reservoir based on Kleinfelder's PDR, boring LGC-B14 was located almost on top of the reservoir location. Leighton, our geotechnical subconsultant, will review the available data and determine if an additional boring is required. Leighton may recommend that the boring not be performed until the mass grading by ICDC is completed in order to have the actual field geology to confirm no changes from the design assumptions.
- Verification of the Fire Agency and its requirements. Confirm: minimum width of fire lanes; maximum grade; minimum radius curves; is the site in the State Responsibility Area (SRA) and adopted high Fire Hazard Severity Zone (FHSZ); requirements of Fire Master Plan; and is a Conceptual Fuel Modification Plan required. Based on our preliminary review of the agency requirements, we are assuming the width, maximum grade and minimum radius may need to be changed (latest City of Orange Fire requirements).
- Confirmation of construction work area and turnaround by the reservoir.
- Confirm scope of grading to be completed by ICDC prior to reservoir construction and the limits of IRWD work and ICDC work regarding storm drain, water and electrical facilities. Also, confirm location of the stockpile.
- Confirm limits of terrace drain construction with ICDC work.
- Confirm with SCE the 12kV connection location.
- Review the Surge Report prepared by Flow Science.

The key design issue for Tetra Tech is to meet with ICDC to determine the site access requirements, restrictions, drainage and schedule of the mass grading of the site. Tetra Tech recommends consistent coordination meetings with ICDC to monitor mass grading and limits (point of connection) of the drain, water and electrical facilities. Coordination with ICDC will be required for future irrigation meter and pump as well as any coordination with the proposed Zone 5-6 Booster Pump Station.

## SCOPE OF SERVICES

Members of our Project Team have performed a review of Kleinfelder's PDR and 60% plans as well as our previous proposal for this project. We have a good understanding of the work due to our previous reservoir projects with the District. The following is a summary of our anticipated scope of services.

### Task 1: Project Management

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

- A. Preparation of Project Status Reports.** Tetra Tech will prepare bi-weekly and monthly status reports. Each bi-weekly status report shall consist of a brief (one or two paragraphs) e-mail summarizing the activities

completed the previous week, the activities planned for the upcoming weeks, and critical decisions that need to be made.

Each monthly status report shall provide more detail, summarizing the work completed and reviewing work status relative to budget and schedule. The project schedule shall also be updated on a monthly basis, if needed.

- B. Meetings and Workshops.** Tetra Tech will organize, attend, and conduct meetings and workshops as required; prepare and submit meeting agendas for IRWD review and concurrence at least five days prior to the meeting; and prepare draft and final minutes for all meetings and workshops and submit them to IRWD within one week of the meeting. For budgeting purposes, Tetra Tech has assumed the following in-person meetings at a minimum.

Meeting/Workshop	Description
Kick-off meeting and follow up discussion of key issues	Two (2) one-hour meetings
Discussion of Fire Master Plan Requirements	One (1) two-hour meeting
Coordination meetings with jurisdictional agencies/ stakeholders including, but not limited to, Fire Agency, ICDC, and SCE	Five (5) two-hour meetings
Present Preliminary Basis of Design Update	One (1) two-hour meeting
Preliminary Basis of Design Update Review	One (1) two-hour meeting
Summary of Plan Changes from Kleinfelder 60% Submittal	One (1) two-hour meeting
Present the 60% design, discuss IRWD’s comments, and discuss how the outstanding items were addressed	One (1) two-hour meeting
Present the 90% design, discuss IRWD’s comments, and discuss how the outstanding items were addressed	One (1) two-hour meeting
Present the 100% design, discuss IRWD’s comments, and discuss how the outstanding items were addressed	One (1) two-hour meeting
Final Plan Signing	One (1) two-hour meeting

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

**Task 2: Basis of Design Update**

In order for IRWD to have a paper trial of the design decisions, Tetra Tech will prepare a Basis of Design Update. The purpose of the Basis of Design Update is to verify the design decisions made in Kleinfelder’s PDR. The report organization will follow the organization of Kleinfelder’s PDR. Tetra Tech will provide any modifications, revisions, or additional design issues as an update to the previous submitted PDR. Tetra Tech will perform the following subtasks as part of the Basis of Design Update phase of the work. The subtasks shall be documented and compiled into the Basis of Design Update as summarized below.

- A. Background Information.** Tetra Tech will provide a comprehensive review of existing documents including: Kleinfelder’s PDR and 60% plan submittal; geotechnical reports; surge report; CAD base files and topographic mapping; and previous correspondence provided by IRWD.

- B. Fire Authority.** Tetra Tech will contact the City of Orange Fire Department and Orange County Fire Authority to confirm the correct regulatory agency, the minimum width of fire lanes, maximum grades and horizontal curves for Fire Master Plan requirements and if a Conceptual Fuel Modification Plan is required. Based on search on the web, the City of Orange Fire requirements have changed since 2016, and the latest requirements are: 28 feet minimum width for hazardous fire areas (PDR and 60% have 20 feet); maximum grade of 12% (PDR and 60% are greater than 12% at two locations); and a minimum of 56 feet between compound curves (PDR and 60% have four feet).
- C. Additional Geotechnical Work.** Tetra Tech and Leighton will perform detailed review of the existing geotechnical reports and borings to determine if an additional boring is required prior to the proposed ICDC mass grading. Based on findings, Leighton will provide their recommendation whether a boring is required prior to the mass grading. Leighton may recommend that the boring not be performed until the mass grading by ICDC is completed in order to have the actual field geology to confirm no changes from the design assumptions.
- D. Update Background, Design Requirements and Existing Conditions.** Tetra Tech will update the first two sections of the PDR based on the existing direction provided by IRWD and the latest information provided by ICDC.
- E. Update Site Design.** Tetra Tech will revise the grading of the access road as required to meet the Fire Agency requirements for minimum width and slope and provide the required turn around capabilities on top of the reservoir. This will allow for the future RMS building and/or will allow the potential for fire agency to use the road to fight any potential fire within the property. Tetra Tech is not planning to re-evaluate the location of the reservoir. Tetra Tech is basing our budget on providing a new access road (holding to 28 feet wide, 10% slope (to the turnaround location) and horizontal curve requirements) and will not be evaluating alternative alignments.
- F. Reservoir Structural Design.** Tetra Tech will perform the structural calculations for the reservoir based on the latest building code and reference codes. The reservoir roof will be designed for support fire engines or H-20 loading, whichever is greater. Based on the results, Tetra Tech will summarize any impacts to the design as previously done by Kleinfelder.
- G. Reservoir Appurtenances.** Based on lessons learned from Fleming Tank and the Zone 1 Reservoir project, Tetra Tech will provide recommendations for any changes to the reservoir appurtenances, pipe connections, subdrain facilities, reservoir mixing, etc.
- H. Site Layout.** Tetra Tech will review the recommended layouts, site piping and appurtenances to confirm there are recommended by Tetra Tech. Based on our preliminary review, we are not assuming an evaluation of alternatives will be needed. Once the access road alignment and profile has been revised, the corresponding piping alignment and profile will be revised as well.
- I. Drain and Valve Vaults.** Based on lessons learned from Fleming Tank and the Zone 1 Reservoir project, Tetra Tech will provide recommendations for any changes to the two vault structures. We anticipate only minor changes, if any, will be determined to be required.
- J. Future RMS Facility.** IRWD will revisit the potential future need of the RMS facility. Tetra Tech will provide support as requested by IRWD to assist in determining if the RMS facility is required. It is recommended that the Fire Master Plan be prepared now if the RMS facility may be required in the future.
- K. Electrical Design.** Based on lessons learned from Fleming Tank and the Zone 1 Reservoir project, Tetra Tech will provide recommendations for any changes to the electrical design. We anticipate only minor changes, if any, will be determined to be required.

- L. Regulatory Permits and Approvals.** Tetra Tech will update the section regarding regulatory permits and approvals based on our latest reservoir projects. We are assuming a more focused summary of the requirements for the Fire Master Plan and ultimate approval from the Fire Agency due to the fire potential in the project area.

Tetra Tech will make applications and secure all permits with appropriate agencies. The permit acquisition process shall be initiated as early as practical to avoid project delay. Copies of completed permits and approvals shall be inserted in the appendix of the Project Manual. IRWD will reimburse Tetra Tech for actual permit fees without surcharge. Tetra Tech will include a \$5,000 allowance within their budget for the payment of permit fees in addition to the labor effort described above.

- M. Construction General Permit.** Our proposal is based on the assumption that TIC will prepare a SWPPP for the overall project and IRWD's contractor will need to follow the provisions of TIC's SWPPP.
- N. WQMP.** Tetra Tech will evaluate and provide a summary of the requirements for a WQMP similar to what was done on the Fleming Reservoir Project. This work will need to be coordinated with ICDC and the City of Orange but will not be submitted to the City for review and approval. For budgeting purposes, we have assumed similar facilities as designed for the Fleming Reservoir Project.
- O. City of Orange.** Tetra Tech has assumed that the grading plans will not be submitted to the City of Orange for review and comments. We are assuming that ICDC will submit its mass grading plans to the City for approval.
- P. SCE Coordination.** Tetra Tech will continue the coordination with SCE for the new electrical service.
- Q. Construction Phasing and Sequencing.** Tetra Tech will update the construction phasing and sequencing based on discussions with ICDC and the District.
- R. Plans, Specifications, Schedule and Cost Estimate.** Tetra Tech will update the anticipated plans, specifications, design and construction schedule and the engineer's opinion of probable construction costs.
- S. Basis of Design Update.** The work described above shall be summarized and compiled into a Basis of Design Update. At a minimum, the Basis of Design Update shall summarize the results of the subtasks identified above along with additional design criteria identified by Tetra Tech during this phase of the work.
- One (1) electronic copy in PDF of Draft Basis of Design Update shall be submitted for review. Upon resolution and incorporation of review comments, five (5) copies of the final Basis of Design Update and one (1) electronic copy in PDF shall be submitted. The final Basis of Design Update shall be submitted prior to proceeding with the 60 percent design deliverable.
- T. ICDC Coordination.** Throughout this phase of the work, Tetra Tech, in conjunction with IRWD, will continue its coordination with ICDC for the design of the project, including schedule and proposed mass grading. For this proposal, we have assumed one (1) virtual meeting per month for this coordination effort.

### Task 3: Final Design

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

- A. ICDC Coordination.** Throughout this phase of the work, Tetra Tech, in conjunction with IRWD, will continue its coordination with ICDC for the design of the project, including schedule and proposed mass grading. For this proposal, we have assumed one (1) virtual meeting per month for this coordination effort.



- B. Fire Master Plan.** Tetra Tech will prepare the required Fire Master Plan and Conceptual Fuel Modification Plan as required by the Fire Regulatory Agency. Tetra Tech has assumed a total of three (3) submittals and re-submittals will be required to get approval.
- C. Project Manual.** Tech will prepare a Project Manual in standard IRWD format. IRWD’s front end documents shall be utilized, and Tetra Tech will assess IRWD’s documents to determine any needed supplemental general/special provisions that should be added to comply with IRWD’s general provisions and front end requirements. The Project Manual shall describe the allowable shutdown durations and sequencing associated with any connections and tie-ins to existing IRWD facilities. The Project Manual shall also include the IRWD General Technical Specifications, modifications thereto, and any project specific technical specifications.
- D. Construction Plans.** Tetra Tech will prepare detailed construction drawings in the latest version of AutoCAD and using NCS V4.0 layering standards, on 22-inch x 34-inch sheets utilizing IRWD’s standard border template. Separate sheets with sheet index/location map/legend, general notes, index map, construction notes, condensed profiles, phasing, and detail connections shall be included. Construction notes shall be used (callouts on the plans are not allowed) on all construction drawings. Existing IRWD utilities shall be identified on the plan view by as-built plan set number with the pipeline material and IRWD pressure zone labeled. The index map shall include sheet legend, final alignment, valve locations, surrounding streets, and significant project site locations. Construction plans shall be prepared using the NAVD 88 and NAD 83 survey standards.

The following is a summary of the drawings that we envision for the project:

Sheet Title
General Sheets (4 sheets)
Construction Notes
Horizontal Control Plan (3 sheets)
Existing Site and Vegetation
Overall Site Plan
Fire Master Plan
Construction Phase Grading Plan (40 scale)
Construction Phase Cross Sections and Site Details
Final Grading Plan (40 scale)
Grading Cross Sections (2 sheets)
Site Drainage Plan
Grading and Drainage Details (2 sheets)
Erosion Control Plan
Access Road Plan and Profile (3 sheets)
Access Road Cross Sections
Reservoir Site Plan and Precise Grading at Reservoir (10 scale)
Drain and Valve Vault Site Plan and Precise Grading Plan (10 scale)
Future RMS Site Layout Plan (10 scale)
Site Details including Subgrade Preparation
Gate and Fencing Details
Fire Agency Details
Reservoir Yard Piping Plan



Sheet Title
Reservoir Subdrain Piping Plan
Inlet/Outlet Plan and Profile (3 sheets)
Drain/Overflow Pipe Plan and Profile (2 sheets)
Piping Details (2 sheets)
Connection Details
Miscellaneous Details
Reservoir Subdrain Details
Reservoir Access Hatches/Ladders
Reservoir Piping Details (2 sheets)
Reservoir Miscellaneous Appurtenances (2 sheets)
Drain Vault Plan and Section
Valve Vault Mechanical Plan and Section (2 sheets)
Vault Details
Biofiltration Plan, Section and Details
General Structural Notes and Special Inspection Requirements (2 sheets)
Foundation Plan
Roof Deck Plan
Partial Roof Deck Reinforcing Plan
Typical Reservoir Sections
Roof Deck Sections
Wall Section and Elevations
Typical Structure Details
Foundation Details
Wall Details
Roof Deck Details
Miscellaneous Structural Details (2 sheets)
Electrical Symbols and Abbreviations
Electrical Site Plan
Reservoir Area Site Plan
Lower Area Site Plan and Valve Vault Plan
Power Site Plan
I&C Site Plan
Single Line Diagram and Electrical Schedules
Elevation Drawings and Panel Schedule
Lighting and Grounding Plan
Electrical Details (2 sheets)
I&C Symbols and Abbreviations
PLC Loop Diagram (3 sheets)
P&ID (2 sheets)
Control Panel Layout and System Architecture
<b>Total Number of Sheets: 84 sheets</b>

- E. Geotechnical Investigation.** Tetra Tech has included the budget to perform a geotechnical boring at the reservoir site in case it is recommended. Leighton Consulting, Inc., as a subconsultant to Tetra Tech, will perform the work and will prepare an updated report.
- F. Field Survey Confirmation.** Tetra Tech has assumed that a field survey after ICDC has completed the rough grading of the access road and the reservoir site will be valuable and desired by IRWD. Tetra Tech will perform the following topographic survey after the rough grading: 50 foot cross sections of the completed rough grading access road as well as the proposed water tank location. The survey will collect all topographic site features as well as surface utilities using a combination of Trimble R8 GPS and Trimble S6 Robotic Total Station Equipment. The survey will be tied horizontally to the California State Plan Coordinate System (NAD83) and vertically to the Orange County Public Works benchmark control network (NAVD88). All survey work performed by Tetra Tech will be under the direct supervision of a Professional Land Surveyor licensed in the State of California.
- G. Electrical/Instrumentation.** Tetra Tech will prepare an operational scheme including P&IDs, single line diagrams, PLC loop drawings, control equipment list, and method of integrating the proposed facilities into IRWD's existing SCADA system. Prior to this process, Tetra Tech will meet with IRWD electrical/automation staff to incorporate IRWD's standard operations, PLC and SCADA programming, and equipment tagging requirements into the design. Tetra Tech will develop and provide the operational scheme and functional descriptions (in plain English) for District review and approval.
- H. SCE Final Service Plan.** Tetra Tech will coordinate with SCE early in the design process to obtain the Final Service Plan, which shall be inserted in the appendix of the Project Manual. This task shall include the coordination efforts necessary to communicate the project requirements, address any comments from SCE, and implement all requirements into the project design.
- I. Project Schedule.** Tetra Tech will maintain and consistently update the project schedule, which shall include detailed schedules for both design and construction activities. The schedule shall include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule shall be prepared in Microsoft Project.
- J. Liquidated Damages Spreadsheet.** Tetra Tech will assist in calculating the liquidated damages value for the construction project, should the contract time be exceeded. IRWD's standard liquid damage calculation form will be provided.
- K. Opinion of Probable Construction Cost.** Tetra Tech will prepare a detailed and itemized opinion of probable construction cost for the proposed facilities, which shall be updated and submitted with each of the design deliverables described below.
- L. Final Design Deliverables.** Deliverables shall be made as follows:
1. One (1) CD or a OneDrive link or Dropbox of the 60 percent submittal containing a single PDF file of the entire plan set. Show civil/site, preliminary reservoir plans and sections, mechanical, and electrical plans. Show basic mechanical equipment, structural layouts, pipeline alignments, preliminary profiles, and existing utilities at a minimum. Provide a complete table of contents for the Project Manual.
  2. One (1) CD or a OneDrive link or Dropbox of the 90 percent submittal containing a single PDF file of the entire plan set. Show concepts of each component of the design such as civil, structural, mechanical, electrical and instrumentation. Show plan, profile, connections, details, and location of appurtenances. Plan and profile drawings and mechanical details/drawings shall be developed to a high level of detail.

Provide three (3) color coded copies of the 90 percent Project Manual, including all sections; contract documents, general & special provisions, general requirements, technical specifications, and appendix.

3. One (1) CD or a OneDrive link or Dropbox of the 100 percent submittal containing a single PDF file and the AutoCAD files of the entire plan set. Include complete plans and three (3) color coded copies of the Project Manual, a notebook with the design calculations (including, but not limited to, mechanical, civil, structural, electrical, pipe thickness and restraint), and one (1) CD containing all MS Word files used in the preparation of the Project Manual.
4. One (1) full size final stamped and signed reproducible plan set on bond and one (1) original signed Project Manual for District’s signatures.

**Task 4: Bid Phase Services**

During the bidding period, Tetra Tech will assist with providing information and clarification of bid documents to prospective bidders. Tetra Tech will include budget for the preparation of up to three (3) addenda including revisions to the design plans and specifications and assistance with addressing bidder questions. At a minimum, addenda preparation activities shall include:

- **Plan Revisions:** Tetra Tech will budget ten (10) hours of appropriate staff time for plan revisions to the construction drawings.
- **Specification Revisions:** Tetra Tech will budget ten (10) hours of appropriate staff time for revisions or additions to the project specifications.
- **Bidder Questions:** Tetra Tech will budget fifteen (15) hours of appropriate staff time to address and respond to bidder questions.
- **Pre-Bid Meeting:** Tetra Tech will prepare for and conduct one (1) two-hour pre-bid meeting and shall provide agendas, exhibits, sign-in sheet, and minutes for the meeting. This may include a site visit with potential bidding contractors.

**SCHEDULE**

Tetra Tech has reviewed the project scope of services and understand the importance of the schedule. We are familiar with the project site and understand the purpose of the work and the extent of our efforts which will be necessary to complete the project. In addition, our project team’s familiarity with IRWD standards and our past experience with reservoir design will be valuable to meeting and accelerating your schedule. Tetra Tech has reviewed the current and planned workload for our project team. They are available to immediately begin work on this project.

Tetra Tech will meet the following significant project milestones:

Task Milestone	Date
Notice of Award (Design)	April 26, 2022
Kick-off Meeting	May 4, 2022
Draft Basis of Design Update Submittal	June 8, 2022
Final Basis of Design Update Submittal	June 29, 2022
60% Design Submittal	July 27, 2022
90% Design Submittal	October/November 2022
100% Design Submittal	December 2022
Plans Approved	January 2023

## PROJECT TEAM

For this project, we are proposing the following Project Team:

<b>Project Manager:</b>	Tom Epperson, P.E.
<b>Team Leader:</b>	Mike Tsoi, P.E.
<b>QA/QC:</b>	Ken Berard, P.E.
<b>Mechanical/Piping Technical Lead:</b>	Erin Cabanero, P.E.
<b>Grading/Site/WQMP/SWPPP:</b>	Nate Schreiner, P.E., QSD
<b>Electrical/Controls Lead:</b>	Mazen Kassar, P.E.
<b>Structural Lead:</b>	Eric Yuen, P.E., S.E.

Subconsultants: Geotechnical – Leighton Consulting, Inc.; Survey will be performed by Tetra Tech staff.

Resumes of most of these team members were included within our November 21, 2019 proposal for the Fleming Zone 8 Tank and Zone 8 to 9 Booster Pump Station Project. All of the team members were involved in the design of both the Zone 1 Reservoir and the Fleming Zone 8 Tank projects. We can provide you with project specific resumes if you request.

## PROJECT TEAM EXPERIENCE

In general, our project team’s experience was described in our June 7, 2016 proposal for Santiago Hills Zone 6 Domestic Water Reservoir proposal (Reservoir, IRWD Design and Extensive Grading Experience). In addition, our November 21, 2019 proposal for Fleming Zone 8 Tank updated our reservoir and IRWD design experience. The following is a summary of our reservoir experience.

### Reservoir Experience

During the last 18 years, our Project Team has designed over 24 prestressed concrete tanks within Southern California. The following table summarizes the experience of our Project Team on all reservoir projects, not just on prestressed concrete tanks.

Type of Tank	Last 8 Years (2014 to 2021)	From 2009 to 2013	From 2004 to 2008	Total During Last 15 Years
Prestressed Concrete	8	3	13	<b>24</b>
Reinforced Concrete	11	2	11	<b>24</b>
Steel Tank	4	1	9	<b>14</b>
<b>Subtotal</b>	<b>23</b>	<b>6</b>	<b>33</b>	<b>62</b>

Therefore, our project team is high on the learning curve and can apply their expertise to addressing and resolving your project issues in a cost-effective and timely manner. We feel our best reference is the latest two reservoir projects that the project team has completed for IRWD: Fleming Zone 8 Tank and Zone 1 Reservoir Projects. Our project team knows IRWD’s design procedures and standards, electrical and P&ID standards, preferred materials, and operational preferences which will allow us to complete the design in the most cost-effective and timely manner.

**MISCELLANEOUS**

**Joint Venture.** No joint ventures will be used on the project.

**Conflict of Interest.** Tetra Tech has no Conflicts of Interest on this project.

**Insurance.** Tetra Tech has insurance coverage in the limits required for your typical projects.

**SUMMARY OF FEE**

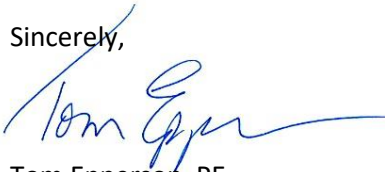
Tetra Tech will perform the work for the above scope of services for the following not-to-exceed fee amount.

Scope of Services	Budget
Task 1: Project Management	\$43,000
Task 2: Basis of Design Update	\$99,900
Task 3: Final Design	\$331,600
Task 4: Bid Phase Services	\$9,500
<b>Total Not-to-Exceed Amount</b>	<b>\$484,000</b>

We have included herewith our staff hourly breakdown per task as well as our Hourly Rate Schedule.

Thank you for giving us the opportunity to submit our proposal, we look forward to working with you. Should you require additional information or have any questions, please feel contact me at 949/809-5156 or via email at tom.epperson@tetrattech.com.

Sincerely,



Tom Epperson, PE  
Vice President

TLE/de

M:\Marketing\Proposals\FY 2022\IRWD-Santiago Reservoir Final





2022

**HOURLY CHARGE RATE AND EXPENSE REIMBURSEMENT SCHEDULE**

**Project Management**

Project Manager 1	\$220.00
Project Manager 2	\$270.00
Sr Project Manager	\$305.00
Program Manager	\$340.00
Principal in Charge	\$340.00

**Engineers**

Engineering Technician	\$37.00
Engineer 1	\$100.00
Engineer 2	\$115.00
Engineer 3	\$130.00
Project Engineer 1	\$150.00
Project Coordinator	\$165.00
Project Engineer 2	\$165.00
Sr Engineer 1	\$175.00
Sr Engineer 2	\$185.00
Sr Engineer 3	\$210.00
Principal Engineer	\$300.00

**Planners**

Planner 1	\$104.00
Planner 2	\$115.00
Sr Planner 1	\$125.00
Sr Planner 2	\$151.00
Sr Planner 3	\$175.00

**Designers & Technicians**

CAD Technician 1	\$65.00
CAD Technician 2	\$75.00
CAD Technician 3	\$90.00
CAD Designer	\$105.00
Sr CAD Designer 1	\$125.00
Sr CAD Designer 2	\$150.00
CAD Director	\$155.00
Survey Tech 1	\$50.00

**Health & Safety**

H&S Administrator	\$95.00
Sr H&S Administrator	\$115.00
H&S Manager	\$145.00

**Construction**

Construction Project Rep 1	\$80.00
Construction Project Rep 2	\$90.00
Sr Constr Project Rep 1	\$105.00
Sr Constr Project Rep 2	\$120.00
Construction Manager 1	\$170.00
Construction Manager 2	\$190.00
Construction Director	\$235.00

**General & Administrative**

Project Assistant 1	\$67.00
Project Assistant 2	\$75.00
Project Administrator	\$95.00
Sr Project Administrator	\$120.00
Sr Graphic Artist	\$130.00
Technical Writer 1	\$97.00
Technical Writer 2	\$124.00
Sr Technical Writer	\$155.00

**Information Technology**

Systems Analyst / Programmer 1	\$77.00
Systems Analyst / Programmer 2	\$115.00
Sr Sys Analyst / Programmer 1	\$130.00
Sr Systems Analyst / Programmer 2	\$196.00

**Project Accounting**

Project Analyst 1	\$90.00
Project Analyst 2	\$114.00
Sr Project Analyst	\$155.00

**Reimbursable In-House Costs:**

Photo Copies (B&W 8.5"x11")	\$ 0.15/Each
Photo Copies (B&W 11"x17")	\$ 0.40/Each
Color Copies (up to 8.5"x11")	\$ 2.00/Each
Color Copies (to 11"x17")	\$ 3.00/Each
Compact Discs	\$10/each
Large format copies	\$0.40 S.F.

Mileage-Company Vehicle	\$0.80/mile
Mileage-POV	\$0.55/mile*

\*current GSA POV mileage rate subject to change

All other direct costs, such as production, special photography, postage, delivery services, overnight mail, printing and any other services performed by subconsultant will be billed at cost plus 15%.


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April 25, 2022

Prepared by: W. James / M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook 

## ACTION CALENDAR

### WOODBIDGE RECYCLED WATER PIPELINE REPLACEMENT CONSTRUCTION AWARD

#### SUMMARY:

The Woodbridge Recycled Water Pipeline Replacement will replace asbestos cement recycled water pipelines that have reached the end of their useful life in the Woodbridge community of Irvine. Staff recommends the Board:

- Authorize a budget increase for Project 11571 in the amount of \$4,200,000, from \$11,018,000 to \$15,218,000, and
- Authorize the General Manager to execute a construction contract with E.J. Meyer Company in the amount of \$11,959,999 for the Woodbridge Recycled Water Pipeline Replacement.

#### BACKGROUND:

This is IRWD's first major pipeline replacement project and it will replace approximately ten miles of asbestos cement pipe of the recycled water system in Woodbridge. The recycled water system serving the area was originally constructed between 1975 through 1981 and these pipelines have experienced multiple failures in recent years. Most of the new pipe will be installed in East and West Yale Loops. A project site map is provided as Exhibit "A".

The design has been coordinated with the City of Irvine and the Woodbridge community's multiple schools, parks, and the Woodbridge Village Association. To reduce impacts to schools and traffic, the construction of new pipelines adjacent to schools will occur during Irvine Unified School District's summer recess from June 5 to August 17, 2022. To allow the contractor to begin working during the upcoming summer and mitigate the current business market and long delivery times for materials, IRWD has pre-purchased approximately 10,000 feet of PVC pipe and ductile iron fittings for delivery before the end of May. The remainder of the materials needed for the project will be procured by the contractor.

#### Construction Bid Process:

In May 2021, IRWD retained West Yost to provide engineering design services for the project. West Yost completed the design and staff approved the construction plans and advertised the project for construction bidding to a select list of 18 pipeline contractors on March 15, 2022. The bid opening was held April 14, 2022. Seven bids were received and are summarized in the following table:

<b>Bidder</b>	<b>Bid Amount</b>
E.J. Meyer Company	\$11,959,999
Vido Artukovich & Son, Inc./ Vidmar Inc. A JV	\$13,943,840
T.E. Roberts, Inc.	\$14,323,924
Ferreira Construction Co, Inc.	\$16,214,102
CCL Contracting, Inc.	\$16,370,456
Sukut Construction, LLC	\$16,449,805
Paulus Engineering, Inc.	\$22,154,526
<i>Engineer's Estimate</i>	<i>\$16,280,000</i>

E.J. Meyer Company was the apparent low bidder with a bid of \$11,959,999, and the bid information is provided in Exhibit “B”. The bids ranged from 26% lower to 36% higher than the engineer’s estimate of \$16,280,000. The difference between the low bid and the engineer’s estimate can be attributed to the engineer’s estimate having higher costs for bid items including traffic control, trench safety measures, potholing, installation of pipe, and bore and jack installations. E.J. Meyer has extensive experience with pipeline installation and is well qualified to construct the improvements.

Schedule:

Installation of pipelines adjacent to schools will occur during summer to mitigate construction impacts, and pipe materials have been pre-purchased in consideration of current delivery times to allow the contractor to begin work this summer. Should the contractor not be able install the approximately 10,000 feet of pipe in these school areas during the 2022 summer recess, the construction contract time was extended to end in August 2023 to allow the contractor to complete the work next summer. This extended contract time also provides time for the protracted delivery of the remainder of the materials required.

Community Outreach:

Because the project will replace ten miles of pipeline throughout the Woodbridge community, staff has already begun outreach to the community regarding the project. In March, the District met with the Woodbridge Village Association (WVA) to brief the association on the project and to introduce WVA’s Executive Director and landscape/maintenance team leads to the IRWD staff working on the project. WVA and IRWD are communicating, and will continue to coordinate on water shutoffs, irrigation schedules and community outreach. For example, an article explaining the project will be included in WVA’s May “*Reflections*” newsletter. The article will inform residents about the work taking place and note that heavily traveled to points of interest, such as schools and community facilities, are scheduled for construction during off-season periods. Staff has also reached out to the Irvine Unified School District (IUSD) to update them on the project and to communicate about the construction taking place around IUSD schools over the summer break.

Additional outreach is planned as the project progresses, and IRWD's project webpage, [IRWD.com/WoodbridgePipelineProject](http://IRWD.com/WoodbridgePipelineProject), will continue to be updated to give residents easy access to project updates once construction begins.

FISCAL IMPACTS:

Project 11571 is included in the FY 2021-22 Capital Budget. A budget increase is required to fund the construction and engineering support services for the project as shown in the table below.

Project No.	Current Budget	Addition <Reduction>	Total Budget
11571	\$11,018,000	\$4,200,000	\$15,218,000

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15302 which provides exemption for the replacement or reconstruction of existing utility systems and/or facilities 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 capacity as to structure replaced. A Notice of Exemption for the project was filed with the County of Orange on May 12, 2021.

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD AUTHORIZE A BUDGET INCREASE FOR PROJECT 11571 IN THE AMOUNT OF \$4,200,000, FROM \$11,018,000 TO \$15,218,000, AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH E.J. MEYER COMPANY IN THE AMOUNT OF \$11,959,999 FOR THE WOODBRIDGE RECYCLED WATER PIPELINE REPLACEMENT, PROJECT 11571.

LIST OF EXHIBITS:

Exhibit "A" – Project Site Map

Exhibit "B" – Bid Results

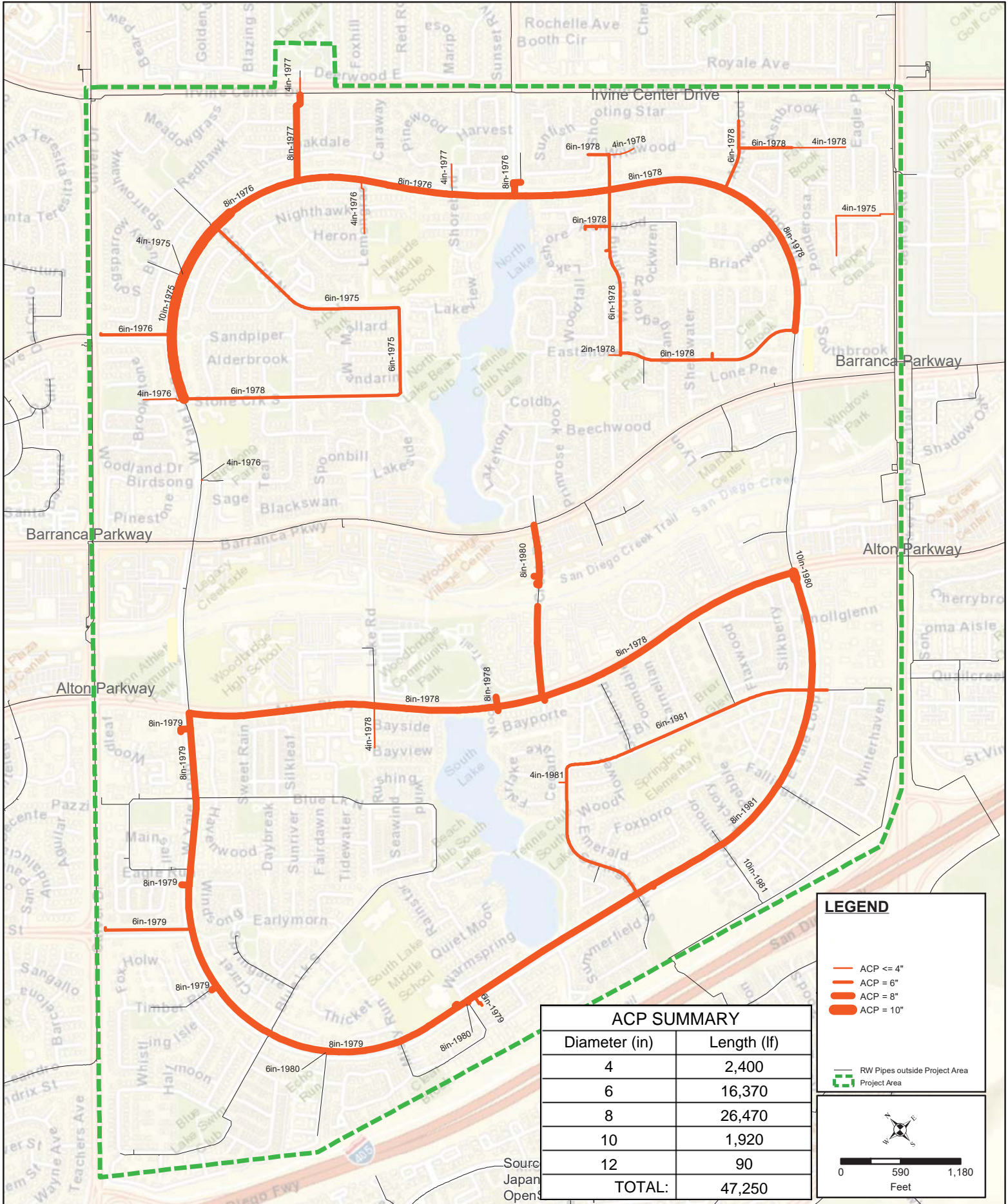
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# Woodbridge ACP Replacement Project

## EXHIBIT "A", ACP MAINS TO BE REPLACED

Irvine, CA 92604-92614



Diameter (in)	Length (lf)
4	2,400
6	16,370
8	26,470
10	1,920
12	90
<b>TOTAL:</b>	<b>47,250</b>

**LEGEND**

- ACP <= 4"
- ACP = 6"
- ACP = 8"
- ACP = 10"
- - - RW Pipes outside Project Area
- Project Area

0 590 1,180  
Feet

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# EXHIBIT "B"

## Bid Results

### Bidder Details

**Vendor Name** E.J. Meyer Company  
**Address** PO Box 277  
Highland, California 92346  
United States  
**Respondee** MICHAEL L. CORCORAN  
**Respondee Title** PRESIDENT  
**Phone** 909-425-4025  
**Email** ejmeyerco@aol.com  
**Vendor Type** CADIR  
**License #** 218385  
**CADIR** 1000002087

### Bid Detail

**Bid Format** Electronic  
**Submitted** 04/14/2022 12:25 PM (PDT)  
**Delivery Method**  
**Bid Responsive**  
**Bid Status** Submitted  
**Confirmation #** 287821

### Respondee Comment

### Buyer Comment

### Attachments

File Title	File Name	File Type
EJ_MEYER_PROPOSAL.pdf	EJ_MEYER_PROPOSAL.pdf	Bid Form

## Subcontractors

Showing 6 Subcontractors

Name & Address	Desc	License Num	CADIR	Amount	Type
<b>All American Asphalt</b> 400 E. Sixth Street Corona, California 92878	GRIND AND OVERLAY AND SLURRY SEAL	267073	1000001051	\$980,000.00	CADIR
<b>Cell-Crete</b> 135 E Railroad Ave Monrovia, California 91016	PIPE ABANDONMENT	243404	1000000262	\$79,000.00	
<b>Golden State Boring &amp; Pipe Jacking,</b> 7000 Merrill Ave. Box 40 Chino, California 91761	BORE AND JACK	678500	1000005788	\$62,000.00	CADIR
<b>Griffin Contract Dewatering</b> 7000 Jurupa Ave Riverside, California 92504	DEWATERING	1009641	1000033028	\$60,000.00	
<b>SIERRA PACIFIC ELECTRICAL</b> 2542 AVALON STREET JURUPA VALLEY, California 92509	LOOPS AND VIDEO DETECTION	264048	1000004626	\$40,000.00	
<b>Superior Pavement Markings</b> 5312 Cypress St Cypress, California 90630	STRIPING	776306	1000001476	\$103,000.00	CADIR



## Line Items

Discount Terms No Discount

Item #	Item Code	Type	Item Description	UOM	QTY	Unit Price	Line Total	Response	Comment
<b>BASE BID ITEMS</b>							<b>\$11,959,999.00</b>		
1			Mobilization, Demobilization and Cleanup (not to exceed 4% of Total Amount of Bid)	LS	1	\$475,000.00	\$475,000.00	Yes	
2			Traffic Control	LS	1	\$190,000.00	\$190,000.00	Yes	
3			Develop Construction Water	LS	1	\$20,000.00	\$20,000.00	Yes	
4			Trench Safety Measures	LS	1	\$200,000.00	\$200,000.00	Yes	
5			Dewatering	LS	1	\$50,000.00	\$50,000.00	Yes	
6			Potholing of Existing Utilities	LS	1	\$200,000.00	\$200,000.00	Yes	
7			Install 4" PVC Pipeline	LF	2400	\$173.00	\$415,200.00	Yes	
8			Install 6" PVC Pipeline	LF	16370	\$125.00	\$2,046,250.00	Yes	
9			Install 8" PVC Pipeline	LF	26470	\$159.00	\$4,208,730.00	Yes	
10			Install 10" PVC Pipeline	LF	1920	\$200.00	\$384,000.00	Yes	
11			Install 12" PVC Pipeline	LF	90	\$265.00	\$23,850.00	Yes	
12			Install 4" Gate Valve	EA	27	\$1,550.00	\$41,850.00	Yes	
13			Install 6" Gate Valve	EA	26	\$1,900.00	\$49,400.00	Yes	
14			Install 8" Gate Valve	EA	31	\$2,600.00	\$80,600.00	Yes	
15			Install 10" Gate Valve	EA	6	\$3,900.00	\$23,400.00	Yes	
16			Install 12" Butterfly Valve	EA	1	\$5,000.00	\$5,000.00	Yes	
17			Install 1" Air Release and Vacuum Relief Assembly	EA	14	\$6,000.00	\$84,000.00	Yes	
18			Install 2" Flush-Out Assembly	EA	10	\$8,000.00	\$80,000.00	Yes	
19			Install 4" Flush-Out Assembly	EA	4	\$10,000.00	\$40,000.00	Yes	
20			Install 18" Steel Casing Pipe by Open Cut	LF	176	\$325.00	\$57,200.00	Yes	
21			Install 18" Steel Casing Pipe by Bore and Jack	LF	92	\$1,400.00	\$128,800.00	Yes	
22			Install 12" Steel Casing Pipe by Open Cut	LF	40	\$300.00	\$12,000.00	Yes	
23			Install 2" Meter Assembly with 1" Disc Meter	EA	4	\$7,400.00	\$29,600.00	Yes	
24			Install 2" Meter Assembly with 1 1/2" Disc Meter	EA	16	\$6,000.00	\$96,000.00	Yes	
25			Install 2" Meter Assembly with 2" Disc Meter	EA	84	\$5,600.00	\$470,400.00	Yes	
26			Install 2" Meter Assembly with 2" Turbo Meter	EA	36	\$6,000.00	\$216,000.00	Yes	
27			Install 3" Meter Assembly with 3" Meter	EA	10	\$35,000.00	\$350,000.00	Yes	
28			Cap End of Watermain	EA	11	\$1,500.00	\$16,500.00	Yes	
29			Abandon Unused Recycled Water Meter Box	EA	25	\$500.00	\$12,500.00	Yes	
30			Hot Tap Existing 30" DIP Watermain	EA	1	\$20,000.00	\$20,000.00	Yes	
31			Hot Tap Existing 16" ACP Watermain	EA	1	\$17,000.00	\$17,000.00	Yes	
32			Abandon Existing Isolation Valves	EA	98	\$500.00	\$49,000.00	Yes	
33			Abandon Existing Recycled Water Pipelines	LF	47980	\$2.50	\$119,950.00	Yes	
34			Asphalt Concrete Base Pavement for Trench	TON	4260	\$95.00	\$404,700.00	Yes	
35			0.1' Grind and Overlay per City of Irvine Std. Plan 223	TON	1800	\$225.00	\$405,000.00	Yes	
36			Slurry Seal Street/Half Street and Intersections	SF	2150000	\$0.35	\$752,500.00	Yes	
37			Restore Street Striping	LS	1	\$125,000.00	\$125,000.00	Yes	
38			Restore OC Surveyor Monument	EA	4	\$1,500.00	\$6,000.00	Yes	
39			Restore Traffic Control Detection Loops	LS	1	\$20,000.00	\$20,000.00	Yes	
40			SWPPP	LS	1	\$24,569.00	\$24,569.00	Yes	
41			Final Record Drawings	LS	1	\$5,000.00	\$5,000.00	Yes	
42			Remove unstable soil in trench bottom and re-fill material	CY	50	\$100.00	\$5,000.00	Yes	
<b>ADDITIVE AND DEDUCTIVE BID ITEMS</b>							<b>\$0.00</b>		
43			ADDITION (+) OR DEDUCTION (-)	LS	1	\$0.00	\$0.00	Yes	

## Line Item Subtotals

Section Title	Line Total
<b>BASE BID ITEMS</b>	<b>\$11,959,999.00</b>
<b>ADDITIVE AND DEDUCTIVE BID ITEMS</b>	<b>\$0.00</b>
<b>Grand Total</b>	<b>\$11,959,999.00</b>

April 25, 2022

Prepared by: C. Spangenberg / M. Cortez

Submitted by: K. Burton

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

## ACTION CALENDAR

### LAKE FOREST WELL 2 TREATMENT SYSTEM CONSULTANT SELECTION

#### SUMMARY:

Lake Forest Well 2 has not operated since 2019 due to issues with iron and manganese precipitation. An economic analysis of the cost effectiveness of installing a water treatment system shows a payback period of six years. Staff recommends the Board authorize the General Manager to execute a Professional Services Agreement with Tetra Tech in the amount of \$340,729 for design engineering services for the Lake Forest Well 2 Treatment System.

#### BACKGROUND:

Lake Forest Well 2 is located in the city of Lake Forest on Osterman Road as shown in Exhibit "A". It was reconstructed in 2011 using stainless steel casing in conformance with the California Well Construction Standards and permitted for use as a potable water supply. The original production rate was 300 gallons per minute (gpm). The most recent production rate was 250 gpm in 2019 when the well was shut down due to increased color resulting from iron and manganese precipitation.

Staff performed an economic analysis to determine the cost effectiveness of a water treatment system to remove iron and manganese to make Lake Forest Well 2 a reliable water supply to the potable water system. Capital expenditures included design, iron / manganese treatment, well bypass pipeline, waste discharge pipeline for off-specification and backwash waters, electrical and instrumentation and all ancillary equipment. Annual operation and maintenance (O&M) costs included power, periodic pump replacement, well rehabilitation, and chemical costs. Lost revenue on the capital investment was included in the O&M costs. The cumulative costs were then evaluated against current and projected water costs from Metropolitan Water District for the equivalent annual well production in acre-feet. Based on this analysis, the payback period to recover an estimated initial capital cost of \$1,800,000 is approximately six years. Based on this outcome, staff deems the project as viable.

#### Consultant Selection:

On February 17, 2022, staff issued a request for proposal for design engineering services for the project to three consultants: AECOM, Lee & Ro, and Tetra Tech. Proposals were received from all three consultants on March 17 and interviews of the project teams were held on March 29. Staff completed its evaluation of the proposals and based upon its strong project team, extensive knowledge and experience of the available treatment technologies, design that provides the most flexibility for treatment selection, design, and procurement, staff recommends awarding a Professional Services Agreement to Tetra Tech in the amount of \$340,729. The consultant selection matrix and Tetra Tech's proposal are provided as Exhibits "B" and "C", respectively.

FISCAL IMPACTS:

Lake Forest Well 2 Treatment System, Project 11218, is included in the FY 2021-22 Capital Budget. The existing budget is sufficient to fund the project's design phase.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with the California Code of Regulations Title 14, Chapter 3, Sections 15301 and 15303. Section 15301 provides exemption for minor alterations of existing public 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. Section 15303 provides exemption of new, small facilities or structures; installation of small new equipment and facilities in small structures; water main, sewage, electrical, gas or other utility extensions, including street improvements of reasonable length to serve such construction. A Notice of Exemption will be prepared for the project and filed with the County of Orange.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on April 19, 2022.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH TETRA TECH IN THE AMOUNT OF \$340,729 FOR DESIGN ENGINEERING SERVICES FOR THE LAKE FOREST WELL 2 TREATMENT SYSTEM, PROJECT 11218.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Consultant Selection Matrix

Exhibit "C" – Tetra Tech Scope of Work and Fee Proposal





Exhibit "A"

Regency Park

Lake Forest Well No. 2  
20034 Ostermann Road, Lake Forest, CA

Ostermann Road

Project Location Map

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EXHIBIT "B"

	Weights	AECOM	Lee & Ro	Tetra Tech
<b>TECHNICAL APPROACH</b>	60%			
*Project Approach	40%	2	3	1
*Project Details in PDR	20%	3	2	1
*Scope of Work	40%	2	3	1
Weighted Score (Technical Approach)		2.20	2.80	1.00
<b>EXPERIENCE</b>	40%			
*Firm/Team	15%	2	3	1
*Project Manager	40%	2	3	1
*Project Engineer 1 - Mech	15%	2	3	1
*Project Engineer 2 - Elec	15%	2	3	1
*Project Engineer 2 - Struct	15%	1	3	2
Weighted Score (Experience)		1.85	3.00	1.15
Project Manager		Alex Franchi 26 Yrs	Kevin Saleh 25 Yrs	Beverly Encina 19 Yrs
Project Engineer/Civil/Site		Dylan LaFrance 10	Adam Betworth 12	Kyle Matsumoto 4
QC/QA		Jack Gundariahalli 31	Sam Lee 15	Steve Tedesco 37
Mechanical & Process Design		Ben Shanthikumar 9	Roman Silvestre 20	Amanda Taylor 13
Electrical		Narciso Ubario 34	Linkture 30	Mazen Kassar 29
Structural		David Ambartsumyan 15	Alice Maupin 20	Eric Yuen 14
Traffic Control Desgin		Not Listed	Not Listed	Peter Kim 27
Pilot Study		Angel Gabeau 23	Jay Jung 14	Steve Ellis 42
Surveying/ Mapping		Psomas	OnPoint Land	Metz Surveying Inc.
Noise Analysis		AECOM	Behrens and Assoc.	Behrens and Assoc.
Potholing		T2 utility Engineers	Bess Testlab	Not Listed
<b>COMBINED WEIGHTED SCORE</b>		2.06	2.88	1.06
		Man-hours	Man-hours	Man-hours
Task 1 Project Management		226	90	205
Task 2 Preliminary Design Report		856	372	611
Task 3 Final Design & 4 Bid Support		1,122	543	1,196
<b>TOTAL DESIGN HOURS</b>		1,978	915	1,807
<b>Optional Tasks</b>				
Replace Well Pump			60	
Replace PLC/RTU			38	
Preprocurement Treatment Package			50	
<b>TOTAL HOURS</b>		2,204	1,153	2,012
<b>Sheet Count</b>				
General		4	5	3
Civil		6	8	10
Mechanical/process		9	6	10
Structural		4	4	8
Electrical		7	5	11
Instrumentation		3	3	10
Traffic Control		0	0	2
<b>Subtotal</b>		33	31	54
<b>TOTAL SHEETS</b>		33	31	54
<b>FD HRS/SHT</b>		60	30	33
<b>FEE</b>				
Average \$/manhrs (design)		\$173	\$242	\$189
Does not include \$s for:		Traffic Control Plans, Design for multiple vendors.	Traffic Control Plans	
Project Management		\$44,300	\$22,518	\$44,976
PDR		\$144,590	\$67,188	\$101,041
Add Items		\$0	\$27,680	\$0
Final Design		\$153,280	\$104,202	\$194,712
<b>Grand Total- PM&amp;PDR &amp; Design</b>		<b>\$342,170</b>	<b>\$221,588</b>	<b>\$340,729</b>
Number of Drawings		33 dwgs	31 dwgs	54 dwgs
Final Design Unit Prices (\$/dwg)		\$10,369	\$7,148	\$6,310
Professional Liability Insurance		YES	YES	YES
General Liability Insurance		YES	YES	YES
<b>FORCED RANKINGS:</b>		2 - Second	3 -Third	1 - First

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EXHIBIT "C"

PROPOSAL TO PROVIDE ENGINEERING DESIGN  
AND CONSTRUCTION SERVICES FOR THE



# Lake Forest Well No. 2 Treatment and Sewer Bypass Project



MARCH 2022



March 17, 2022

Carl Spangenberg, PE  
Project Manager  
Irvine Ranch Water District  
15600 Sand Canyon Ave.  
Irvine, CA 92618

**Reference: Proposal to Provide Engineering Design and Construction Services for the Lake Forest Well No. 2 Treatment and Sewer Bypass Project**

Dear Mr. Spangenberg,

Thank you for the opportunity to submit our proposal to provide engineering services for the Lake Forest Well No. 2 Treatment and Sewer Bypass Project. We value the relationship that has been built with Irvine Ranch Water District (IRWD/District) based on our past and current ongoing projects. It is our desire to continue to provide the same consistently diligent and faithful service to IRWD. We have an outstanding team which combines the experience, depth, and understanding needed for the successful delivery of this project. Our team brings the following advantages to the District:

- ▶ **Extensive Experience in Iron and Manganese Removal Water Treatment Systems:** During the last 15 years, our Project Team has designed over 8 iron and manganese removal systems within Southern California.
- ▶ **Project Team with Extensive IRWD Experience:** Our Project Team, specifically our **Project Director, Mr. Steve Tedesco, PE**, and our **Project Manager, Ms. Beverly Encina, PE**, have worked together on over 15 projects for IRWD during the last 15 years. We know IRWD's design requirements, preferred materials, operational preferences, electrical and P&ID standards which will allow us to deliver a complete design in the most cost-effective manner. These projects include: **the Wells 21 and 22 Desalter; and the Irvine Desalter Project, which includes the Potable Treatment Plant, Manganese Removal System, and seven (7) other associated projects.**
- ▶ **Local In-House Structural, Electrical and Control Capabilities:** Tetra Tech has our own in-house local, graphics team to create architectural renderings, registered plumbing and HVAC, structural, electrical and control engineers with extensive experience with IRWD facilities.
- ▶ **Dedication to the District:** Tetra Tech believes IRWD is an important client with our long-standing partnership and history of projects (over 30 in the last 20 years). Our approach will include a "teaming and partnering" relationship. We will strive to exceed your expectations through hard work, attention to detail, close communication, schedule and budget management.

Our project team is looking forward to working with you and we are committed to providing IRWD with the same high-quality service you expect and deserve. Should you have any questions or require additional information regarding our proposal, please feel free to contact us.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Steve Tedesco'.

Steve Tedesco, PE  
Senior Vice President

M:\Marketing\Proposals\FY 2022\IRWD\_Lake Forest Well No. 2

## TABLE OF CONTENTS

FIRM OVERVIEW .....	1
DEDICATION TO THE DISTRICT .....	1
PROJECT UNDERSTANDING .....	1
APPROACH .....	3
Why Tetra Tech .....	3
General Approach .....	3
Project Management .....	4
Quality Control .....	4
KEY DESIGN ISSUES .....	4
SCOPE OF WORK .....	9
Task 1 – Project Management .....	9
Task 2 – Preliminary Design Report .....	10
Task 3 – Final Design .....	13
Task 4 – Bid Phase .....	16
Task 5 – Engineering Support During Construction .....	16
Task 6 – Training, Commissioning, and Startup Services .....	16
Task 7 – Post Construction Services .....	16
PROJECT TEAM .....	17
Percentage of Staff Contribution .....	18
EXPERIENCE .....	19
IRWD Experience .....	20
CLIENT REFERENCES .....	20
PROJECT SCHEDULE .....	21
BUDGET/MISCELLANEOUS .....	21
Budget .....	21
Miscellaneous .....	21



## FIRM OVERVIEW

Based in Pasadena, California, Tetra Tech is a full-service engineering and science firm with a substantial global presence. We help our clients conceptualize and execute innovative solutions to their most difficult problems. From front-end science and planning to design, construction management and operations, Tetra Tech’s global service network, facilitated by our initiatives program that coordinates resources for specific markets and provides best in-class experts with worldwide project experience.

Founded in 1966, Tetra Tech is a nationally recognized engineering and resource management firm of more than 21,000 engineers, scientists, construction specialists, and technical support personnel in 450 offices worldwide. Listed on the NASDAQ Exchange (TTEK), Tetra Tech’s annual revenues now exceed \$3.2 billion (2021). Thus, we are in an excellent financial position and can provide the necessary resources to rapidly deploy and meet aggressive project schedules.

Tetra Tech consistently ranks among the top engineering firms annually according to the *Engineering News-Record*. **In 2021, Tetra Tech was ranked 4th among the top 500 design firms nationwide and was ranked #1 in the water service industry for the 18th year in a row!**

Tetra Tech’s more than 56 years of experience in water resources management is directly associated with municipal water, wastewater, recycled water, and stormwater facilities encompassing collection and distribution pipelines, pumping stations, storage reservoirs/tanks, treatment and reclamation plants, and disposal systems. Over the years, we have gained the confidence of our clients by meeting the expectations and performance goals of both clients and regulatory agencies.

## DEDICATION TO THE DISTRICT

Tetra Tech is dedicated to Irvine Ranch Water District (IRWD/District) as illustrated in working together on over 30 projects for IRWD during the last 20 years. Our approach will include a teaming and partnering relationship with the District. We will strive to exceed your expectations through proactive project management, strong quality control measures, attention to detail, extensive design experience, close communication, and schedule and budget management.

## PROJECT UNDERSTANDING

IRWD’S Lake Forest Well No. 2 (LF Well No. 2) is located at 20034 Osterman Road in a residential area adjacent to Regency Park in the City of Lake Forest, California and was constructed in May 2011. LF Well No. 2 initially had a production rate of 300 gallons per minute (gpm), however the most recent production rate was 250 gpm in 2019 when the well was shut down due to increased color resulting from iron/manganese precipitation. Despite the color issue, the initial water quality for LF Well No. 2 indicates that iron and manganese levels were slightly below the State secondary maximum contaminant levels (MCL). Due to the brown water complaints by both domestic and recycled water users, the well has remained offline since that time.

Tetra Tech understands the financial impact of being able to operate LF Well No. 2 and using it as a potable supply based on the economic analysis summary provided in the Request for Proposal (RFP). IRWD has estimated a payback period of approximately two years for capital expenditures for the new treatment system and improvements. As costs for imported water from Metropolitan Water District continuously increase, it is beneficial financially for IRWD to continue to move forward with installation of the treatment system.

**Tetra Tech Ranks High with**

**ENR** *Rankings for 2021*  
Engineering News-Record

**#1** Water **18** consecutive years!

**#1** Treatment & Desalination

**#2** Sewer & Waste

**#4** Top 500 Design Firms

**Tetra Tech’s reputation as a leader in consulting engineering is validated by Top 10 ratings annually by *Engineering News-Record*.**

The main goal of the project is to install a new treatment system at the existing wellhead for the removal of iron/manganese using small, package water treatment skids. In order to achieve this, the scope of work in the preliminary phase shall include evaluation of various treatment technologies, whether pilot testing is required for recommended treatment method, and conducting the pilot testing efforts, if required.

In addition to the treatment system, IRWD requires the following additional facilities:

■	The addition of well flush piping to the existing storm drain. A dedicated flush line does not exist and well flushing is accomplished via the well discharging into IRWD’s existing reclaimed water reservoir.
■	The addition of piping and connections for backwash water and/or off-spec treated water to the existing sewer in Osterman Road.
■	Evaluation of existing electrical service, instrumentation, controls and equipment. The design will include modification or additional facilities to provide power and controls to the new treatment system.
■	Structural design of foundations required for new treatment equipment chemical feed system.
■	Replacement of the existing chemical feed system for disinfection. We understand that the current chemical feed and storage system cabinet is corroded and need of replacement. The storage area can be replaced with chemically resistant materials such as a prefabricated fiberglass enclosure or steel canopy with concrete foundation. Additionally, Tetra Tech will evaluate the following:
	<ul style="list-style-type: none"> <li>• Determine if existing equipment can continue to be utilized to meet potential additional chemical dosing for the selected treatment method and determine if existing feed equipment and materials need to be upsized. We understand that in its current state, this facility requires two chemical deliveries per week and at minimum, the tank shall be upsized to reduce the frequency of deliveries.</li> <li>• Tetra Tech will evaluate post disinfection by free chlorine or chloramines. At the pre-proposal meeting, IRWD Operations staff indicated that existing reservoir management system at Zone 2 reservoir may provide sufficient ammonia feed for chloramines. We will evaluate this further as updated chemical dosing criteria is established during design.</li> </ul>
■	Hydraulic analysis shall be performed to sufficiently size the supporting facilities mentioned above to ensure appropriate capacity is available. Tetra Tech will evaluate if any well modifications are required to operate with the new treatment system and other proposed improvements. A hydraulic analysis will be performed to confirm adequate pressure is available to discharge to the existing distribution system. If required, Tetra Tech will size and design an inline booster system post-treatment to supplement for any pressure deficiencies based on the existing submersible well pump and the hydraulic requirements for the recommended treatment system.

## APPROACH

### Why Tetra Tech

Tetra Tech’s team brings the following advantages to the District for the LF Well No. 2 Treatment and Sewer Bypass project:

- ▶ **Extensive Experience with Groundwater Treatment Systems:** Tetra Tech’s process water/wastewater treatment engineers have a wide array of project experience ranging from small to large capital improvement projects, but in particular, have worked on many groundwater treatment systems that are similar in scope and scale to this project.
- ▶ **In-House Civil, Process, Structural and Electrical Capabilities:** Tetra Tech’s project team includes our own in-house structural, process mechanical, and electrical engineers who have worked together for many years as a team on numerous projects for other Southern California agencies, as well as several projects for IRWD.
- ▶ **Key Subconsultants:** To provide all of the services required for the project, Tetra Tech has added the following key subconsultants: Metz Surveying, Inc. and Behrens and Associates, Inc. for noise analysis. We have successfully worked with both on several projects for other Southern California agencies.
- ▶ **Dedication to IRWD:** Our approach will include a “teamwork and partnering” relationship. We will do this by exceeding your expectations through innovative and smart solutions, attention to detail, and our understanding of IRWD’s design processes and requirements.

Our extensive experience with similar groundwater treatment projects will ensure that IRWD will receive a high level of service delivered by qualified, knowledgeable engineering professionals. Highly meticulous and coherent plans and specifications greatly benefit all project stakeholders, with the largest benefit realized by the Owner. Quality contract documents clearly lead to a larger number of bidders, lower competitive bid prices *due to increased competition, the contractor has less to assume and take the risk for and a greater overall comfort level in our design based on a long history of successful projects*, and lowest overall cost while achieving a very high-quality end product *quality contract documents mitigates the potential, and impact of change orders, and sets forth a standard of quality the contract must achieve*.

No two projects are the same, although many are similar. The key is to utilize elements of work that have been successful and can be appropriately applied to this project, continue to improve construction efficiencies without lowering quality based on contractor feedback, and maximize the overall operational flexibility. We want to utilize the experience gained from working on previous projects, and to continue providing IRWD with exceptional services to assure that another project is successfully completed to the satisfaction of IRWD.

### General Approach

Tetra Tech fully understands the importance of your project. We are offering an outstanding team, which combines the experience, depth, and understanding needed for the successful delivery of this project. Our core principles establish how we plan to work together with IRWD to successfully complete this project:

- ❖ **Service:** Tetra Tech puts its clients first. We listen to and better understand our clients’ needs and deliver smart, cost-effective solutions that meet those needs. Our philosophy is to “Do it Right.”
- ❖ **Value:** Tetra Tech takes on our clients’ problems as if they were our own. We develop and implement real-world solutions that are cost-effective, efficient, and practical.
- ❖ **Excellence:** Tetra Tech brings superior technical capability, disciplined project management, and excellence in safety and quality to all of our work.
- ❖ **Opportunity:** Our people are our number one asset. Our workforce is diverse and includes leading experts in our fields. Our entrepreneurial nature and commitment to success provides challenges and opportunities.

We value the relationship that has been established with IRWD and look forward to continuing and further developing this association in the future. We are committed to providing IRWD with the same high-quality service you expect and deserve. Our strength lies in our proven track record that has led to successful completion of multiple projects for IRWD, as well as other project participants or nearby agencies.

## Project Management

Over the years, Tetra Tech has established well defined, rigorous procedures for project management. These techniques have been developed and refined and have contributed to our success and reputation. The keys to our project management system are communications, project planning, monitoring, and quality assurance. The Tetra Tech team's goal is to keep IRWD staff "in the loop" from day one of the project. Communication tools include the formal progress reports afforded through our project management system and an informal give-and-take approach starting with **Beverly Encina, PE, our Project Manager**, and extending to every member of our project team. At the project's outset, the chain of command and appropriate communication methods will be agreed upon.

We will conduct formal meetings with agenda and typewritten notes, and we will use informal meetings with notes to file. We will also have documentation of telephone communications, with notes to file or letters of understanding as appropriate follow-up. Another important communication link will be our e-mail system.

We are proposing to use e-mail to keep IRWD aware of the status of the project. Every week, Tetra Tech will prepare a brief (one or two paragraphs or bullet items) e-mail summarizing the following: activities completed in the previous week; the activities planned for the upcoming week; any critical decisions that need to be made; and schedule of upcoming events/meetings. In addition, each month we will prepare a project status memorandum containing the following: summary of project schedule; description of key issues/concerns which have surfaced along with proposed options and solutions; and a project status summary report showing current schedule and budget.

## Quality Control

Tetra Tech has a well-established Quality Practices Manual (QPM) which will be in effect during the entire duration of the project. The QPM describes Tetra Tech's quality program policy and requirements for all engineering services. The purpose of the QPM is to define basic quality assurance and quality control (QA/QC) requirements that will guide, as applicable, all Tetra Tech projects during planning, implementation, work product preparation, and field activities. The QPM describes Tetra Tech's quality program organization; basic quality management system requirements; and basic QA and QC requirements during all phases of the project. The Tetra Tech quality program is modeled after the quality management principles outlined in the International Organization for Standardization (ISO) 9000.

## KEY DESIGN ISSUES

Successful implementation of this project will involve resolution of several key issues. We believe Tetra Tech has an excellent grasp of these issues based on our overall experience, capabilities and familiarity with other groundwater treatment projects as well as our experience with IRWD projects, personnel, and policies. Our approach to resolving project issues is summarized below.

**Site Layout:** Tetra Tech recognizes the LF Well No. 2 site is limited in space for the addition of new treatment facilities. This will be a critical consideration in key areas of the evaluation of treatment technology alternatives that can fit in the space available, while maintaining vehicular and operational access within the site. Tetra Tech proposes the evaluation of oxidation-filtration technologies for the following media types such as Greensand, Pyrolusite, and proprietary media (Filtronics electromedia, and Tonka IMAX) as discussed in the subsequent section, Treatment Technology methods.





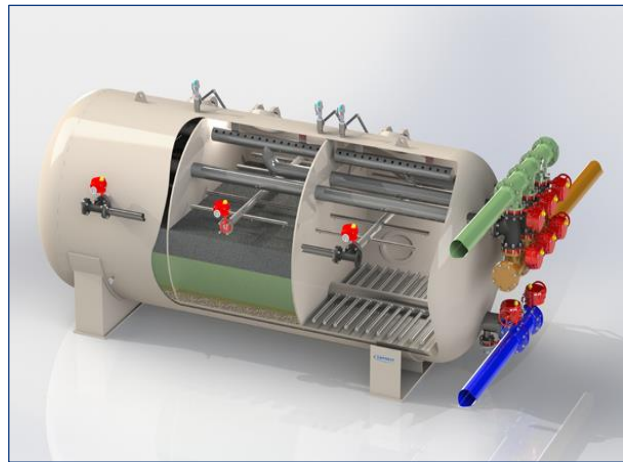
**Conceptual site layout at LF Well No. 2 site**

Space-saving strategies will be evaluated such as:

- Single-cell filter unit configuration
- Multi-cell filter units (including redundancy to allow continuous operation during backwashes)
- Backwash waste direct connection to the sewer, to eliminate the need for a backwash tank



**Single-cell vessel configuration**



**Multi-cell vessel configuration**

Tetra Tech shall describe each of the alternatives and configurations in the Preliminary Design Report (PDR), evaluate the advantages and disadvantages of each option, and provide our recommendations.



### **Treatment Technology Alternatives:**

There are a number of different oxidation/filtration options for treating high iron and manganese levels in groundwater. Manganese can be removed through oxidation of the soluble divalent ions to the insoluble trivalent forms. These insoluble forms precipitate in subsequent sedimentation or filtration steps. The process involves addition of an oxidant such as chlorine into the flow stream to form manganese precipitates, which are then removed with a pressure filter. The filter requires a daily backwash cycle. The backwash water can be supplied from the treated well water and upon completion of the backwash cycle, the wastewater is stored in a backwash settling tank equipped with a dolphin strainer/skimmer which recycles the supernatant solution and pumps it back into the treatment feed stream. During the design phase, Tetra Tech shall evaluate if there is adequate space available for a backwash tank, otherwise, backwash waste can be discharged to the sewer.

Various types of filter media such as Greensand Plus, Pyrolusite and other proprietary media (Filtronics Electromedia and Tonka IMAX) are commonly used in the treatment system. The filter media, when combined with an oxidant like sodium hypochlorite or potassium permanganate, oxidize both iron and manganese to a less soluble form which precipitates out and accumulates in the filter bed. The precipitates are removed by backwashing the filter media. The oxidative capacity of the media is regenerated using an oxidant such as chlorine or permanganate, which is continuously fed to the influent.

Optimum precipitation occurs at a pH greater than 6.4 for iron and greater than 9.3 for manganese. The reaction can be impeded by the presence of organic carbon, biological oxygen demand or ammonia which compete for available oxygen. The stoichiometric requirement for the oxidation reduction process are generally 0.63 mg/l of chlorine per mg/l of iron and 1.29 mg/l of chlorine per mg/l of manganese. Other parameters can affect the process which include temperature of the feed water, pH, total organic carbon (TOC), and ammonia.

Oxidation reactions can take up to 2 hours; therefore, it is important that the filter media selected has demonstrated adsorptive properties to attract iron and manganese ions in place while oxidation occurs. Medias which have demonstrated effective iron and manganese removal when coupled with chemical oxidation include Greensand, Pyrolusite, Electromedia I, and IMAX.

Four types of filter media can be considered for the treatment facility including: Pyrolusite, Greensand, Electromedia I, and IMAX (which is a proprietary blend of pyrolusite and sand by Tonka). A summary of the filter system design components is presented in Table X.

Pyrolusite is a heavy, denser type media and can attain hydraulic loading rates of 5 to 10 gpm/sf. Electromedia can sustain higher loading rates of 10 to 15 gpm/sf, whereas greensand filter loading rates are typically 2 to 4 gpm/sf, thereby requiring larger filter vessels. Accordingly, filter backwash rates for Pyrolusite and Electromedia are substantially greater due to the denser material and can vary from 20 to 30 gpm/sf for, compared with 12 to 15 gpm for greensand media.

The filter run times and backwash frequencies can vary depending on the raw water quality. A filter backwash can be initiated by a pressure drop across the filter bed, constituent breakthrough or run time. Typical operating experience at similar facilities indicates that filters should be backwashed every 12 to 24 hours. While air scouring or a surface rinse of the media is not required for Pyrolusite and Electromedia, it is recommended for Greensand and IMAX to remove precipitates and clean the filter bed more thoroughly.

The filter vessels need a minimum 30 to 35 psi operating feed pressure coming from the influent wells. The expected pressure drop across the treatment facility is anticipated at about 15 psi. Treated filtered water would be discharged to the forebay reservoir.

Iron and Manganese Filter Media Options			
Criteria	Pyrolusite	Electromedia®	Greensand Plus
Media	Pyrolusite	Proprietary	Greensand Plus, Anthracite
Local System Suppliers	Atec	Filtronics	1. Loprest 2. Hungerford and Terry (rep by Gierlich-Mitchell) 3. Wigen (rep by JBI Water)
Media Density (lbs/cf)	120	85 (estimated)	85
Hydraulic Loading Rate (gpm/sf)	5 - 10	10 - 15	7 - 10
Backwash Duration <sup>(a)</sup> (min)	5	5	12
Backwash Rate (gpm/sf)	25 - 28	20 - 30	12 - 15
Backwash Frequency	24 hours	12 hours	24 - 48 hours

<sup>(a)</sup> Includes rinse to waste.

Pyrolusite filter media has been used in many iron and manganese treatment facilities, primarily in the Pacific Northwest; however, this media is less commonly used in Southern California. Electromedia is a proprietary media which can limit the District’s options for a competitive bid. Greensand offers the most competitive bid process and may be best if the District elects to design a single system. However, if desired, Tetra Tech can provide a flexible design that can accommodate either Greensand or an alternative proprietary media system supplier.

**Water Quality Review and Recommendations:** Tetra Tech has reviewed the water quality data provided in Exhibit B-Summary of Water Quality Analytical Data, 2011 and Exhibit H LF Well No. 1 and 2 Water Quality Data, 2016-2018. As noted in the RFP, water quality results for iron and manganese were generally below the State’s Secondary Drinking Water Standard MCLs, however we understand the need for treatment due to brown water issues causing complaints from users. As we are proposing to evaluate various oxidation-filtration type systems which utilize an oxidant such as sodium hypochlorite for the oxidation of iron and manganese to occur, it is critical that the sodium hypochlorite injected into the feed water is present as free chlorine. Based on our experience from past projects that utilize these treatment methods, we have found it necessary to test for the presence of ammonia, as the development of chloramines will reduce the amount of free chlorine available for the treatment process to be effective. Therefore, we recommend additional water quality sampling and testing for ammonia to determine the amount of free chlorine that will be available, as well as identifying the need for additional dosing required.

**Replacement of the Chemical Feed System:** As noted by IRWD in the RFP the existing chemical feed system enclosure is significantly corroded, likely due to incompatibility of the steel enclosure and the sodium hypochlorite being stored. The enclosure will need to be replaced with a non-corrosive weather-proof structure. We will evaluate various options such as a fiberglass enclosure and concrete foundation and concrete containment curb structure with metal shade structure.

IRWD staff also noted at the pre-proposal meeting that the chemical deliveries to the site occurred about twice a week and was too frequent to accommodate. Additionally, it is anticipated that the new iron and manganese treatment system will require additional dosing of sodium hypochlorite. Based on these factors and any other IRWD feedback, we will perform calculations to determine appropriate sizing of the storage tank, feed equipment, piping, and appurtenances and determine whether existing equipment can be utilized or will need replacement.

**Mechanical Appurtenances:** Vendor packaged systems typically do not come with valves, instruments, gages, and other items that meet IRWD standards. For IRWD’s Irvine Desalter Project Manganese Removal System (2009), we spoke with the vendors of these systems and provided a specification that met IRWD

standards. For example, instead of pneumatic control valves we used electric motor operators on IRWD valves meeting IRWD standards. For this project, we will identify appurtenances on the packaged systems that do not meet IRWD standards and confirm with IRWD that these appurtenances are noted in the specifications to meet the District's standards.

**Construction Staging/Storing:** Tetra Tech will provide exhibits to IRWD for staging and storage for construction during the preliminary design report and thoroughly vetted during the design phase of the project.

**Traffic Control:** Tetra Tech will ensure that their traffic engineers assess the maintenance of traffic for the project area. The project site fronts Osterman Road, which is comprised of a two-lane street, with one lane in each direction. Additionally, it is in a residential area where vehicular traffic on Osterman Road is expected to be frequent during construction hours. We anticipate two (2) traffic control plan sheets will be needed for permitting purposes and to ensure that the contractor accounts for proper traffic control within the project work area.

**Noise Mitigation:** As the site is in a residential area, Tetra Tech shall enlist the services of a noise subconsultant Behrens and Associates, Inc. to evaluate and comply with local noise ordinance requirements for the site for new facilities that will generate noise and require noise mitigation. Sound attenuation enclosures or other appurtenances for equipment exceeding noise levels will be incorporated in the proposed project facilities plans, specifications, and construction cost estimate as required.

**Geotechnical:** Tetra Tech recommends a geotechnical investigation to adequately characterize the soil conditions at the LF Well No. 2 site if this has not been completed. As noted in the pre-proposal meeting, IRWD will enlist the services of their on-call geotechnical consultant if required, to perform and provide recommendations based on any subsurface investigations. Therefore, the investigation is not reflected in Tetra Tech's fee and scope, but Tetra Tech will be responsible for reviewing the geotechnical report and designing the proposed facilities in accordance with the report recommendations.

**Permits:** Tetra Tech will identify the required permits needed for this project and prepare applications and submittal documents as required for IRWD to apply for the permits. Additionally, we recommend scheduling one meeting with each of the affected jurisdictional agencies as well as an overall permitting requirements summary meeting (between IRWD and Tetra Tech) based on directions and requirements provided at the agency meetings. It is anticipated the following permits are required:

- Orange County Fire Authority: We anticipate that this facility and the improvements for this project will required the following according to OCFA guidelines - Fire Master Plan, Hazardous Material Identification and Classification.
- Department of Drinking Water (DDW): The DDW permit will require the preparation of an Engineer's Report and Operation, Maintenance, and Monitoring Plan. This is reflected in our scope and fee.
- City of Lake Forest/County of Orange: Tetra Tech will review requirements for encroachment permits and provide submittal forms and documentation for IRWD's execution and submittal.
- We anticipate two (2) traffic control plan sheets will be needed for permitting purposes and to ensure that the contractor accounts for proper traffic control within the project work area.

**Miscellaneous Items:**

- Specifications shall include NSF-61 certification requirements as applicable for required materials and equipment in use for potable drinking water systems.
- Well piping modifications: in addition to modifications to add a dedicated well flush line, it was observed in the plans and at the pre-proposal site visit that a surge tank is installed on the well discharge line. With the incorporation of the new treatment system, the current installation may not be effective for surge protection at this location. Tetra Tech will review the information available on the surge tank and determine if a surge tank is required at the treatment product water discharge.

## SCOPE OF WORK

Members of the Project Team have performed an in-depth review of the project description and scope of work within the RFP. We propose to provide the following scope of work for the preliminary design, final design and bid phase services.

All work performed on this project will conform to IRWD standards and requirements including, but not limited to, the following: IRWD Project Manual; IRWD Construction Manual; and IRWD Electrical and Instrumentation and Control (I&C) Design Standards.

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

### Task 1 – Project Management

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

**Preparation of Project Status Reports:** Tetra Tech will prepare weekly and monthly status reports. Each weekly status report will be submitted on a Monday and will consist of a brief (one to two paragraphs) e-mail summarizing the activities completed the previous week, the activities planned for the upcoming week, and critical decisions that need to be made. Each monthly status report will be submitted along with the billing invoice for that month and will provide more detail, summarizing the work completed and reviewing work status relative to budget and schedule. The project schedule will also be updated on a monthly basis with the monthly status report.

**Meetings:** Tetra Tech will organize, schedule, attend, and conduct meetings as required. We will prepare and submit meeting agendas for IRWD review and concurrence at least three days prior to the meeting. We will prepare draft and final minutes for all meetings and workshops and submit them to IRWD within one week of the meeting.

Tetra Tech has assumed the following meetings and provided possible meeting topics and potential attendees for these meetings as required in the RFP:

Meeting/Workshop	Possible Agenda/Meeting Topics	Attendees
Kick-off Meeting	<ul style="list-style-type: none"> <li>• Introduction of Parties</li> <li>• Lines of Communication</li> <li>• Summary of Project Goals and Approach</li> <li>• Preliminary Schedule</li> </ul>	Tetra Tech PM, Discipline leads, IRWD PM, Mechanical, Electrical, and Operations Staff
Pilot Study Evaluation	<ul style="list-style-type: none"> <li>• Summary of Evaluation Process and Parameters</li> <li>• Conclusions and Recommendations on whether to Pilot is required</li> </ul>	Tetra Tech PM, Pilot Study Manager, IRWD PM, and others as needed
Additional Design Development Meetings	<ul style="list-style-type: none"> <li>• 60% Design Development Meeting</li> <li>• 99% Design Development Meeting</li> </ul>	Tetra Tech PM, IRWD PM, and other leads as required
Coordination activities with jurisdictional agencies and project stakeholders	One meeting with each of the following: <ul style="list-style-type: none"> <li>• City of Lake Forest</li> <li>• DDW</li> <li>• OCFA</li> <li>• Others as required</li> </ul>	Tetra Tech PM, IRWD PM, City of Lake Forest, DDW, OCFA, and other agencies as required
Overall Permit Requirements Meeting	Follow up meeting to discuss and summarize permitting requirements after meeting with agency representatives	Tetra Tech PM, Process Engineer, IRWD PM

Meeting/Workshop	Possible Agenda/Meeting Topics	Attendees
Site Visits	<ul style="list-style-type: none"> <li>Field data collection</li> <li>Photographs</li> <li>Site measurements</li> </ul>	Tetra Tech PM and/or Civil Engineer, IRWD Representative
Draft PDR Presentation	<ul style="list-style-type: none"> <li>Treatment Technology Alternatives and Recommended Option</li> <li>Pilot Study Evaluation</li> </ul>	Tetra Tech PM, discipline leads, IRWD PM, Mechanical, Electrical, Operations Staff
60% Design Presentation	<ul style="list-style-type: none"> <li>Discussion of Comments and Responses</li> <li>Coordination of design issues</li> <li>Permitting Status</li> </ul>	Tetra Tech PM, discipline leads, IRWD PM, Mechanical, Electrical, Operations Staff
99% Design Presentation	<ul style="list-style-type: none"> <li>Discussion of Comments and Responses</li> <li>Coordination of design issues</li> <li>Permitting Status</li> </ul>	Tetra Tech PM, discipline leads, IRWD PM, Mechanical, Electrical, Operations Staff
Final Design Presentation	<ul style="list-style-type: none"> <li>Discussion of Comments and Responses</li> </ul>	Tetra Tech PM, discipline leads, IRWD PM, Mechanical, Electrical, Operations Staff

**Quality Assurance/Quality Control (QA/QC):** Tetra Tech will implement proven QA/QC measures throughout the project to ensure ongoing and consistent quality control throughout all project phases.

**Project Schedule:** Tetra Tech shall prepare and will update the project schedule for design and construction activities in Microsoft Project on a monthly basis at minimum. Included herein is a proposed schedule of preliminary through design phase activities.

## Task 2 – Preliminary Design Report

The preliminary design will be used to document the basis of the final design for the facility, e.g. code requirements, permitting requirements, site piping layouts, process mechanical layouts, electrical service onsite, structural improvements, etc. As required per the RFP, recommendations for wellhead equipment, modifications, site improvements, pilot study, water treatment system, product water delivery, hydraulic analysis, off spec water conveyance to sewer, well bypass to storm drain, backwash water storage and conveyance to sewer, instrumentation and controls, ancillary equipment, construction materials summary, redundancy, noise mitigation measures, and a preliminary site plan. Tetra Tech’s evaluation of the PDR shall also include an opinion of construction and operations and maintenance costs. Supporting documentation in the form of budgetary quotations, data sheets of major equipment, and other pertinent data will be included for reference.

The work will consist of, but not be limited to, the following subtasks:

**A. Information, Data Collection, and Site Investigation:** Tetra Tech shall identify and gather all information from IRWD including, but not limited to, reports, historical data, hydraulics, and perform any site investigations as necessary to complete the design of the treatment, wellhead, utility, electrical, instrumentation SCADA, pipelines, and appurtenances. As part of the site investigations Tetra Tech shall identify equipment that can be salvaged or in poor condition which warrants disposal and/or replacement along with consideration from input from IRWD staff on the conditions of the existing equipment.



Record drawings which IRWD has already furnished shall be reviewed, but additional documents will be reviewed at the beginning of NTP:

- IRWD Legal Documents (well site title, easement, deed, and plat record)
- County Road Legal Documents (easement, deed, and plat record)
- County Park Legal Documents (Regency Park title, easement, deed, and plat record)

Tetra Tech will also complete a site visit to identify and collect any other existing site data in the form of 3D and 2D photographs, and field measurements of existing site features.

**B. Regulatory Water Quality Requirements:** Tetra Tech shall collect, compile, review, and evaluate all available relevant groundwater quality data for the purpose of predicting critical design water quality criteria to produce potable water from Lake Forest Well No. 2 for compliance with California Drinking Water and USEPA standards for public consumption.

**C. Permitting:** Identify all permits required and their controlling agencies during the construction phase, including but not limited to the Department of Drinking Water (DDW) City of Lake Forest, Orange County and Orange County Fire Authority (OCFA).

Initiate and complete application process and secure permits with appropriate agencies. Copies of completed permits shall be made a part of the Project Manual. IRWD will reimburse Tetra Tech for actual permit fees without surcharge.

**D. Siting Design:** Prepare a preliminary site layout for the preferred treatment alternative and include all necessary pre-treatment, chemical systems, site piping/valves, electrical and instrumentation equipment, building(s) and/or enclosures, site access, drainage, as applicable. Coordinate with IRWD to determine ultimate facility sizing and layout.

**E. Treatment Alternatives:** Evaluate treatment alternatives and make recommendation of preferred alternative and prepare short list of acceptable and approved vendors. Activities included in this task are as follows:

- Establish the process selection and design criteria for the treatment system
- Establish groundwater production requirements for the treatment system
- Prepare a process flow diagram for the treatment system
- Selection and sizing of equipment
- Establish design criteria for all engineering disciplines

As IRWD is willing to consider pre-purchase of the treatment unit, Tetra Tech will compare the advantages, disadvantages, and estimated cost impacts of a pre-purchase versus purchase by the selected contractor during the construction phase. This evaluation along with any supporting documents will be provided within the PDR.

**F. Pilot Testing:** Tetra Tech shall evaluate the need for pilot testing based on historical water quality data to determine operational performance of the recommended treatment system in order to achieve the required water quality goals. As the need for pilot testing and recommended technology has not yet been fully evaluated, a preliminary estimate for this effort is included in our fee based on discussions with oxidation-filtration system suppliers. Note that the estimate does not include costs for water sampling and lab testing.

**G. Wellhead/piping Modifications and Improvements:** Tetra Tech will review existing well data sheets and reports to perform a hydraulic analysis on the wellhead, existing piping, well bypass piping at startup, and improvements necessary to accommodate the recommended treatment alternatives. An evaluation of the existing submersible pump shall be performed to ensure that it has sufficient capacity to discharge flow through the treatment vessels. Any pressure deficiencies for potable distribution within IRWD's system shall be made up by using a post treatment booster system and will be included in the hydraulic analysis.

**H. Utility Search and Needs:** Utility research shall include completing a search of available record drawings and performing onsite utility pothole testing and site topographic survey. Utility survey will be based on the evaluated as-built record drawings, onsite utility markings. We will also perform a Dig-Alert search of the area to identify and request maps of existing utility agencies that have facilities within the project area; which will be used as part of the development of CADD site background files for the construction plans. Additionally, we will utilize record drawings of facilities that will require connection from proposed pipelines such as sewer and storm drain for the development of connection details. As IRWD has indicated there are no plans available for the 8-inch water distribution pipeline from LF Well No. 2 to the reservoirs, we assume some potholing services will be required to locate this horizontally and vertically. We will pothole other utility points of connection and additional utilities that may be impacted by proposed facilities and have included this in our fee.

Tetra Tech will evaluate if the existing power supply available on site will sufficiently accommodate loads generated by all existing and new equipment.

**I. Geotechnical Investigation:** If required, subsurface geotechnical investigations shall be performed by IRWD’s on-call consultant and not by Tetra Tech. Tetra Tech will coordinate with IRWD’s on-call geotechnical consultant who shall prepare a geotechnical report that will be reviewed by Tetra Tech to ensure facilities proposed onsite are designed in accordance with the recommendations noted in the report and applicable California Building Codes.

**J. Site Survey:** Topographic survey of the site will be performed which will extend from the LF Well No. 2 Site to the limits of the road right-of-way headed north of the site. As noted above, utility pothole testing shall be performed to confirm horizontal and vertical locations of some subsurface utilities.

**K. Improvement Plan Sheets:** Schematic drawings shall be prepared for the PDR along with a drawing list to complete the design phase of the project.

Sheet Title
Process Flow Diagram
Horizontal Control Plan
Overall Site Plan
Grading and Paving Plan
Overall Process/Mechanical Plan
Electrical Site Plan
Single Line Diagram
Process and Instrumentation Legend and Abbreviations
Process and Instrumentation Diagram 1
Process and Instrumentation Diagram 2
Process and Instrumentation Diagram 3

**L. Instrumentation and Control Design Criteria:** Tetra Tech shall include a process and instrumentation diagram (P&ID) for the recommended alternative treatment system including all existing instrumentation and control at the wellhead. Additionally a preliminary operational scheme including the P&ID, single line diagram, control equipment list, and method of integration with IRWD’s existing SCADA system.

Prior to this, Tetra Tech shall develop control loop functional description, control system input/output list, and an action matrix identifying control/alarm points and what items or functions they will control (per IRWD standard format) for District review and approval. Tetra Tech shall identify existing IRWD

telemetry cabling and facilities and recommend new telemetry connections and extensions, coordinating with IRWD’s Electrical Engineer.

- M. Opinion of Probable Construction Cost and O&M Costs:** Tetra Tech shall prepare a detailed and itemized opinion of probable construction cost and O&M costs for the proposed facilities, updated at each design phase, corresponding to the appropriate AACE Cost Estimate Classifications and standards. The basis of construction costs will be developed based on budgetary quotations from equipment and material vendors. Tetra Tech will also engage IRWD staff for input regarding recent historical costs for labor and maintenance-related purchases, if available.
- N. Construction Schedule:** An updated design schedule and an initial construction schedule shall be developed. Long lead items will be noted, and the schedule will indicate key critical path tasks.
- O. Deliverables – Draft PDR, Final PDR:** The work described above shall be summarized and compiled into a PDR. One (1) electronic copy in PDF format shall be submitted for review. Upon resolution and incorporation of review comments, one (1) electronic copy in PDF format shall be submitted. The PDR shall be finalized prior to proceeding with the 60 percent design deliverable.

### Task 3 – Final Design

The final design will result in the preparation of the Contract Documents. In the final design phase, Tetra Tech will address the items discussed below:

- A. Project Manual:** Tetra Tech will prepare a Project Manual in standard IRWD format for the Contract Documents. IRWD’s front end documents will be utilized, and Tetra Tech will assess IRWD’s documents to determine any needed supplemental special provisions that should be added to comply with IRWD’s general provisions and front-end requirements. The Project Manual will describe the allowable shutdown durations and sequencing associated with construction activities. The Project Manual will also include the IRWD General Technical Specifications, modifications thereto, any project specific technical specifications, and any appendices for reports or documents needed for the selected contractor’s reference for construction and permitting.
- B. Improvement Plans:** Tetra Tech will prepare detailed construction drawings in the latest version of AutoCAD and using NCS V4.0 layering standards, on 24-inch x 36-inch sheets utilizing IRWD’s standard border template. Sheet index/location map/legend, general notes, construction notes, and details will be included. Construction notes shall be used (callouts on the plans are not allowed) on all construction drawings. Construction plans shall be prepared using the NAVD 88 and NAD 83 survey standards.

Tetra Tech will provide plans, calculations and specifications as needed to clearly define the preferred treatment system and supporting facilities. We envision the final design will include the following construction drawings and anticipate a total of 54 sheets as shown in the table below:

Sheet No.	Sheet Title	60% Submittal	99% and Final Submittals
1	Cover Sheet	■	■
2	Sheet Index, Abbreviations, Legend, Project Location Map	■	■
3	General Notes and Agency Index	■	■
4	Process Flow Diagram	■	■
5	Horizontal Control Plan	■	■
6	Staging, Work Area and Access Plan		■
7	Demolition Plan and Section	■	■
8	Overall Site Plan	■	■



Sheet No.	Sheet Title	60% Submittal	99% and Final Submittals
9	Grading and Paving Plan	■	■
10	Yard Piping Plan	■	■
11	Piping Profiles	■	■
12	Connection Details		■
13	Civil Details 1		■
14	Civil Details 2		■
15	Overall Process/Mechanical Plan	■	■
16	Well Piping Modifications Plan and Section	■	■
17	Treatment Equipment Plan and Section	■	■
18	Backwash Tank Plan and Section (if required)	■	■
19	Chemical Feed System Plan and Section	■	■
20	Process Details 1		■
21	Process Details 2		■
22	Process Details 3		■
23	Structural General Notes	■	■
24	Special Inspections	■	■
25	Foundation Plan 1	■	■
26	Foundation Plan 2	■	■
27	Chemical Storage Foundation Plan and Roof Framing Plan	■	■
28	Chemical Storage Section (if required)		■
29	Structural Details 1		■
30	Structural Details 2		■
31	Foundation and Equipment Anchorage Details		■
32	Electrical Symbols and Abbreviations	■	■
33	Electrical Demolition Plan	■	■
34	Electrical Site Plan	■	■
35	Power Plan 1	■	■
36	Power Plan 2	■	■
37	Power Plan 3	■	■
38	Control Plan 1	■	■
39	Control Plan 2	■	■
40	Control Plan 3	■	■
41	Lighting and Grounding		■
42	Single Line Diagram	■	■
43	Conduit and Panel Schedule	■	■
44	Control Schematic 1	■	■
45	Control Schematic 2	■	■
46	Control Schematic 3	■	■
47	Electrical Details 1		■
48	Electrical Details 2		■

Sheet No.	Sheet Title	60% Submittal	99% and Final Submittals
49	Process and Instrumentation Legend and Abbreviations	■	■
50	Process and Instrumentation Diagram 1	■	■
51	Process and Instrumentation Diagram 2	■	■
52	Process and Instrumentation Diagram 3	■	■
53	Traffic Control Plan 1		■
54	Traffic Control Plan 2		■

- C. Opinion of Probable Construction Cost:** Prepare a detailed itemized opinion of probable construction cost for the proposed upgrades. The estimate will be provided at each project deliverable.
- D. Project Schedule:** Maintain and consistently update the project schedule, which will include detailed schedules for both design and construction activities. The schedule will be updated and submitted with each of the design deliverables described below. The schedule will include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule will be prepared in Microsoft Project.
- E. Design Deliverables:** Deliverables shall be provided as follows:
1. **60% Design Submittal:** Tetra Tech will provide the following:
    - A single searchable PDF file of the entire 60-percent plan set as defined in the previous table.
    - A table of contents of the Project Manual shall be provided in addition to the plan set, referencing applicable and modified IRWD standard specification sections, as well as additional specifications sections that will be required for the project.
    - A tabulated comment-response form generated based on IRWD’s review of the PDR.
  2. **99% Design Submittal:** Tetra tech will provide the following:
    - A single searchable PDF file of the entire 90-percent plan set as defined in the table above.
    - Five color-coded hardcopies of the 99 percent Project Manual, complete with all sections as required by IRWD’s standard project manual and the RFP. An itemized Opinion of Probable Construction Cost in the form of the list of Bid Items shall be provided along with the Project Manual.
    - A tabulated comment-response form generated based on IRWD’s review of the 60% submittal.
  3. **Final (100%) Design Deliverable:** Tetra Tech will provide the following:
    - One full size, printed, final set of plans in a single PDF with Tetra Tech’s electronic stamp and signature, including IRWD’s signatures on the design sheets.
    - A single searchable PDF file of the Project Manual including Tetra Tech’s electronic stamp and signature on the signature page.
    - A tabulated comment-response form generated based on IRWD’s review of the 99% submittal.

We understand that this submittal will be backchecked for inclusion of all previous comments prior to adding the Executive Director’s electronic signature on the cover sheets of the plans and Project Manual. Once the submittal is reviewed and signed by IRWD, Tetra Tech will provide AutoCAD files for the entire plan set. Provide Microsoft Word files used in the preparation of the Project Manual.

The final submittal shall consist of the following:

- One (1) CD – AutoCAD Files
- One (1) CD – PDF File of Plan Set
- One (1) CD – Project Manual MS Word Files
- One full-size final stamped and signed reproducible plan set consisting of a mylar title sheet and all remaining sheets on bond paper, and one (1) original signed Project Manual for District's signatures.

#### Task 4 – Bid Phase

During the bidding period, Tetra Tech will assist with providing information and clarification of bid documents to prospective bidders. This will include the preparation of up to two (2) addenda including revisions to the design plans and specifications and assistance with addressing bidder questions. Addenda preparation activities will include:

- Plan Revisions
- Specification Revisions
- Bidder Questions
- Pre-Bid Meeting

#### Task 5 – Engineering Support During Construction

Tetra Tech shall provide support during the duration of construction of the project. Support services are outlined in the subtasks noted below as described in the RFP requirements.

- A. Project Meetings:** Tetra Tech attend/conduct up to five (5) project meetings of two hours each during the construction and provide meeting minutes.
- B. Shop Drawing Reviews:** Tetra Tech shall review up to forty (40) shop drawing submittals accounting for two (2) review cycles per submittal.
- C. Requests for Information (RFI):** Tetra Tech shall review up to fifteen (15) Requests for Information (RFI).
- D. Minor Plan Revisions:** Tetra Tech shall provide up to 40 hours of staff time to make any minor plan revisions.
- E. Record Drawings:** Tetra Tech shall prepare Record Drawings at construction completion, using Contractor's and IRWD Inspector's redlines. A draft set of Record Drawings in PDF format will be submitted to IRWD for their review. This will be repeated once record drawings are determined to be complete and accurate by IRWD; Tetra Tech will then submit Final Record Drawings in PDF and AutoCAD file formats. IRWD record drawing requirements shall be followed for generating the record drawings.

#### Task 6 – Training, Commissioning, and Startup Services

Tetra Tech shall provide support and coordination with our staff and vendor staff to provide all startup, commissioning, and training services for IRWD.

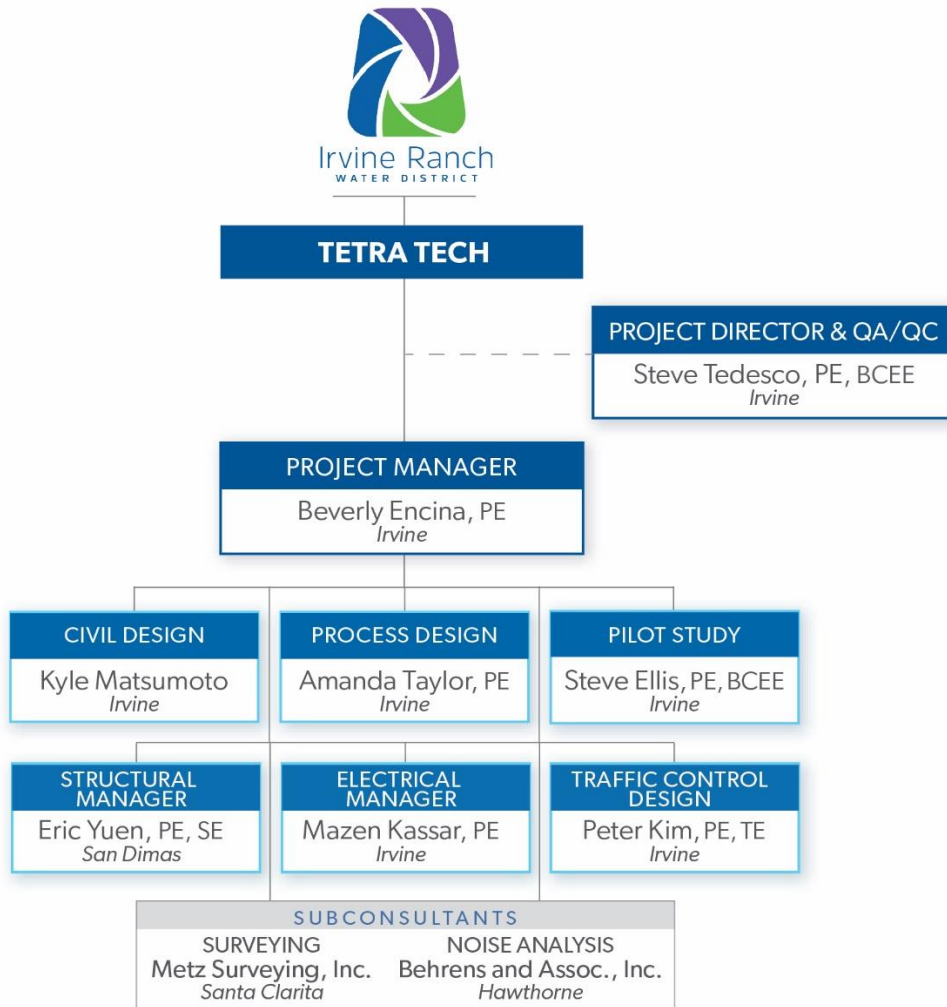
#### Task 7 – Post Construction Services

Tetra Tech shall develop an O&M Plan for the treatment facility and will collaborate with the treatment vendor and all other applicable equipment vendors for input. A draft O&M plan including five (5) hard copies and one (1) electronic PDF format copy shall be prepared for IRWD review and comments. The final version shall include five (5) hard copies and one (1) electronic PDF format, and the MS Word file.

## PROJECT TEAM

Tetra Tech has assembled a project team that possesses the knowledge, experience, and enthusiasm necessary to successfully complete this project. **Our Project Team is devoted to completing your project within schedule and under budget, and not only meet, but exceed your expectations.** Resumes for our project team members can be found in the Resumes section of this proposal.

### P R O J E C T T E A M C H A R T



### Project Director & QA/QC

**Steve Tedesco, PE, BCEE**, will be the Project Director and will serve as overall project delivery quality control. Steve has more than 38 years of experience and will provide his technical expertise to assist the design team in the areas of constructability, specifications, review and as-needed project management support. Steve has been involved on over 25 different projects for IRWD.

### Project Manager

**Beverly Encina, PE**, will serve as the Project Manager and will oversee the day-to-day management of the project. Beverly has more than 19 years of experience in the water and wastewater field and her qualifications include experience in project management and engineering design of water treatment, distribution, hydraulic analysis for water, sewer, storm drain, as well as construction phase services. Beverly has been involved on over 15 different projects for IRWD. With guidance and input from Steve Tedesco, she will provide overall management of the various phases to this project to ensure they are delivered on time and within budget.

### Lead Civil and Site Layout Engineer

**Kyle Matsumoto**, will lead the civil design of the project as well as assist the project manager with coordination within the team. Kyle has more than four years of experience working on water treatment and water distribution projects.

### Lead Process Engineer

**Amanda Taylor, PE** will lead the process design of the project as well as assist the project manager with coordination within the team. Amanda has more than 13 years of experience working on water treatment and water distribution projects.

### Pilot Studies

**Steve Ellis, PE, BCEE**, will lead the Pilot Study Evaluation and coordination of testing for the project as well as has more than 42 years of experience in project management and design of water treatment and water distribution projects. Steve has been involved in past project piloting efforts such as the Wellhead Treatment Strategy and Preliminary Design Project for Rancho California Water District.

### Electrical Task Leader

**Mazen Kassar, PE**, will assist our Project Manager and direct the activities of other members of the design team in the capacity of the Electrical Task Leader. At Tetra Tech, Mazen has been responsible for the design of electrical systems for the majority of all of our water/wastewater facilities in Southern California.

### Structural Engineer

**Eric Yuen, PE, SE**, will assist our Project Manager and direct the activities of other members of the design team in the capacity of the structural aspects of the project. For the past 14 years Eric has been involved in the structural design of the majority of our treatment facility **structures including IRWD’s Wells 21 and 22 Desalter.**

### Traffic Control

**Peter Kim, PE, TE**, will assist as our Traffic Control Engineer and provide Traffic Control Design for the project. For the past 27 years Peter has been involved in responsible for over 20 freeway projects requiring preparation of traffic design plans and traffic management plans throughout Southern California as well as traffic control plans for various water districts (including IRWD) on more than 100 projects. **Peter most recently provided Traffic Control Design for IRWD’s Harvard Avenue Trunk Sewer Diversion Structure Rehabilitation and IRWD’s Principal Aquifer Plant (PAP, Well ET-1) Optimization for PFAS Treatment.**

### Subconsultants

In order to provide the full range of services required for this project, we have added **Metz Surveying, Inc.** and **Behrens and Associates, Inc.** as Subconsultants to our project team. Tetra Tech will be responsible for coordinating and integrating the efforts of our surveyor and noise analysis specialists.

Surveying: Metz Surveying, Inc. (DIR Registration #: 1000045062)

Noise Analysis: Behrens and Associates, Inc. (DIR Registration #: 1000018695)

## Percentage of Staff Contribution

As requested in the RFP, the following is our estimate for Percentage of Staff Contribution:

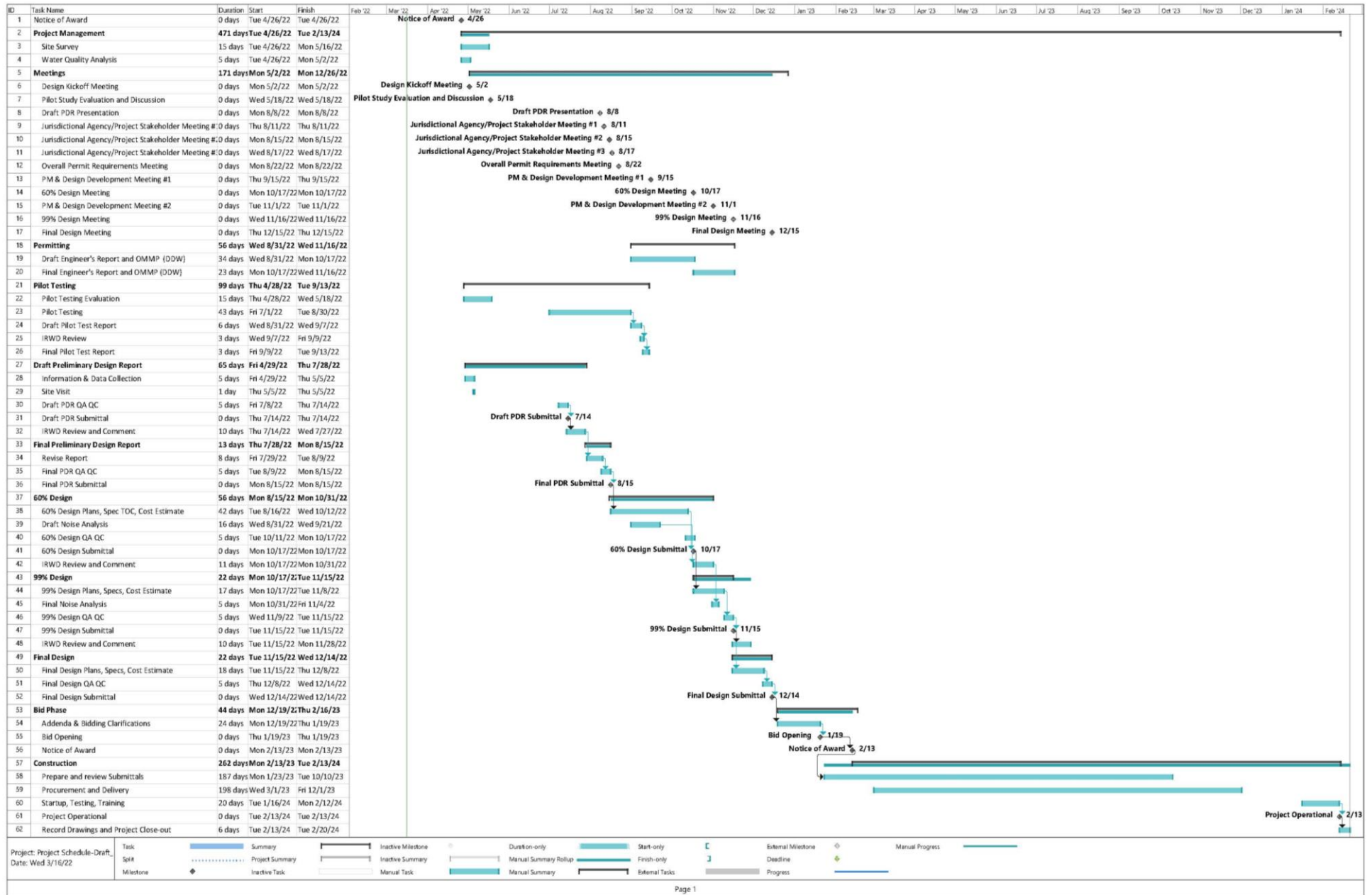
Team Member	Contribution Percentage	Team Member	Contribution Percentage
Steve Tedesco, PE, BCEE	5%	Amanda Taylor, PE	10%
Beverly Encina, PE	20%	Mazen Kassar, PE	10%
Kyle Matsumoto	20%	Eric Yuen, PE, SE	5%
Steve Ellis, PE, BCEE	20%	Additional Design and Administrative Support Staff	25%

## EXPERIENCE

Our Project Team has performed similar work on many wellhead treatment system projects. The following is just a brief summary of this experience and additional project summary sheets with more details can be found in the Project Experience and References section.

Client	Project Name	Treatment	Capacity (GPM)	Year Completed
Eastern Municipal Water District	San Jacinto Enhanced Recharge and Recovery Program	Oxidation - Filtration for Iron and Manganese Removal	6,300	2021
Orange County Water District	Fullerton Main Water Treatment Plant	Ion Exchange (IX) for PFOA, PFAS Removal	8,300	2021
Water Replenishment District	Tract 349 Mutual Water Company Wells 3 and 4 Preliminary Design Report	Oxidation - Filtration for Manganese Removal	800 and 900	2020
Orange County Water District	Yorba Linda Water District Headquarters PFAS Water Treatment Plant	Ion Exchange (IX) for PFOA, PFAS Removal	17,300	2020
Eastern Municipal Water District	Moreno Valley Groundwater Treatment Plant	Oxidation - Filtration for Iron and Manganese Removal	3,000	2019
Orange County Water District	Kimberley 1A PFAS Water Treatment Plant	Ion Exchange (IX) for PFOA, PFAS Removal	3,200	2019
Orange County Water District	Serrano Water District PFAS Water Treatment Plant	Ion Exchange (IX) for PFOA, PFAS Removal	3,000	2019
U.S. Army Corps of Engineering	Joint Base Lewis McChord Field Housing Water System	Oxidation - Filtration for Iron and Manganese Removal	2,125	2018
Water Replenishment District	Sativa Well 5 Technical Evaluation Study and Design Projects	Oxidation - Filtration for Manganese Removal	750	2017
Pascal & Ludwig/Goleta Water District	Design-Build of Four Small Wells	Oxidation - Filtration for Manganese Removal (Shirrell Well)	280	2016
Irvine Ranch Water District	Irvine Desalter Manganese Removal Treatment Project	Oxidation - Filtration for Manganese Removal	1,800	2009
South Coast Water District	Groundwater Recovery Program Desalination Facility	Oxidation - Filtration for Iron and Manganese Removal	163	2008







March 17, 2022

Carl Spangenberg, PE  
Project Manager  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

**Reference: Fee Proposal to Provide Engineering Design and Construction Services for the Lake Forest Well No. 2 Treatment and Sewer Bypass Project**

Dear Mr. Spangenberg,

Tetra Tech is eager to submit our fee proposal to provide engineering design and construction services for the Lake Forest Well No. 2 Treatment and Sewer Bypass Project. All work will be performed on a time and material basis “not-to-exceed” the contract price and no additional compensation will be received beyond the price negotiated to be performed unless changes are approved in advance by an amendment to our contract signed by the Irvine Ranch Water District.

Attached is our work plan with a breakdown of labor hours by employee billing classification, together with the cost of non-labor and subconsultant services. The attached rate schedule includes Tetra Tech’s billing rates for this project for all classifications of staff likely to be involved in the project; as well as overhead, profit, and expenses.

Tetra Tech appreciates the opportunity to submit our fee proposal and looks forward to your positive response. Should you require additional information or have any questions regarding our submittal, please don’t hesitate to contact us.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Steve Tedesco', is written over a light gray rectangular background.

Steve Tedesco, PE  
Project Manager

SDT/BSE/de

Attachments







3.02 99% Plans, Specs, Cost Estimate	10/17/22	11/15/22	0.9	3	18	575	-	45	66	55	69	-	14	46	16	56	78	19	86	25	87,310	3,300	-	2,200	-	92,810
General (3)						3		1	2													435				435
PFID (1)						2				1	1											310				310
Civil (10)						96		16	40													14,320				14,320
Process/Mechanical (7)						56				16	40											7,840				7,840
Structural (9)						80							8	32								12,440				12,440
Electrical (17)						72									8	24	40					10,040				10,040
PID (4)						32				2	4				2	8	16					4,330				4,330
Traffic Control (2)						22													16	6		5,040				5,040
Project Manual						134		8	8	20	12		4	12	4	20	20	2				19,850				19,850
Construction and O&M Cost Estimate						33		4	8	4	4		2	2	2	4	2	1				5,265				5,265
Permitting Asst. including Final Eng Report & OMM						44		16	8	12	8											7,320				7,320
Project Manual Prints (5)						1																120		2,200		2,320
Final Noise Analysis																							3,300			3,300
<b>3.03 Final Plans, Specs, Cost Estimate</b>	<b>11/15/22</b>	<b>12/14/22</b>	<b>0.9</b>	<b>3</b>	<b>18</b>	<b>110</b>	<b>-</b>	<b>8</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>-</b>	<b>4</b>	<b>11</b>	<b>5</b>	<b>14</b>	<b>12</b>	<b>3</b>	<b>9</b>	<b>9</b>	<b>16,575</b>	<b>-</b>	<b>-</b>	<b>4,400</b>	<b>-</b>	<b>20,975</b>
Revise and Prepare Bid Set Plans						61		4	8	4	8		2	8	2	8	8	1	8		9,095				9,095	
Revise and Prepare Bid Set Specs						30		2	4	2	4		1	2	2	4		1		8	4,540				4,540	
Finalize Construction and O&M Cost Estimate						17		2	2	1	2		1	1	1	2	4	1			2,660				2,660	
Full-size Plan Plots and Proj Manual Prints (5)						2														1	1	280		4,400		4,680
3.04 Construction Schedule Updates						15		4	4	2			2		2				1			2,835				2,835
<b>4.0 Bid Phase</b>	<b>12/14/22</b>	<b>02/13/23</b>	<b>2.0</b>	<b>5</b>	<b>39</b>	<b>56</b>	<b>-</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>6</b>	<b>-</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>2</b>	<b>-</b>	<b>4</b>	<b>12</b>	<b>8,400</b>	<b>-</b>	<b>22</b>	<b>-</b>	<b>8,422</b>	
4.01 Conformed Documents & Pre-Bid Meeting						22		2	2	2	2		1	2	1	2			4	4	3,410		22			3,432
4.02 Addenda & Meeting Minutes						34		2	4	2	4		2	4	2	4	2				4,990				4,990	
<del>4.03 Engineering Support During Construction</del>	<del>02/13/23</del>	<del>02/13/24</del>	<del>11.8</del>	<del>26</del>	<del>225</del>	<del>702</del>	<del>-</del>	<del>31</del>	<del>22</del>	<del>11</del>	<del>20</del>	<del>-</del>	<del>10</del>	<del>18</del>	<del>16</del>	<del>25</del>	<del>12</del>	<del>-</del>	<del>28</del>	<del>-</del>	<del>22,320</del>	<del>-</del>	<del>220</del>	<del>-</del>	<del>22,540</del>	
<del>5.01 Project Meetings (4)</del>						16		10					4		2						3,320		165			3,485
<del>5.02 Shop Drawing Reviews (30)</del>						72		4	12	4	12		4	12	4	12	8				10,600				10,600	
<del>5.03 Requests For Information (15)</del>						28		4	2	4	2		4	2	4	4	2				4,990				4,990	
<del>5.04 Minor Plan Revisions (40 hrs)</del>						40		2	4	2	4		2	4	2	4				16	6,370				6,370	
<del>5.05 Site Visits (5)</del>						22		10					4		4	4					4,430		165		4,595	
<del>5.06 Record Drawings</del>						24		1	4				1		1	2				12	3,610				3,610	
<b>6.0 Training, Commissioning, &amp; Startup Services</b>	<b>01/13/24</b>	<b>02/13/24</b>	<b>1.0</b>	<b>3</b>	<b>20</b>	<b>48</b>	<b>-</b>	<b>12</b>	<b>8</b>	<b>12</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9,420</b>	<b>-</b>	<b>110</b>	<b>-</b>	<b>9,530</b>	
6.01 Startup & Commissioning Support						48		4	12	8	12		4		8						9,420		110			9,530
<b>7.0 Post Construction Services</b>	<b>02/13/24</b>	<b>02/27/24</b>	<b>0.5</b>	<b>1</b>	<b>9</b>	<b>66</b>	<b>4</b>	<b>6</b>	<b>-</b>	<b>12</b>	<b>16</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16</b>	<b>10,830</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10,830</b>	
7.01 Draft O&M Plan						40		2	4		8				2	4				12	6,470				6,470	
7.02 Final O&M Plan						26		2	2		4				2	4				4	4,360				4,360	
<b>Totals</b>	<b>04/26/22</b>	<b>02/27/24</b>	<b>21.7</b>			<b>2,328</b>	<b>39</b>	<b>339</b>	<b>294</b>	<b>250</b>	<b>286</b>	<b>36</b>	<b>82</b>	<b>119</b>	<b>111</b>	<b>190</b>	<b>226</b>	<b>23</b>	<b>223</b>	<b>110</b>	<b>0.00%</b>	<b>374,460</b>	<b>12,601</b>	<b>1,078</b>	<b>6,600</b>	<b>394,739</b>

Total = \$340,729

Sum of PM, PDR, Design + Bid Phase

(excludes construction phase services, training / Start up & post construction services)