

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

May 26, 2020

*Due to COVID-19, this meeting will be conducted as a teleconference pursuant to the provisions of the Governor's Executive Orders N-25-20 and N-29-20, which suspend certain requirements of the Ralph M. Brown Act. Members of the public may not attend this meeting in person.*

Participation by members of the Board of Directors will be from remote locations. Public access and participation will only be available telephonically/electronically.

To virtually attend the meeting and to be able to view any presentations or additional materials provided at the meeting, please join online via Webex using the link and information below:

Via Web:

<https://irwd.my.webex.com/irwd.my/j.php?MTID=m257ce67e924916b07f23281883b4f439>

Meeting Number (Access Code): 626 121 455

Meeting Password: ZKf2ga2GUV3 (95324224 from phones and video systems)

After joining the meeting, in order to ensure all persons can participate and observe the meeting, please select the "Call in" option and use a telephone to access the audio for the meeting by using the call-in information and attendee identification number provided.

*As courtesy to the other participants, please mute your phone when you are not speaking.*

**PLEASE NOTE:** Participants joining 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. Participants who join the meeting while the Board is in closed session will receive a notice that the meeting has been locked. They will be able to join the meeting once the closed session has concluded.

**CALL TO ORDER**      5:00 p.m.

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

**PUBLIC COMMENT NOTICE**

If you wish to address the Board of Directors on any item, please submit a request to speak via the "chat" feature available when joining the meeting virtually. Remarks are limited to three minutes per speaker on each subject. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 12:00 p.m. on Tuesday, May 26, 2020.

**ALL VOTES SHALL BE TAKEN BY A ROLL CALL VOTE.**

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**COMMUNICATIONS TO THE BOARD**

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1. A. Written:

B. Oral:

2. ITEMS RECEIVED TOO LATE TO BE AGENDIZED

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

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**CONSENT CALENDAR**

**Resolution No. 2020-12**

**Items 3-6**

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3. BOARD MEETING MINUTES

Recommendation: That the minutes of the May 11, 2020 Regular Board meeting be approved as presented.

4. APRIL 2020 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 April 2020 Summary of Payroll ACH payments in the total amount of \$3,110,433, and approve the April 2020 Accounts Payable Disbursement Summary of Warrants 407457 through 408209, Workers' Compensation Distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$21,517,910.

5. CAPSTONE THREE-YEAR FACTORY PROTECTION PLAN AGREEMENT FOR THE BIOSOLIDS AND ENERGY RECOVERY FACILITY PROJECT

Recommendation: That the Board authorize the General Manager to execute a three-year Capstone Microturbine Factory Protection Plan Agreement with authorized service provider Cal Microturbine for a total of \$320,796.

6. THREE-YEAR CONTRACT AWARD FOR OPERATION AND MAINTENANCE OF MICROTURBINE AND BIOGAS TREATMENT SYSTEMS AT THE MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES

Recommendation: That the Board authorize the General Manager to execute a three-year operation and maintenance contract with GI Energy for the Operation and Maintenance of Microturbine and Biogas Treatment Systems at the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities in the amount of \$1,431,754.

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**ACTION CALENDAR**

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7. MID-CYCLE OPERATING BUDGET AND RATES FOR FISCAL YEAR 2020-21

Recommendation: That the Board receive and file the Mid-cycle Operating Budget Update for Fiscal Year 2020-21 and approve deferring the potable water, recycled water, and sewer rate increases for FY 2020-21.

8. SEWER SIPHON IMPROVEMENTS CONSTRUCTION AWARD

Recommendation: That the Board authorize a budget increase for Project 07886 in the amount of \$3,114,000, from \$6,632,000 to \$9,746,000; and authorize the General Manager to execute a construction contract with Vido Artukovich & Son, Inc. in the amount of \$8,355,349.67 for the Sewer Siphon Improvements, Project 07886.

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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.

9. General Manager's Report

10. Directors' Comments

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

12. CLOSED SESSION CONFERENCE WITH LABOR NEGOTIATORS – Pursuant to Government Code Section 54957.6(a):

*Agency designated representatives: Paul Cook and Jenny Roney*

*Unrepresented employee: Managers, Supervisors and Confidential Employees*

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**OTHER BUSINESS - Continued**

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13. CLOSED SESSION CONFERENCE WITH REAL PROPERTY NEGOTIATORS – Pursuant to Government Code Section 54956.8:

*Property:* 32633 Trabuco Creek Road, Trabuco Canyon, CA 92679 (Assessor's Parcel Number 842-061-04)

*Agency Negotiator:* Paul Cook, General Manager, and Rob Jacobson, Director of Treasury and Risk Management

*Negotiating Parties:* Mark U. Parker Living Trust, Steven U. Parker Living Trust and Linda Jane U. Laval Living

*Under negotiation:* Price and Terms of Payment

14. Open Session

15. Adjourn.

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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. 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.

May 26, 2020  
Prepared and  
submitted by: L. Bonkowski  
Approved by: Paul A. Cook



CONSENT CALENDAR

BOARD MEETING MINUTES

SUMMARY:

Provided are the minutes of the May 11, 2020 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE MAY 11, 2020 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – May 11, 2020 Minutes

EXHIBIT “A”

MINUTES OF REGULAR MEETING – May 11, 2020

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President Matheis on May 11, 2020 via teleconference pursuant to the provisions of the Governor’s Executive Orders N-25-20 and N-29-20 due to COVID-19. Members of the public did not attend this meeting in person.

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

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Technical Services Burton, Executive Director of Water Policy Weghorst, Executive Director of Finance and Administration Clary, Director of Treasury and Risk Management Jacobson, Executive Director of Operations Chambers, General Counsel Collins, Director of Public Affairs Beeman, Director of Human Resources Roney, Director of Water Quality and Regulatory Compliance Colston, Director of Recycling Operations Zepeda, Director of Maintenance Mykitta, Director of Administrative Services Malone, Government Relations Officer/Deputy General Counsel Compton, Secretary Bonkowski, and members of staff and the public.

WRITTEN AND ORAL COMMUNICATIONS: None.

ITEMS TOO LATE TO BE AGENDIZED: None.

CONSENT CALENDAR

Following an inquiry from Director Reinhart on Consent Calendar Item No. 6, for which staff said that the boundary changes would typically occur in 2021, on MOTION by Withers, seconded by LaMar and unanimously carried by a roll call vote (5-0) Withers, Matheis, Reinhart, Swan, and LaMar voting aye, and 0 noes, **CONSENT CALENDAR ITEMS 3 THROUGH 9 WERE APPROVED AS FOLLOWS:**

3. RATIFY/APPROVE BOARD OF DIRECTORS’ ATTENDANCE AT MEETINGS AND EVENTS

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

4. BOARD MEETING MINUTES

Recommendation: That the minutes of the April 27, 2020 Regular Board meeting be approved as presented.

5. 2020 LEGISLATIVE AND REGULATORY UPDATE

Recommendation: That the Board adopt a “seek amendments” position on AB 2968 (Rodriguez).

CONSENT CALENDAR (CONTINUED)

6. REGISTRAR OF VOTERS INFORMATION REQUEST AND CANDIDATE STATEMENT WORD LIMIT FOR THE ELECTION OF THE BOARD OF DIRECTORS

Recommendation: That the Board authorize the District Secretary to file the “Transmittal of Election Information” form for each general election confirming IRWD’s political and division boundaries, providing the Registrar of Voters with the requested information, selecting a 200-word limit for Candidate Statements of Qualifications, and indicating that IRWD will not pay for the Statements of Qualifications.

7. BONITA CANYON RECYCLED WATER ZONE D TO B PRESSURE REDUCING STATION SUPPLY PIPELINE REPLACEMENT FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Bonita Canyon Recycled Water Zone D to B Pressure Reducing Station Supply Pipeline Replacement, Project 10999, 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.

8. MICHELSON WATER RECYCLING PLANT EMERGENCY RECYCLED WATER DIVERSION TO SAN DIEGO CREEK FINAL ACCEPTANCE

Recommendation: That the Board accept construction of MWRP Emergency Recycled Water Diversion to San Diego Creek Project 10093, 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.

9. PELICAN HILL GOLF CLUB SEWER REHABILITATION FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Pelican Hill Golf Club Sewer Rehabilitation, Project 11121, 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.

ACTION CALENDAR

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

General Manager Cook reported that Metropolitan Water District is currently updating its Integrated Water Resources Plan (IRP) which will identify new regional targets for local water resource development. Mr. Cook said that these new targets will affect the updating and implementing of Metropolitan’s Local Resources Program, which provides incentives to

water agencies for the development of water recycling, groundwater recovery, and seawater desalination projects. To help guide IRWD's advocacy efforts related to ongoing policy discussions on Metropolitan's IRP and Local Resources Program, staff presented an updated draft policy position paper to the Board on March 9, 2020. Since that time, staff has continued to revise the position paper based on input provided by the Board.

Executive Director Weghorst reported on the changing conditions which are guiding Metropolitan's policy issues. Mr. Weghorst said that IRWD supports Metropolitan's proposed scenario planning approach to the 2020 IRP, and throughout that process, recommends that Metropolitan should: 1) protect existing imported water supply infrastructure and deliveries; 2) minimize potential stranding of conveyance, treatment, and storage assets; and 3) carefully evaluate new water supply projects to improve regional water supply reliability.

Mr. Weghorst reviewed the Integrated Resources Plan Policy Principles as follows: 1) Metropolitan should continue its regional approach to water resources planning and work to ensure its financial stability while maintaining the ability to provide reliable, cost effective and high-quality water supplies to its member agencies; 2) Metropolitan should evaluate previous approaches taken in the preparation of IRPs and develop a new approach that provides flexibility in dealing with current and future conditions and uncertainties; 3) Metropolitan's new approach to the 2020 IRP should balance regional and member agency water supply reliability in a way that allows Metropolitan to maintain rate and financial stability; 4) Metropolitan's 2020 IRP should encourage member agencies to take responsibility for complying with water conservation legislation and to implement projects that augment Metropolitan supplies during major droughts and supply interruptions; 5) To reduce risks to its imported supplies, Metropolitan should invest in the proposed Delta Conveyance Project, support subsidence related repairs to the California Aqueduct, and develop new innovative programs on the Colorado River; 6) Metropolitan should take actions to stabilize demands for its imported supplies to help maintain rate and financial stability; 7) Should Metropolitan be unable to maintain financial stability, it should consider enhancing its variable revenue structure with a fixed rate component that ensures it can cover its full cost of regional service; 8) Metropolitan should anticipate future reductions in its imported supplies and plan cost effective and timely regional recycled and other water supply projects; and 9) In preparing its 2020 IRP, Metropolitan should consider the feasibility, risk and ease of implementation of local supply projects when accounting for the potential benefits of the projects on regional water supply reliability.

Mr. Weghorst reviewed the Local Resources Plan Policy Principles including: 1) Metropolitan should consider limiting use of its Local Resources Program until average annual demands for water from Metropolitan have increased to levels that reduce risk to its financial stability; 2) Metropolitan should discourage base-loaded local projects and other supplies that strand capacity in Metropolitan's water treatment facilities and increase risk to rate and financial stability; 3) Metropolitan should incentivize local projects that provide extraordinary and other supplies that augment Metropolitan supplies during major droughts and supply interruptions. Metropolitan should also take an active role in ensuring that state mandates do not discourage the use of supplies from such projects; 4) Metropolitan should prioritize providing its incentives to local projects located in areas of that have less access to local supplies, such as South Orange County and northern portions of Metropolitan's service area; 5) Metropolitan should not provide incentives for local projects that result in the local communities subsidizing other areas of Metropolitan's service area; 6) To increase demands for its supplies, Metropolitan should consider reallocating Local Resource Program funds to

reduce overdraft in groundwater basins within Metropolitan's service area; and 7) Metropolitan should only consider providing incentives to local groundwater treatment projects up to the lowest cost and effective treatment of regulated constituents impacting the supplies.

Director LaMar reported that this item was reviewed by the Water Resources Policy and Communications Committee on March 5, 2020 as well as May 7, 2020 and said that staff did an excellent presentation. He said during the meeting additional language was added to some of the principles. Director Swan said that he listened to this meeting, and that tonight had several comments for staff to address, and following discussion with Director Swan and other Board members, the General Manager proposed adding one more principle to the Local Resources Plan Policy Principles as follows: Project shall be funded by the Local Resources Program through a competitive process based on specific criteria and block grants.

There being no further comments, on MOTION by Matheis, seconded by Withers and unanimously carried by a roll call vote (5-0) Withers, Matheis, Reinhart, Swan, and LaMar voting aye, and 0 noes, **THE BOARD ADOPTED THE REVISED IRWD POLICY PRINCIPLES REGARDING METROPOLITAN WATER DISTRICT'S INTEGRATED WATER RESOURCES PLAN AND LOCAL RESOURCES PROGRAM AS AMENDED.**

#### GENERAL MANAGER'S REPORT

General Manager Cook reported that all employees at the District are well with no reports of the virus. Mr. Cook said that staff is currently working with a modified work schedule and looking into opening the District up incrementally in the coming months. He said that all work is getting done in a very productive way with telecommunications and other measures.

Mr. Cook said that the District was featured in an OC Register article on COVID-19 testing of raw sewage.

Mr. Cook said that that staff has put together resources to assist building owners, i.e. the Irvine Company, cities, the Irvine Chamber of Commerce and others, to return to work after the buildings have been unoccupied, and notifying them that the water is of the highest quality for their use.

Mr. Cook further reported that the District's Consultant, Mr. Bruce Newell, said that all is well in the canyon areas.

#### DIRECTORS' COMMENTS

Director Reinhart said he was unable to attend the OCWD Retirement Committee meeting, but he is attending the OCWD Board meeting via teleconference.

Director Withers said that he attended his regular meetings, and that he would be attending an OCBC meeting tomorrow, an OCSD Administration and Finance Committee meeting, and a weekly meeting with the General Manager to receive an update on COVID-19 issues.

Director Swan reported that he attended a Kern Fan scoping meeting, a PPIC briefing on headwaters, a WACO monthly meeting, an OCBC Government Affairs Committee meeting, several MWDOC meetings, and a Central and West Basin Board meeting.

Director LaMar reported on his attendance at an ACWA headwaters work group meeting, a PPIC Headwaters Forest Management virtual event, and a WACO meeting. He further reported that as ACWA will be unable to book hotels in July, its next conference will be a virtual event.

Director Matheis reported that she is very proud of the General Manager Cook and the District, and thanked everyone for their participation.

Director Swan further reported that this Thursday, Friday, Saturday and Sunday there will be COVID-19 testing in the District's parking lot. Mr. Cook said that he will forward this information to the Board.

ADJOURNMENT

President Matheis adjourned the meeting at 6:14 p.m.

APPROVED and SIGNED this 27<sup>th</sup> day of May 2020.

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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

May 26, 2020

Prepared by: J. Davis / T. Fournier

Submitted by: R. Jacobson / C. Clary

Approved by: Paul A. Cook



## CONSENT CALENDAR

### APRIL 2020 TREASURY REPORT

#### SUMMARY:

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

- A. The April 2020 Investment Summary Report. This Investment Summary Report conforms with the 2020 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 April 30, 2020, as outlined in Exhibit "B";
- C. The Monthly Interest Rate Swap Summary as of April 30, 2020, as outlined in Exhibit "C";
- D. The April 30, 2020 Disbursement Summary of warrants 407457 through 408209, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$21,517,910, as outlined in Exhibit "D";
- E. The Summary of Payroll ACH payments in the total amount of \$3,110,433, as outlined in Exhibit "E"; and
- F. The Disclosure Report of Reimbursements to Board members and staff for April 2020, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "F".

#### FISCAL IMPACTS:

As of April 30, 2020, the book value of the investment portfolio was \$369,567,579, with a 1.77% rate of return and a market value of \$374,208,656. Based on IRWD's March 31, 2020 quarterly real estate investment rate of return of 9.03%, the weighted average return for the fixed income and real estate investments was 4.02%.

As of April 30, 2020, the outstanding principal amount of fixed and variable rate debt was \$655,745,000. The monthly weighted average all-in variable rate was 0.75%. Including the District's weighted average fixed rate bond issues of 3.69% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 2.83%.

Payroll ACH payments totaled \$3,110,433, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for April totaled \$21,517,910.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE APRIL 2020 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$3,110,433; AND APPROVE THE APRIL 2020 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 407457 THROUGH 408209, WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$21,517,910.

LIST OF EXHIBITS:

Exhibit "A" – Investment Summary Report

Exhibit "B" – Summary of Fixed and Variable Debt

Exhibit "C" – Monthly Interest Rate Swap Summary

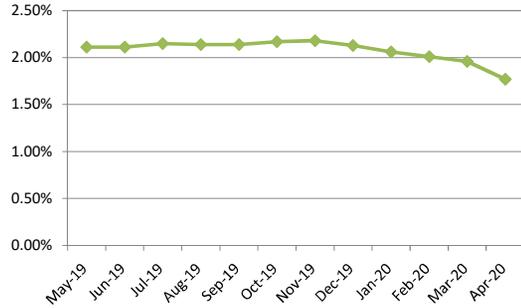
Exhibit "D" – Monthly Summary of District Disbursements

Exhibit "E" – Monthly Payroll ACH Summary

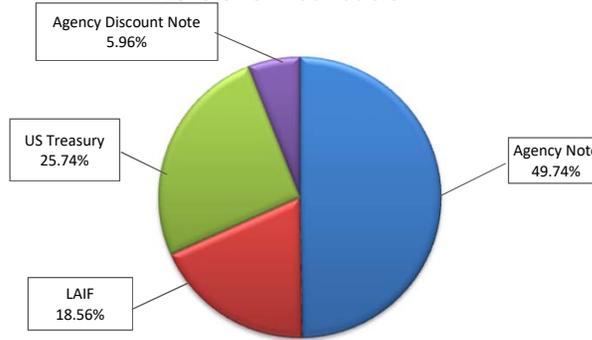
Exhibit "F" – Disclosure of Reimbursements to Board Members and Staff

Exhibit "A"  
**Irvine Ranch Water District  
Investment Portfolio Summary  
April 2020**

**Monthly Fixed Income Yield**



**Portfolio Distribution**



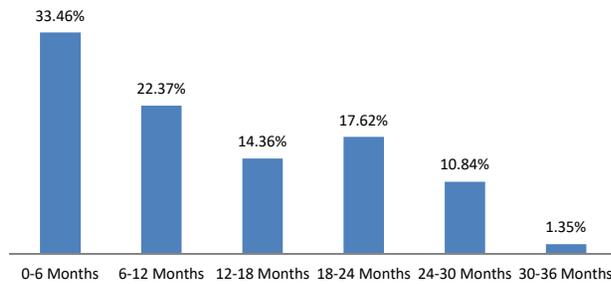
**Investment Summary**

Type	PAR	Book Value	Market Value
Agency Note	183,550,000	184,010,447	185,987,416
US Treasury	95,000,000	95,101,108	97,225,550
LAIF	68,500,000	68,500,000	69,012,450
Agency Discount Note	22,000,000	21,956,024	21,983,240
<b>Grand Total</b>	<b>369,050,000</b>	<b>369,567,579</b>	<b>374,208,656</b>

**Weighted Average Return  
Including Real Estate Portfolio**



**Maturity Distribution**



**Top Issuers**

Issuer	PAR	% Portfolio
US Treasury	95,000,000	25.74%
State of California Tsy.	68,500,000	18.56%
Fed Home Loan Bank	67,000,000	18.15%
Fed Farm Credit Bank	65,000,000	17.61%
Fed Natl Mortgage Assoc	38,550,000	10.46%
Fed Home Loan Mortgage Corp	35,000,000	9.48%
<b>Grand Total</b>	<b>369,050,000</b>	<b>100.00%</b>

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

04/30/20

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 4/30/2020	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
08/23/17			05/01/20		LAIF	State of California Tsy.	\$68,500,000		1.620%	\$68,500,000.00	\$68,500,000.00	69,012,449.53	512,449.53
06/29/18	NA	NA	05/15/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.566%	4,998,450.00	4,999,968.37	5,004,950.00	4,981.63
12/04/19	NA	NA	05/28/20	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.625%	1.582%	5,025,000.00	5,003,835.23	5,008,450.00	4,614.77
06/11/18	NA	NA	06/11/20	Aaa/NR/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.570%	4,997,100.00	4,999,837.35	5,014,650.00	14,812.65
11/10/17	NA	NA	06/22/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.750%	4,968,000.00	4,999,890.23	5,009,800.00	9,909.77
04/19/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.535%	4,886,000.00	4,987,683.07	5,016,400.00	28,716.93
06/08/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.559%	4,890,100.00	4,987,367.82	5,016,400.00	29,032.18
12/20/17	Quarterly	11/10/16	08/10/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.450%	2.052%	4,923,000.00	4,983,785.27	5,001,750.00	17,964.73
09/14/18	NA	NA	08/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.680%	2.789%	4,989,700.00	4,998,331.69	5,045,550.00	47,218.31
09/14/18	NA	NA	09/04/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.690%	2.794%	4,990,050.00	4,998,261.17	5,041,650.00	43,388.83
03/13/20	NA	NA	09/16/20	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.480%	0.489%	4,987,533.35	4,989,533.35	4,997,500.00	7,966.65
12/12/17	NA	NA	09/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	2.000%	2.000%	5,000,000.00	5,000,000.00	5,023,150.00	23,150.00
10/31/17	NA	NA	10/30/20	Aaa/NR/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,550,000	1.850%	1.850%	5,550,000.00	5,550,000.00	5,576,196.00	26,196.00
03/31/20	NA	NA	10/30/20	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.150%	0.153%	4,995,562.50	4,996,187.50	4,996,700.00	512.50
09/28/18	NA	NA	10/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.750%	2.847%	4,889,453.13	4,805,385.42	5,040,050.00	234,664.58
03/16/20	NA	NA	11/18/20	NR	FHLB - Discount Note	Fed Home Loan Bank	7,000,000	0.530%	0.540%	6,974,545.28	6,977,636.95	6,994,540.00	16,903.05
11/30/17	NA	NA	11/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.850%	1.964%	4,983,550.00	4,996,876.01	5,046,150.00	49,273.99
12/20/17	NA	NA	12/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.875%	2.023%	4,978,400.00	4,993,289.13	5,055,450.00	62,160.87
11/09/18	NA	NA	12/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.375%	2.958%	4,939,843.75	4,981,253.99	5,074,200.00	92,946.01
03/31/20	NA	NA	01/19/21	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	0.200%	0.204%	4,991,833.33	4,992,666.66	4,994,500.00	1,833.34
10/12/18	NA	NA	01/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.375%	2.890%	9,664,843.76	9,890,536.86	10,093,800.00	203,263.14
12/14/18	NA	NA	02/16/21	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.375%	2.806%	4,954,750.00	4,982,412.26	5,086,600.00	104,187.74
12/14/18	NA	NA	02/28/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.000%	2.755%	4,919,515.95	4,967,985.90	5,076,550.00	108,564.10
02/12/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	2.500%	2.516%	9,996,500.00	9,998,547.43	10,189,600.00	191,052.57
02/25/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.549%	4,982,700.00	4,992,695.04	5,093,500.00	100,804.96
06/17/19	NA	NA	03/17/21	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.950%	1.938%	5,001,050.00	5,000,525.82	5,062,050.00	61,524.18
02/28/20	NA	NA	04/13/21	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	3,000,000	2.500%	1.185%	3,043,950.00	3,040,734.15	3,066,270.00	25,535.85
06/14/19	NA	NA	04/30/21	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.750%	1.913%	4,985,000.00	4,992,040.82	5,066,950.00	74,909.18
12/05/19	NA	NA	04/30/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.250%	1.650%	5,041,406.25	5,029,437.26	5,104,700.00	75,262.74
09/13/19	NA	NA	05/15/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.625%	1.757%	5,071,093.75	5,044,171.36	5,128,150.00	83,978.64
03/02/20	NA	NA	05/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	2.125%	1.186%	10,115,711.10	10,108,081.80	10,212,500.00	104,418.20
09/18/19	NA	NA	06/11/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.250%	1.786%	5,039,300.00	5,025,246.52	5,118,250.00	93,003.48
01/16/20	NA	NA	06/30/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.125%	1.594%	4,966,406.25	4,973,112.35	5,055,850.00	82,737.65
07/26/19	NA	NA	07/19/21	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.875%	1.927%	4,995,000.00	4,996,933.70	5,004,500.00	97,566.30
12/12/19	One Time	05/27/20	08/27/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.750%	1.712%	5,003,200.00	5,002,469.90	5,005,700.00	3,230.10
08/01/19	NA	NA	08/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.125%	1.816%	4,929,687.50	4,955,003.70	5,062,900.00	107,896.30
10/11/19	NA	NA	10/15/21	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	2.875%	1.540%	5,131,640.63	5,095,282.74	5,196,900.00	101,617.26
10/22/19	NA	NA	10/15/21	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.400%	1.642%	4,976,500.00	4,982,732.04	5,081,050.00	98,317.96
11/05/19	NA	NA	11/15/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.875%	1.610%	5,125,585.94	5,095,418.20	5,204,500.00	109,081.80
11/08/19	NA	NA	11/30/21	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	1.750%	1.680%	5,007,031.25	5,005,397.16	5,121,500.00	116,102.84
04/23/20	NA	NA	12/20/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.625%	0.309%	10,217,480.00	10,214,967.85	10,222,900.00	7,932.15
11/25/19	NA	NA	12/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.000%	1.619%	5,039,062.50	5,031,015.73	5,148,850.00	117,834.27
11/25/19	NA	NA	01/13/22	Aaa/NA/NR	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.375%	1.635%	5,077,250.00	5,061,601.92	5,177,350.00	115,748.08
03/08/19	NA	NA	01/15/22	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	2.500%	2.460%	5,005,468.75	5,003,268.68	5,195,100.00	191,831.32
01/15/20	One Time	7/10/20	01/10/22	Aaa/NA/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.625%	1.625%	5,000,000.00	5,000,000.00	5,012,450.00	12,450.00
12/19/19	NA	NA	01/31/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.875%	1.641%	5,024,218.75	5,020,025.84	5,145,700.00	125,674.16
03/21/19	NA	NA	02/03/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.030%	2.361%	4,974,530.00	4,972,044.81	5,150,800.00	178,755.19
12/19/19	NA	NA	02/15/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.500%	1.652%	5,089,453.13	5,074,260.84	5,204,900.00	130,639.16
03/08/19	NA	NA	03/11/22	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.500%	2.549%	5,002,750.00	5,001,699.04	5,210,950.00	209,250.96
12/19/19	NA	NA	03/31/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.875%	1.645%	5,025,585.94	5,021,470.07	5,159,400.00	137,929.93
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	4,998,557.47	5,104,950.00	106,392.53
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	10,247,450.55	10,246,700.00	(750.55)

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

04/30/20

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE <sup>(1)</sup> 4/30/2020	UNREALIZED <sup>(2)</sup> GAIN/(LOSS)
04/27/20	Quarterly	10/27/20	04/27/22	NA/NA/NA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	0.550%	0.550%	10,000,000.00	10,000,000.00	10,000,900.00	900.00
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	5,000,662.01	5,135,400.00	134,737.99
04/24/20	NA	NA	10/21/22	Aaa/NR/NR	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.550%	0.555%	5,000,000.00	5,000,000.00	5,000,000.00	
<b>TOTAL INVESTMENTS</b>							<u>\$369,050,000</u>			<u>\$369,094,062.79</u>	<u>\$369,567,579.01</u>	<u>\$374,208,655.53</u>	<u>\$4,641,076.52</u>
Petty Cash											3,400.00		
Ck Balance							Bank of America				1,645,796.00		
										<u>\$370,743,258.79</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	\$260,600,000
Net Outstanding Variable Rate Debt (Less \$60 million fixed-payer swaps)	\$200,600,000
Investment Balance:	\$370,743,259
Investment to Variable Rate Debt Ratio:	185%
Portfolio - Average Number of Days To Maturity	326

	Investment Portfolio	Real Estate <sup>(3)</sup> Portfolio	Weighted Avg. Return
April	1.77%	9.03%	4.02%
March	1.96%	9.03%	4.18%
Change	-0.19%		-0.16%

This Investment Summary Report is in conformity with the 2020 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.  
\*S - Step up

IRVINE RANCH WATER DISTRICT  
SUMMARY OF MATURITIES

04/30/20

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Municipal Bonds	US Treasury
04/20	\$68,500,000	18.56%	\$68,500,000				
05/20	10,000,000	2.71%		10,000,000			
06/20	10,000,000	2.71%		10,000,000			
07/20	10,000,000	2.71%		10,000,000			
08/20	10,000,000	2.71%		10,000,000			
09/20	15,000,000	4.06%		10,000,000	5,000,000		
10/20	15,550,000	4.21%		5,550,000	5,000,000		5,000,000
11/20	12,000,000	3.25%		5,000,000	7,000,000		
12/20	10,000,000	2.71%		5,000,000			5,000,000
01/21	15,000,000	4.06%			5,000,000		10,000,000
02/21	10,000,000	2.71%		5,000,000			5,000,000
03/21	20,000,000	5.42%		20,000,000			
<b>SUB-TOTAL</b>	<b>\$206,050,000</b>	<b>55.83%</b>	<b>\$68,500,000</b>	<b>\$90,550,000</b>	<b>\$22,000,000</b>		<b>\$25,000,000</b>
<b>13 Months - 3 YEARS</b>							
04/01/2021 - 05/31/2021	28,000,000	7.59%		8,000,000			20,000,000
06/30/2021 - 08/31/2021	25,000,000	6.77%		15,000,000			10,000,000
09/01/2021 - 11/30/2021	20,000,000	5.42%		5,000,000			15,000,000
12/01/2021 - 02/28/2022	45,000,000	12.19%		25,000,000			20,000,000
03/01/2022 - 05/31/2022	35,000,000	9.48%		30,000,000			5,000,000
06/01/2022- 08/31/2022	5,000,000	1.35%		5,000,000			
09/01/2022 +	5,000,000	1.35%		5,000,000			
	-						
	-						
<b>TOTALS</b>	<b>\$369,050,000</b>	<b>100.00%</b>	<b>\$68,500,000</b>	<b>\$183,550,000</b>	<b>\$22,000,000</b>		<b>\$95,000,000</b>

% OF PORTFOLIO

18.56%

49.74%

5.96%

25.74%

Irvine Ranch Water District  
Summary of Real Estate - Income Producing Investments  
3/31/2020

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	MARKET VALUE 3/31/2020	ANNUALIZED RATE OF RETURN QUARTER ENDED 3/31/2020
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 148,625,000	19.73%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 28,710,327	8.30%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 11,730,000	10.20%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 9,180,000	5.88%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 11,220,000	9.30%
<b>Total - Income Properties</b>				<b>\$ 72,569,826</b>	<b>\$ 209,465,327</b>	<b>15.14%</b>
<b>OTHER REAL ESTATE DESCRIPTION</b>						
Serrano Summit - Promissory Note	Sep-17	NA	NA	\$ 88,128,000	\$ 88,128,000	4.00%
<b>Total - Income Producing Real Estate Investments</b>				<b>\$ 160,697,826</b>	<b>\$ 297,593,327</b>	<b>9.03%</b>

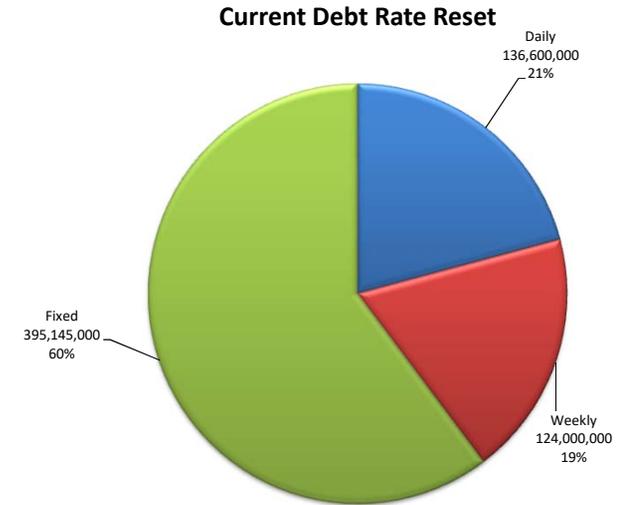
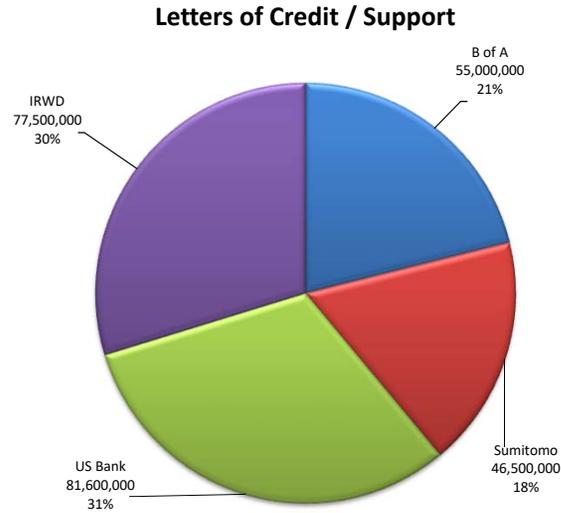
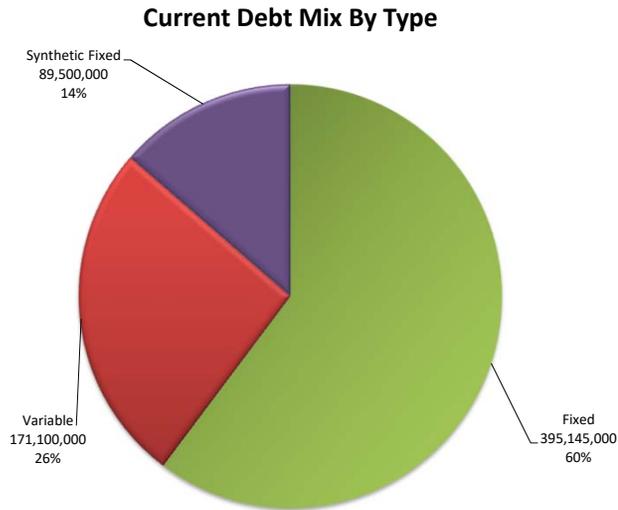
**IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT**  
**INVESTMENT ACTIVITY**  
**Apr-20**

**MATURITIES/SALES/CALLS**

**PURCHASES**

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
4/20/2020	FHLMC - Note	\$5,000,000	1.63%	4/23/2020	12/21/2020	FHLB - Note	\$10,000,000	0.31%
4/23/2020	FHLMC - Note	\$5,000,000	2.54%	4/23/2020	4/22/2020	FFCB - Note	\$10,000,000	0.32%
4/24/2020	EASTWTR - Muni Bond	\$5,000,000	0.16%	4/24/2020	10/21/2022	FHLMC - Note	\$5,000,000	0.55%

Exhibit "B"  
**Irvine Ranch Water District**  
**Summary of Fixed and Variable Rate Debt**  
**April 2020**



**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	\$26,600,000	4.06%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$46,500,000	7.09%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$46,500,000	7.09%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$31,000,000	4.73%	IRWD	Goldman	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$55,000,000	8.39%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$55,000,000	8.39%	B of A	Goldman	Variable	Daily
2016 COPS	09/01/16	03/01/46	\$116,745,000	17.80%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	26.69%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	15.77%	N/A	N/A	Fixed	Fixed
<b>Total</b>			<b>\$655,745,000</b>	<b>100.00%</b>				

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

April-20

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION										TRUSTEE INFORMATION									
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODYS	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee						
SERIES 1993	05/19/93	04/01/33	Apr 1	5th Bus. Day	\$38,300,000	\$26,600,000	US BANK	05/07/15	12/15/21	Aa3/VMIG1	AA-/A-1+	N/R	\$26,958,553	0.3300%	\$88,963	BAML	DAILY	0.10%	\$26,600	BANK OF NY						
SERIES 2008-A Refunding	04/24/08	07/01/35	Jul 1	5th Bus. Day	\$60,215,000	\$46,500,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/F1	\$47,187,945	0.3150%	\$148,642	BAML	WED	0.07%	\$32,550	BANK OF NY						
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$60,545,000	\$46,500,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$58,125	BANK OF NY						
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$40,370,000	\$31,000,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$38,750	BANK OF NY						
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$55,000,000	US BANK	04/01/11	12/15/21	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$55,614,795	0.3300%	\$183,529	US Bank	DAILY	0.07%	\$38,500	US BANK						
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$55,000,000	B of A	04/01/11	05/16/22	Aa2/VMIG 1	A/A-1	A1/F1+	\$55,614,795	0.3000%	\$166,844	Goldman	DAILY	0.10%	\$55,000	US BANK						
					<b>\$349,430,000</b>	<b>\$260,600,000</b>	<b>SUB-TOTAL VARIABLE RATE DEBT</b>										<b>\$185,376,088</b>		<b>0.3172%</b>		<b>\$587,978</b>		<b>0.10%</b>		<b>\$249,525</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 (2021)	Mar/Sept	\$116,745,000	\$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK						
SERIES 2016	10/12/16	02/01/46	Feb (2022)	Feb/Aug	\$103,400,000	\$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY						
					<b>\$395,145,000</b>	<b>\$395,145,000</b>	<b>SUB-TOTAL FIXED RATE DEBT</b>																			
					<b>\$744,575,000</b>	<b>\$655,745,000</b>	<b>TOTAL- FIXED &amp; VARIABLE RATE DEBT</b>																			

Remarketing Agents			GO VS COP's		
Goldman	132,500,000	51%	GO:	539,000,000	82%
BAML	73,100,000	28%	COPS:	116,745,000	18%
US Bank	55,000,000	21%	Total	<u>655,745,000</u>	
	<u>260,600,000</u>				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	46,500,000	Daily Issues	136,600,000 21%
BANK OF AMERICA	55,000,000	Weekly Issues	46,500,000 7%
US BANK	81,600,000	ITN Issues	77,500,000 12%
	<u>183,100,000</u>	Sub-Total	<u>260,600,000</u>
		Fixed Rate Issues	\$395,145,000 60%
		Sub-Total - Fixed	<u>395,145,000</u>
		TOTAL DEBT	
		FIXED & VAR.	<u>655,745,000</u> 100%

IRVINE RANCH WATER DISTRICT  
SUMMARY OF DEBT RATES  
Apr-20

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	55,000,000	46,500,000	31,000,000	26,600,000	46,500,000	55,000,000
Bank	BOFA	(SIFMA -6)	(SIFMA -6)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday		Wednesday	
4/1/2020	0.45%	4.65%	4.65%	0.33%	4.67%	0.50%
4/2/2020	0.32%	1.77%	1.77%	0.28%	1.77%	0.40%
4/3/2020	0.23%	1.77%	1.77%	0.24%	1.77%	0.35%
4/4/2020	0.23%	1.77%	1.77%	0.24%	1.77%	0.35%
4/5/2020	0.23%	1.77%	1.77%	0.24%	1.77%	0.35%
4/6/2020	0.21%	1.77%	1.77%	0.19%		0.30%
4/7/2020	0.18%	1.77%	1.77%	0.13%	1.77%	0.20%
4/8/2020	0.11%	1.77%	1.77%	0.10%	1.77%	0.16%
4/9/2020	0.07%	0.68%	0.68%	0.07%	0.48%	0.13%
4/10/2020	0.07%	0.68%	0.68%	0.07%	0.48%	0.13%
4/11/2020	0.07%	0.68%	0.68%	0.07%	0.48%	0.13%
4/12/2020	0.07%	0.68%	0.68%	0.07%	0.48%	0.13%
4/13/2020	0.04%	0.68%	0.68%	0.05%	0.48%	0.09%
4/14/2020	0.03%	0.68%	0.68%	0.03%	0.48%	0.05%
4/15/2020	0.02%	0.68%	0.68%	0.02%	0.48%	0.05%
4/16/2020	0.02%	0.30%	0.30%	0.02%	0.21%	0.03%
4/17/2020	0.01%	0.30%	0.30%	0.01%	0.21%	0.03%
4/18/2020	0.01%	0.30%	0.30%	0.01%	0.21%	0.03%
4/19/2020	0.01%	0.30%	0.30%	0.01%	0.21%	0.03%
4/20/2020	0.01%	0.30%	0.30%	0.01%	0.21%	0.02%
4/21/2020	0.01%	0.30%	0.30%	0.02%	0.21%	0.02%
4/22/2020	0.01%	0.30%	0.30%	0.02%	0.21%	0.02%
4/23/2020	0.01%	0.15%	0.15%	0.02%	0.16%	0.02%
4/24/2020	0.03%	0.15%	0.15%	0.01%	0.16%	0.02%
4/25/2020	0.03%	0.15%	0.15%	0.01%	0.16%	0.02%
4/26/2020	0.03%	0.15%	0.15%	0.01%	0.16%	0.02%
4/27/2020	0.04%	0.15%	0.15%	0.06%	0.16%	0.05%
4/28/2020	0.06%	0.15%	0.15%	0.06%	0.16%	0.06%
4/29/2020	0.07%	0.15%	0.15%	0.07%	0.16%	0.08%
4/30/2020	0.10%	0.16%	0.16%	0.07%	0.21%	0.10%
Avg Interest Rates	0.09%	0.84%	0.84%	0.08%	0.74%	0.13%
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.30%			0.33%	0.32%	0.33%
<b>All-In Rate</b>	<b>0.49%</b>	<b>0.96%</b>	<b>0.96%</b>	<b>0.51%</b>	<b>1.12%</b>	<b>0.53%</b>
Par Amount	101,500,000		31,000,000	73,100,000		55,000,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	52.42%	136,600,000	0.51%	0.11%
Weekly	47.58%	124,000,000	1.02%	0.80%
	100.00%	<b>\$ 260,600,000</b>	0.75%	0.44%
<b>Fixed</b>				
COPS 2016	29.54%	116,745,000	2.90%	
BABS 2010	44.29%	175,000,000	4.44%	(1)
SERIES 2016	26.17%	103,400,000	3.32%	
	100.00%	<b>\$ 395,145,000</b>	3.69%	
<b>All-In Debt Rate Including \$60 Million Notional Amount of Swaps</b>				<b>2.83%</b>

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 5.9%

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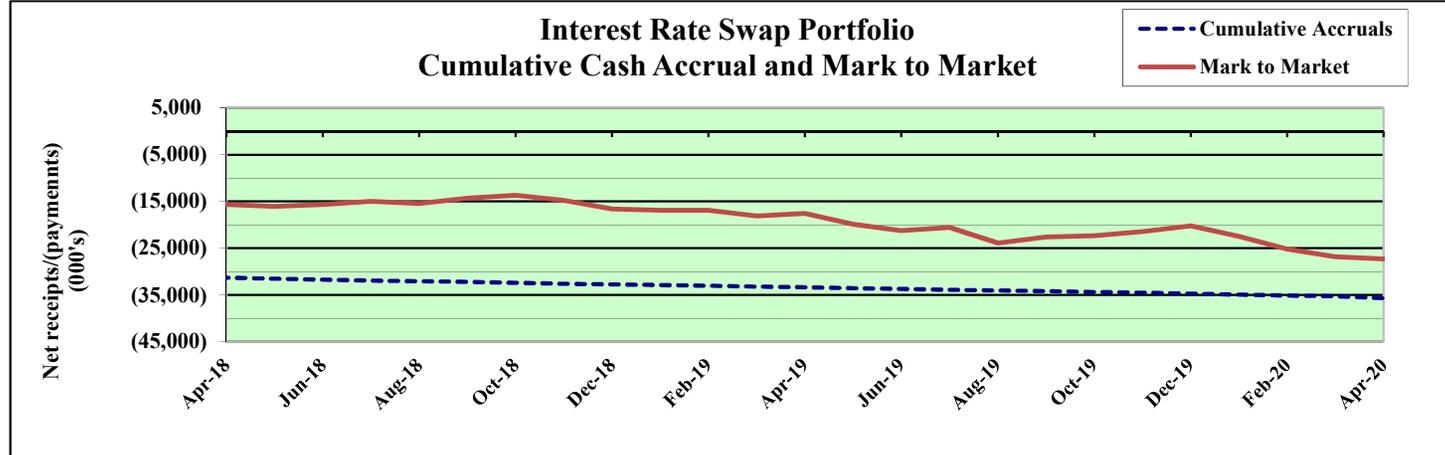
**IRVINE RANCH WATER DISTRICT  
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL  
April 30, 2020**

<b>LIBOR Avg %</b>	<b>Prior Mo.</b>	<b>Current Mo.</b>	<b>12-Mo Avg</b>
	0.98%	0.68%	1.69%

Current Fiscal Year Active Swaps								Cash Flow				(Since 3/07)	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	
<b>Fixed Payer Swaps - By Effective Date</b>														
3/10/2007	3/10/2029	8.9	ML	30,000,000	FXP	LIBOR	5.687%	(84,426)	(200,859)	(995,069)	(17,840,796)	16,362,618	(13,637,382)	
3/10/2007	3/10/2029	8.9	CG	30,000,000	FXP	LIBOR	5.687%	(84,426)	(200,859)	(995,069)	(17,840,796)	16,364,107	(13,635,893)	
<b>Totals/Weighted Avgs</b>		8.9		\$ 60,000,000			5.687%	\$ (168,852)	\$ (401,718)	\$ (1,990,138)	\$ (35,681,591)	\$ 32,726,725	\$ (27,273,275)	
<b>Total Current Year Active Swaps</b>				\$ 60,000,000				\$ (168,852)	\$ (401,718)	\$ (1,990,138)	\$ (35,681,591)	\$ 32,726,725	\$ (27,273,275)	

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
<b>Total Current Year Terminated Swaps</b>								\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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
<b>Total Current Year Active &amp; Terminated Swaps</b>				\$ 60,000,000				\$ (168,852)	\$ (401,718)	\$ (1,990,138)	\$ (35,681,591)	\$ 32,726,725	\$ (27,273,275)



Cash Flow Comparison Synthetic Fixed vs. Fixed Rate Debt	
	<u>Cash Flow to Date</u>
Synthetic Fixed =	\$50,386,095
Fixed Rate =	\$59,724,129
<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	

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**Exhibit "D"**  
**IRVINE RANCH WATER DISTRICT**  
**AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
407457	Compton, Christine A	2-Apr-20	24.15	IRWD Check	Negotiable
407458	Hall, William P (William)	2-Apr-20	288.00	IRWD Check	Reconciled
407459	Ho, Connie	2-Apr-20	11.39	IRWD Check	Reconciled
407460	Nash, Joel	2-Apr-20	41.40	IRWD Check	Reconciled
407461	ACCURATE MEASUREMENT SYSTEMS INC	2-Apr-20	1,155.27	IRWD Check	Reconciled
407462	AFLAC	2-Apr-20	148.74	IRWD Check	Reconciled
407463	AFLAC	2-Apr-20	6,787.10	IRWD Check	Reconciled
407464	AIRGAS, INC.	2-Apr-20	12,763.79	IRWD Check	Reconciled
407465	AMAZON CAPITAL SERVICES, INC.	2-Apr-20	1,584.95	IRWD Check	Reconciled
407466	APEX SYSTEMS, LLC	2-Apr-20	4,160.00	IRWD Check	Reconciled
407467	AT&T	2-Apr-20	56.85	IRWD Check	Reconciled
407468	AT&T	2-Apr-20	172.67	IRWD Check	Reconciled
407469	AT&T	2-Apr-20	173.55	IRWD Check	Reconciled
407470	AT&T	2-Apr-20	4,075.08	IRWD Check	Reconciled
407471	AUTOZONE PARTS, INC.	2-Apr-20	12.91	IRWD Check	Reconciled
407472	BLOOMBERG FINANCE LP	2-Apr-20	13,305.00	IRWD Check	Reconciled
407473	BORCHARD SURVEYING & MAPPING, INC.	2-Apr-20	4,180.00	IRWD Check	Reconciled
407474	BRIAN HOMSY	2-Apr-20	395.60	IRWD Check	Reconciled
407475	BSI SERVICES AND SOLUTIONS (WEST) INC.	2-Apr-20	30,518.79	IRWD Check	Reconciled
407476	BURKE, WILLIAMS & SORENSEN, LLP	2-Apr-20	422.50	IRWD Check	Reconciled
407477	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC	2-Apr-20	301.00	IRWD Check	Reconciled
407478	C WELLS PIPELINE MATERIALS INC	2-Apr-20	4,206.56	IRWD Check	Reconciled
407479	CANON SOLUTIONS AMERICA, INC.	2-Apr-20	13.89	IRWD Check	Reconciled
407480	CAPTIVE AUDIENCE MARKETING INC.	2-Apr-20	237.00	IRWD Check	Reconciled
407481	CART MART INC.	2-Apr-20	196.16	IRWD Check	Reconciled
407482	CASHEL CORPORATION	2-Apr-20	7,902.18	IRWD Check	Reconciled
407483	CEM CORPORATION	2-Apr-20	3,946.39	IRWD Check	Reconciled
407484	CHARLES P CROWLEY COMPANY INC	2-Apr-20	10,488.43	IRWD Check	Reconciled
407485	CITY OF IRVINE	2-Apr-20	4,681.25	IRWD Check	Reconciled
407486	CITY OF NEWPORT BEACH	2-Apr-20	1,827.15	IRWD Check	Reconciled
407487	CLARIS STRATEGY INC.	2-Apr-20	10,190.00	IRWD Check	Reconciled
407488	COMPUTER AIDED SOLUTIONS LLC	2-Apr-20	1,890.00	IRWD Check	Reconciled
407489	CONSTELLATION NEWENERGY, INC.	2-Apr-20	13,534.20	IRWD Check	Reconciled
407490	COX COMMUNICATIONS, INC.	2-Apr-20	244.62	IRWD Check	Reconciled
407491	DAN'S MACHINE TOOL, INC.	2-Apr-20	3,181.52	IRWD Check	Reconciled
407492	DEMARIA ELECTRIC MOTOR SERVICES, INC.	2-Apr-20	9,912.96	IRWD Check	Reconciled
407493	DG INVESTMENT INTERMEDIATE HOLDINGS 2, INC.	2-Apr-20	47,300.81	IRWD Check	Reconciled
407494	DIRECTV INC	2-Apr-20	139.54	IRWD Check	Reconciled
407495	DRONE NERDS INC	2-Apr-20	19,293.25	IRWD Check	Reconciled
407496	ELITE EQUIPMENT, INC.	2-Apr-20	825.35	IRWD Check	Reconciled
407497	ENDRESS AND HAUSER INC	2-Apr-20	1,147.88	IRWD Check	Reconciled
407498	ENVIRONMENTAL RESOURCE ASSOCIATES	2-Apr-20	317.77	IRWD Check	Reconciled
407499	ENVIRONMENTAL SCIENCE ASSOCIATES	2-Apr-20	3,251.50	IRWD Check	Reconciled
407500	EUROFINS CALSCIENCE, LLC	2-Apr-20	714.00	IRWD Check	Reconciled
407501	EUROFINS EATON ANALYTICAL, INC.	2-Apr-20	600.00	IRWD Check	Reconciled
407502	FERGUSON ENTERPRISES, LLC	2-Apr-20	5,737.69	IRWD Check	Reconciled
407503	FISHER SCIENTIFIC COMPANY LLC	2-Apr-20	4,752.23	IRWD Check	Reconciled
407504	FRONTIER CALIFORNIA INC.	2-Apr-20	289.05	IRWD Check	Reconciled
407505	FUSCOE ENGINEERING, INC.	2-Apr-20	20,068.00	IRWD Check	Reconciled
407506	GEI CONSULTANTS INC	2-Apr-20	20,052.28	IRWD Check	Reconciled
407507	GEIGER BROS	2-Apr-20	2,009.40	IRWD Check	Reconciled
407508	GENERAL MONITORS INC.	2-Apr-20	1,710.00	IRWD Check	Reconciled
407509	GEORGE YARDLEY CO., INC.	2-Apr-20	500.00	IRWD Check	Reconciled
407510	GRAINGER	2-Apr-20	2,656.94	IRWD Check	Reconciled
407511	GRAYBAR ELECTRIC COMPANY	2-Apr-20	3,695.00	IRWD Check	Reconciled
407512	HAAKER EQUIPMENT COMPANY	2-Apr-20	588.32	IRWD Check	Reconciled
407513	HACH COMPANY	2-Apr-20	7,663.36	IRWD Check	Reconciled
407514	HAMILTON, KURT	2-Apr-20	311.22	IRWD Check	Reconciled
407515	HAZEN AND SAWYER	2-Apr-20	12,427.50	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
407516	HDR ENGINEERING INC	2-Apr-20	47,620.20	IRWD Check	Reconciled
407517	HELPMATES STAFFING SERVICES	2-Apr-20	12,427.88	IRWD Check	Reconciled
407518	HI-LINE INC	2-Apr-20	594.22	IRWD Check	Reconciled
407519	HILL BROTHERS CHEMICAL COMPANY	2-Apr-20	12,040.79	IRWD Check	Reconciled
407520	IDEA HALL	2-Apr-20	2,500.00	IRWD Check	Reconciled
407521	ILAND INTERNET SOLUTION CORPORATION	2-Apr-20	9,804.00	IRWD Check	Reconciled
407522	INDUSTRIAL METAL SUPPLY CO	2-Apr-20	60.73	IRWD Check	Reconciled
407523	IRVINE PIPE & SUPPLY INC	2-Apr-20	51.85	IRWD Check	Reconciled
407524	JCI JONES CHEMICALS INC	2-Apr-20	11,464.04	IRWD Check	Reconciled
407525	KLEINFELDER, INC.	2-Apr-20	17,077.45	IRWD Check	Reconciled
407526	LA HABRA FENCE COMPANY INC	2-Apr-20	9,201.00	IRWD Check	Reconciled
407527	LABWORKS, LLC	2-Apr-20	4,450.00	IRWD Check	Reconciled
407528	LAGUNA BEACH COUNTY WATER DISTRICT	2-Apr-20	3,095.06	IRWD Check	Reconciled
407529	LANDCARE HOLDINGS, INC.	2-Apr-20	76,411.76	IRWD Check	Reconciled
407530	MC FADDEN-DALE INDUSTRIAL	2-Apr-20	42.28	IRWD Check	Reconciled
407531	MICHAEL BAKER INTERNATIONAL, INC.	2-Apr-20	6,162.69	IRWD Check	Reconciled
407532	NATURES IMAGE INC	2-Apr-20	12,829.00	IRWD Check	Reconciled
407533	NEPTUNE TECHNOLOGY GROUP, INC.	2-Apr-20	69,337.13	IRWD Check	Reconciled
407534	NMG GEOTECHNICAL INC	2-Apr-20	5,740.00	IRWD Check	Reconciled
407535	OLIN CORPORATION	2-Apr-20	21,411.70	IRWD Check	Reconciled
407536	ORANGE COUNTY AUTO PARTS CO	2-Apr-20	2,134.71	IRWD Check	Reconciled
407537	PALL CORPORATION	2-Apr-20	5,976.06	IRWD Check	Reconciled
407538	PARKHOUSE TIRE INC	2-Apr-20	968.94	IRWD Check	Reconciled
407539	PETRUSSE-NORRIS PAINTING, INC.	2-Apr-20	5,700.00	IRWD Check	Reconciled
407540	PIVOT INTERIORS INC	2-Apr-20	802.85	IRWD Check	Reconciled
407541	PRAXAIR DISTRIBUTION INC	2-Apr-20	440.20	IRWD Check	Reconciled
407542	PYRO-COMM SYSTEMS INC	2-Apr-20	390.00	IRWD Check	Reconciled
407543	QUICK CRETE PRODUCTS CORP.	2-Apr-20	13,606.67	IRWD Check	Reconciled
407544	R&L WATKINS, INC.	2-Apr-20	8,562.50	IRWD Check	Reconciled
407545	RAM AIR ENGINEERING INC	2-Apr-20	6,195.00	IRWD Check	Reconciled
407546	REACH EMPLOYEE ASSISTANCE INC	2-Apr-20	1,064.00	IRWD Check	Reconciled
407547	RESILIENT COMMUNICATIONS INC.	2-Apr-20	15,156.42	IRWD Check	Reconciled
407548	RESTEK CORPORATION	2-Apr-20	136.76	IRWD Check	Reconciled
407549	ROBERTS ROOFING INC	2-Apr-20	23,026.50	IRWD Check	Reconciled
407550	ROSE PAVING LLC	2-Apr-20	1,250.00	IRWD Check	Reconciled
407551	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT	2-Apr-20	22,887.27	IRWD Check	Reconciled
407552	SCHINDLER ELEVATOR CORPORATION	2-Apr-20	3,509.00	IRWD Check	Reconciled
407553	SHAMROCK SUPPLY CO INC	2-Apr-20	4,643.56	IRWD Check	Reconciled
407554	SOUTH COAST WATER DISTRICT	2-Apr-20	931.00	IRWD Check	Reconciled
407555	SOUTHERN CALIFORNIA EDISON COMPANY	2-Apr-20	214,126.07	IRWD Check	Reconciled
407556	SOUTHERN CALIFORNIA EDISON COMPANY	2-Apr-20	71.91	IRWD Check	Reconciled
407557	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	2-Apr-20	148.94	IRWD Check	Reconciled
407558	SOUTHWEST VALVE & EQUIPMENT	2-Apr-20	9,409.22	IRWD Check	Reconciled
407559	SPARKLETTS	2-Apr-20	406.22	IRWD Check	Reconciled
407560	STANTEC CONSULTING SERVICES INC.	2-Apr-20	5,512.50	IRWD Check	Reconciled
407561	STETSON ENGINEERS INC.	2-Apr-20	5,167.45	IRWD Check	Reconciled
407562	SUMMIT CHEMICAL SPECIALTY PRODUCTS	2-Apr-20	12,240.27	IRWD Check	Reconciled
407563	TOTAL RESOURCE MANAGEMENT, INC.	2-Apr-20	3,495.96	IRWD Check	Reconciled
407564	UNITED PARCEL SERVICE INC	2-Apr-20	124.00	IRWD Check	Reconciled
407565	UNITED SITE SERVICES OF CALIFORNIA INC	2-Apr-20	320.57	IRWD Check	Reconciled
407566	V&A CONSULTING ENGINEERS	2-Apr-20	1,912.00	IRWD Check	Reconciled
407567	VERIZON WIRELESS SERVICES LLC	2-Apr-20	8,972.22	IRWD Check	Reconciled
407568	WAXIE'S ENTERPRISES, INC	2-Apr-20	1,936.08	IRWD Check	Reconciled
407569	WECK LABORATORIES INC	2-Apr-20	3,207.00	IRWD Check	Reconciled
407570	WESTERN AV	2-Apr-20	839.44	IRWD Check	Reconciled
407571	WIRELESS WATCHDOGS, LLC	2-Apr-20	1,336.00	IRWD Check	Reconciled
407572	YORKE ENGINEERING, LLC	2-Apr-20	20,660.65	IRWD Check	Reconciled
407573	Guzman, Brenda	2-Apr-20	174.55	IRWD Check	Reconciled
407574	T.E. ROBERTS, INC	2-Apr-20	140,205.75	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
407575	SANCON TECHNOLOGIES, INC.	2-Apr-20	43,565.57	IRWD Check	Reconciled
407576	KPRS CONSTRUCTION SERVICES, INC.	2-Apr-20	1,411,645.68	IRWD Check	Reconciled
407577	SS MECHANICAL CONSTRUCTION CORP	2-Apr-20	55,823.77	IRWD Check	Reconciled
407578	Borowski, Michael (Mike)	9-Apr-20	244.00	IRWD Check	Reconciled
407579	Clary, Cheryl L	9-Apr-20	46.73	IRWD Check	Negotiable
407580	Cotton, Derrien	9-Apr-20	165.17	IRWD Check	Reconciled
407581	Hufana, Mr. Eugenio D II (Gino)	9-Apr-20	184.58	IRWD Check	Reconciled
407582	Perez, Rodolfo (Rudy)	9-Apr-20	94.00	IRWD Check	Negotiable
407583	Prewoznik, Frank	9-Apr-20	349.68	IRWD Check	Reconciled
407584	Reyes, Jennifer Russell	9-Apr-20	288.00	IRWD Check	Reconciled
407585	Weghorst, Paul A (Paul)	9-Apr-20	46.50	IRWD Check	Reconciled
407586	ACCUSOURCE, INC.	9-Apr-20	63.25	IRWD Check	Reconciled
407587	ADS LLC	9-Apr-20	2,250.00	IRWD Check	Reconciled
407588	AECOM TECHNICAL SERVICES, INC.	9-Apr-20	8,873.85	IRWD Check	Reconciled
407589	AIRGAS, INC.	9-Apr-20	620.64	IRWD Check	Reconciled
407590	ANTHONY N. LARSEN	9-Apr-20	225.00	IRWD Check	Negotiable
407591	APEX SYSTEMS, LLC	9-Apr-20	4,160.00	IRWD Check	Reconciled
407592	AT&T	9-Apr-20	1,096.92	IRWD Check	Reconciled
407593	AUTOZONE PARTS, INC.	9-Apr-20	49.89	IRWD Check	Reconciled
407594	AVISTA TECHNOLOGIES, INC	9-Apr-20	17,510.44	IRWD Check	Reconciled
407595	BARTEL ASSOCIATES, LLC	9-Apr-20	3,200.00	IRWD Check	Reconciled
407596	BIOENERGY ASSOCIATION OF CALIFORNIA	9-Apr-20	1,000.00	IRWD Check	Reconciled
407597	BRENNTAG PACIFIC INC	9-Apr-20	24,786.23	IRWD Check	Reconciled
407598	BURBAN, MARK	9-Apr-20	59.04	IRWD Check	Reconciled
407599	BURDICK, WENDY	9-Apr-20	7.47	IRWD Check	Reconciled
407600	C WELLS PIPELINE MATERIALS INC	9-Apr-20	13,407.77	IRWD Check	Reconciled
407601	CALIFORNIA BARRICADE RENTAL, INC.	9-Apr-20	7,603.22	IRWD Check	Reconciled
407602	CHEM TECH INTERNATIONAL INC	9-Apr-20	5,630.40	IRWD Check	Reconciled
407603	CITY OF TUSTIN	9-Apr-20	301.47	IRWD Check	Reconciled
407604	CLARIS STRATEGY INC.	9-Apr-20	9,205.50	IRWD Check	Reconciled
407605	CONSTELLATION NEWENERGY, INC.	9-Apr-20	68,823.81	IRWD Check	Reconciled
407606	COX COMMUNICATIONS, INC.	9-Apr-20	270.13	IRWD Check	Reconciled
407607	DEVELOPMENT AND CONSERVATION MANAGEMENT, INC.	9-Apr-20	1,000.00	IRWD Check	Reconciled
407608	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY	9-Apr-20	5,229.00	IRWD Check	Reconciled
407609	DRONE NERDS INC	9-Apr-20	3,608.55	IRWD Check	Reconciled
407610	EI&C ENGINEERING INC.	9-Apr-20	47,766.00	IRWD Check	Reconciled
407611	ENVIRONMENTAL EQUIPMENT SUPPLY	9-Apr-20	1,013.93	IRWD Check	Reconciled
407612	ENVIRONMENTAL RESOURCE ASSOCIATES	9-Apr-20	484.11	IRWD Check	Reconciled
407613	ENVIRONMENTAL SCIENCE ASSOCIATES	9-Apr-20	21,291.83	IRWD Check	Reconciled
407614	EUGENIO H. NEARNS	9-Apr-20	12,350.00	IRWD Check	Reconciled
407615	EUROFINS CALSCIENCE, LLC	9-Apr-20	7,057.05	IRWD Check	Reconciled
407616	EXECUTIVE LIGHTING & ELECTRIC	9-Apr-20	2,281.53	IRWD Check	Reconciled
407617	FAIRWAY IMPORT-EXPORT, INC.	9-Apr-20	3,733.54	IRWD Check	Reconciled
407618	FEDEX	9-Apr-20	182.15	IRWD Check	Reconciled
407619	FISERV	9-Apr-20	289.85	IRWD Check	Reconciled
407620	FLEET SOLUTIONS LLC	9-Apr-20	5,593.44	IRWD Check	Reconciled
407621	FOUGHT, CYNTHIA J.	9-Apr-20	2,601.23	IRWD Check	Reconciled
407622	FRANCHISE TAX BOARD	9-Apr-20	230.62	IRWD Check	Negotiable
407623	GAN, SHAN	9-Apr-20	1,031.86	IRWD Check	Reconciled
407624	GEIGER BROS	9-Apr-20	576.92	IRWD Check	Reconciled
407625	GENERAL MONITORS INC.	9-Apr-20	305.00	IRWD Check	Reconciled
407626	GRAINGER	9-Apr-20	5,060.37	IRWD Check	Reconciled
407627	HAAKER EQUIPMENT COMPANY	9-Apr-20	990.37	IRWD Check	Reconciled
407628	HAMILL, KAREN	9-Apr-20	507.40	IRWD Check	Reconciled
407629	HARRINGTON INDUSTRIAL PLASTICS LLC	9-Apr-20	37,373.13	IRWD Check	Reconciled
407630	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	9-Apr-20	72.30	IRWD Check	Reconciled
407631	HDR ENGINEERING INC	9-Apr-20	57,476.27	IRWD Check	Reconciled
407632	HELPMATES STAFFING SERVICES	9-Apr-20	14,801.47	IRWD Check	Reconciled
407633	HERITAGE FIELDS EL TORO, LLC	9-Apr-20	188.46	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT  
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<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
407634	HI-LINE INC	9-Apr-20	1,202.07	IRWD Check	Reconciled
407635	HILL BROTHERS CHEMICAL COMPANY	9-Apr-20	2,799.08	IRWD Check	Reconciled
407636	HOLTE, SUZI	9-Apr-20	59.06	IRWD Check	Reconciled
407637	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	9-Apr-20	2,753.23	IRWD Check	Reconciled
407638	IRON MOUNTAIN INFORMATION MANAGEMENT INC	9-Apr-20	1,664.80	IRWD Check	Reconciled
407639	IRVINE GATEWAY DEVELOPMENT, LLC	9-Apr-20	200.65	IRWD Check	Negotiable
407640	IRVINE PIPE & SUPPLY INC	9-Apr-20	386.42	IRWD Check	Reconciled
407641	IRWD-PETTY CASH CUSTODIAN	9-Apr-20	614.18	IRWD Check	Reconciled
407642	JOHNSTONE SUPPLY SANTA ANA	9-Apr-20	1,138.54	IRWD Check	Reconciled
407643	JURADO, LUIS	9-Apr-20	54.99	IRWD Check	Reconciled
407644	KAYUGA SOLUTION INC	9-Apr-20	7,380.00	IRWD Check	Reconciled
407645	KENT DAHLBERG	9-Apr-20	20,485.00	IRWD Check	Reconciled
407646	KIM, SEAN	9-Apr-20	531.74	IRWD Check	Reconciled
407647	KLEINFELDER, INC.	9-Apr-20	6,520.50	IRWD Check	Reconciled
407648	KONA GRILL	9-Apr-20	93.39	IRWD Check	Reconciled
407649	LANDCARE HOLDINGS, INC.	9-Apr-20	5,918.95	IRWD Check	Reconciled
407650	LENNAR HOMES	9-Apr-20	163.77	IRWD Check	Reconciled
407651	LSA ASSOCIATES INC	9-Apr-20	35,256.49	IRWD Check	Reconciled
407652	M5 TECHNOLOGIES LLC	9-Apr-20	4,509.34	IRWD Check	Reconciled
407653	MA, CHENGYUN	9-Apr-20	36.13	IRWD Check	Negotiable
407654	MARK ENTERPRISES TECHNOLOGIES LLC	9-Apr-20	41,474.40	IRWD Check	Reconciled
407655	MARQUAND CONTRACTING CORP	9-Apr-20	41.79	IRWD Check	Reconciled
407656	MATHUR, AJAY	9-Apr-20	12.76	IRWD Check	Reconciled
407657	MC FADDEN-DALE INDUSTRIAL	9-Apr-20	11.80	IRWD Check	Reconciled
407658	MC MASTER CARR SUPPLY CO	9-Apr-20	21.08	IRWD Check	Reconciled
407659	MCR TECHNOLOGIES INC	9-Apr-20	4,598.43	IRWD Check	Reconciled
407660	MPULSE MOBILE, INC	9-Apr-20	68.90	IRWD Check	Reconciled
407661	MUNICIPAL UNDERGROUND SERVICES INC	9-Apr-20	7,700.00	IRWD Check	Reconciled
407662	O.C. SUPERIOR CUSTOM CLEANING	9-Apr-20	4,560.00	IRWD Check	Reconciled
407663	OFFICE DEPOT INC	9-Apr-20	888.04	IRWD Check	Reconciled
407664	OLIN CORPORATION	9-Apr-20	16,807.42	IRWD Check	Reconciled
407665	ORANGE COUNTY AUTO PARTS CO	9-Apr-20	344.63	IRWD Check	Reconciled
407666	ORANGE COUNTY SANITATION DISTRICT	9-Apr-20	154,959.44	IRWD Check	Reconciled
407667	ORANGE COUNTY SHERIFF'S OFFICE	9-Apr-20	169.65	IRWD Check	Reconciled
407668	PACIFIC RESOURCE RECOVERY	9-Apr-20	2,579.89	IRWD Check	Reconciled
407669	PARKHOUSE TIRE INC	9-Apr-20	6,630.40	IRWD Check	Reconciled
407670	PAYNE & FEARS LLP	9-Apr-20	2,480.50	IRWD Check	Reconciled
407671	PERS LONG TERM CARE	9-Apr-20	538.89	IRWD Check	Reconciled
407672	PLUMBERS DEPOT INC.	9-Apr-20	1,361.10	IRWD Check	Reconciled
407673	PRAXAIR DISTRIBUTION INC	9-Apr-20	2,262.28	IRWD Check	Reconciled
407674	PRE-PAID LEGAL SERVICES INC	9-Apr-20	1,154.06	IRWD Check	Reconciled
407675	RAM AIR ENGINEERING INC	9-Apr-20	4,766.84	IRWD Check	Reconciled
407676	RED WING SHOE STORE	9-Apr-20	2,097.00	IRWD Check	Reconciled
407677	RIVERROCK REAL ESTATE GROUP, INC.	9-Apr-20	6,000.00	IRWD Check	Reconciled
407678	ROBERTS ROOFING INC	9-Apr-20	31,826.50	IRWD Check	Reconciled
407679	RYAN HERCO PRODUCTS CORP	9-Apr-20	84.28	IRWD Check	Reconciled
407680	SALSMAN, SOSHANNA	9-Apr-20	32.28	IRWD Check	Negotiable
407681	SANTA ANA BLUE PRINT	9-Apr-20	123.74	IRWD Check	Reconciled
407682	SC HOMES, INC	9-Apr-20	252.47	IRWD Check	Reconciled
407683	SECURITAS SECURITY SERVICES USA, INC.	9-Apr-20	53,003.34	IRWD Check	Reconciled
407684	SEHGAL RAJKUMAR, VAIBHAV	9-Apr-20	818.49	IRWD Check	Reconciled
407685	SHAMROCK SUPPLY CO INC	9-Apr-20	214.36	IRWD Check	Reconciled
407686	SIEMENS INDUSTRY INC	9-Apr-20	1,013.93	IRWD Check	Reconciled
407687	SMITH, MARC	9-Apr-20	49.71	IRWD Check	Negotiable
407688	SOUTH COAST WATER CO.	9-Apr-20	90.00	IRWD Check	Reconciled
407689	SOUTH ORANGE COUNTY WASTEWATER AUTHORITY	9-Apr-20	20,326.00	IRWD Check	Reconciled
407690	SOUTHERN CALIFORNIA EDISON COMPANY	9-Apr-20	266,250.85	IRWD Check	Reconciled
407691	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	9-Apr-20	375.66	IRWD Check	Reconciled
407692	SOUTHERN COUNTIES LUBRICANTS LLC	9-Apr-20	4,675.74	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
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407693	SPARKLETTS	9-Apr-20	109.72	IRWD Check	Reconciled
407694	SPECIALIZED PRODUCTS COMPANY	9-Apr-20	302.15	IRWD Check	Reconciled
407695	STATE OF CALIFORNIA, EDD	9-Apr-20	75.00	IRWD Check	Reconciled
407696	STRADLING YOCCA CARLSON & RAUTH	9-Apr-20	84.00	IRWD Check	Reconciled
407697	SUSAN A. SIROTA	9-Apr-20	4,525.00	IRWD Check	Reconciled
407698	SWAINS ELECTRIC MOTOR SERVICE	9-Apr-20	17,459.41	IRWD Check	Reconciled
407699	TASSIN SCIENTIFIC SERVICES, LLC.	9-Apr-20	1,158.75	IRWD Check	Reconciled
407700	THYSSENKRUPP ELEVATOR CORPORATION	9-Apr-20	409.45	IRWD Check	Reconciled
407701	TREE OF LIFE NURSERY	9-Apr-20	2,045.63	IRWD Check	Reconciled
407702	TROPICAL PLAZA NURSERY INC	9-Apr-20	62,997.26	IRWD Check	Reconciled
407703	TURTLE ROCK CANYON APTS	9-Apr-20	42.78	IRWD Check	Negotiable
407704	U.S. GAIN - A DIVISION OF U.S. VENTURE, INC.	9-Apr-20	448.19	IRWD Check	Reconciled
407705	UNIVAR SOLUTIONS USA INC.	9-Apr-20	4,522.00	IRWD Check	Reconciled
407706	USA BLUEBOOK	9-Apr-20	691.74	IRWD Check	Reconciled
407707	USDA FOREST SERVICE	9-Apr-20	65.29	IRWD Check	Reconciled
407708	VALVO, DAN	9-Apr-20	421.86	IRWD Check	Negotiable
407709	VERIZON WIRELESS SERVICES LLC	9-Apr-20	6,679.10	IRWD Check	Reconciled
407710	VERTECH INDUSTRIAL SYSTEMS, LLC	9-Apr-20	1,512.27	IRWD Check	Reconciled
407711	VULCAN MATERIALS COMPANY	9-Apr-20	1,472.24	IRWD Check	Reconciled
407712	WASTE MANAGEMENT OF CALIFORNIA, INC.	9-Apr-20	3,094.04	IRWD Check	Reconciled
407713	WATERSMART SOFTWARE, INC	9-Apr-20	13,547.22	IRWD Check	Reconciled
407714	WAXIE'S ENTERPRISES, INC	9-Apr-20	720.22	IRWD Check	Reconciled
407715	WECK LABORATORIES INC	9-Apr-20	120.00	IRWD Check	Reconciled
407716	WEST YOST & ASSOCIATES	9-Apr-20	35,620.58	IRWD Check	Reconciled
407717	WILLIAM LYON HOMES, INC.	9-Apr-20	133.38	IRWD Check	Negotiable
407718	YP LLC	9-Apr-20	91.00	IRWD Check	Reconciled
407719	Chambers, Wendy	16-Apr-20	33.00	IRWD Check	Reconciled
407720	Parra, Dennis	16-Apr-20	367.00	IRWD Check	Reconciled
407721	Pfister, Ken D (Ken)	16-Apr-20	49.30	IRWD Check	Negotiable
407722	Reynoso, Pio (Pio)	16-Apr-20	291.00	IRWD Check	Negotiable
407723	Shinbashi, Allen	16-Apr-20	68.94	IRWD Check	Reconciled
407724	AAF INTERNATIONAL	16-Apr-20	1,106.52	IRWD Check	Reconciled
407725	ABC ICE, INC	16-Apr-20	205.46	IRWD Check	Negotiable
407726	AGILENT TECHNOLOGIES, INC.	16-Apr-20	659.89	IRWD Check	Reconciled
407727	AIR TECHNOLOGY LABORATORIES	16-Apr-20	289.00	IRWD Check	Negotiable
407728	AIRGAS, INC.	16-Apr-20	2,593.01	IRWD Check	Reconciled
407729	ALEXANDER'S CONTRACT SERVICES, INC.	16-Apr-20	123,115.40	IRWD Check	Reconciled
407730	ALLIANCE RESOURCE CONSULTING LLC	16-Apr-20	6,625.00	IRWD Check	Reconciled
407731	ALSTON & BIRD LLP	16-Apr-20	352,029.75	IRWD Check	Reconciled
407732	AMAZON CAPITAL SERVICES, INC.	16-Apr-20	1,278.00	IRWD Check	Reconciled
407733	AMERICAN WATER CHEMICALS, INC.	16-Apr-20	9,686.73	IRWD Check	Reconciled
407734	AMPCO CONTRACTING INC	16-Apr-20	817.61	IRWD Check	Reconciled
407735	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA	16-Apr-20	38,514.90	IRWD Check	Reconciled
407736	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA	16-Apr-20	1,168.26	IRWD Check	Reconciled
407737	AT&T	16-Apr-20	1,666.07	IRWD Check	Reconciled
407738	AUTOZONE PARTS, INC.	16-Apr-20	1,777.65	IRWD Check	Reconciled
407739	BEST DRILLING AND PUMP, INC.	16-Apr-20	435,151.96	IRWD Check	Reconciled
407740	BIGWIG MONSTER, LLC	16-Apr-20	1,950.00	IRWD Check	Negotiable
407741	BIOMAGIC INC	16-Apr-20	17,056.95	IRWD Check	Reconciled
407742	BLACK & VEATCH CORPORATION	16-Apr-20	615,680.34	IRWD Check	Reconciled
407743	BOFA SECURITIES, INC.	16-Apr-20	15,129.37	IRWD Check	Reconciled
407744	BOYD & ASSOCIATES	16-Apr-20	396.00	IRWD Check	Reconciled
407745	CALIFORNIA BARRICADE RENTAL, INC.	16-Apr-20	6,960.82	IRWD Check	Reconciled
407746	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	16-Apr-20	2,170.00	IRWD Check	Reconciled
407747	CANON SOLUTIONS AMERICA, INC.	16-Apr-20	136.80	IRWD Check	Reconciled
407748	CAROLLO ENGINEERS, INC	16-Apr-20	46,007.50	IRWD Check	Reconciled
407749	CDW GOVERNMENT LLC	16-Apr-20	3,605.69	IRWD Check	Reconciled
407750	CHAIREL CUSTOM HAY, INC.	16-Apr-20	7,427.06	IRWD Check	Reconciled
407751	CHEM TECH INTERNATIONAL INC	16-Apr-20	2,809.68	IRWD Check	Reconciled

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407752	CHO DESIGN ASSOCIATES, INC	16-Apr-20	800.00	IRWD Check	Reconciled
407753	CHUMO CONSTRUCTION, INC	16-Apr-20	1,345.10	IRWD Check	Reconciled
407754	CITY OF TUSTIN	16-Apr-20	473.25	IRWD Check	Reconciled
407755	CLEAN ENERGY	16-Apr-20	3,630.92	IRWD Check	Reconciled
407756	CLIFFORD MORIYAMA	16-Apr-20	4,000.00	IRWD Check	Reconciled
407757	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	16-Apr-20	1,692.19	IRWD Check	Reconciled
407758	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	16-Apr-20	2,028.20	IRWD Check	Reconciled
407759	CONSTELLATION NEWENERGY, INC.	16-Apr-20	37,659.35	IRWD Check	Negotiable
407760	COUNTY CIRCUIT BREAKERS	16-Apr-20	3,070.88	IRWD Check	Reconciled
407761	CR & R INCORPORATED	16-Apr-20	431.20	IRWD Check	Reconciled
407762	CS-AMSCO	16-Apr-20	181.53	IRWD Check	Reconciled
407763	CULLIGAN OF SANTA ANA	16-Apr-20	22,000.00	IRWD Check	Reconciled
407764	DATASITE INC	16-Apr-20	65,000.00	IRWD Check	Reconciled
407765	DEE JASPAR & ASSOCIATES, INC.	16-Apr-20	30,567.82	IRWD Check	Reconciled
407766	DELL MARKETING LP	16-Apr-20	39,773.47	IRWD Check	Reconciled
407767	DEMARIA ELECTRIC MOTOR SERVICES, INC.	16-Apr-20	3,357.13	IRWD Check	Reconciled
407768	DENALI WATER SOLUTIONS LLC	16-Apr-20	6,714.06	IRWD Check	Reconciled
407769	DEPARTMENT OF WATER RESOURCES	16-Apr-20	102,057.00	IRWD Check	Reconciled
407770	DG INVESTMENT INTERMEDIATE HOLDINGS 2, INC.	16-Apr-20	47,300.81	IRWD Check	Reconciled
407771	DISCOUNT COURIER SERVICE INC.	16-Apr-20	67.47	IRWD Check	Reconciled
407772	EAST ORANGE COUNTY WATER DISTRICT	16-Apr-20	2,167.35	IRWD Check	Reconciled
407773	ENVIRONMENTAL RESOURCE ASSOCIATES	16-Apr-20	833.20	IRWD Check	Reconciled
407774	EUROFINS EATON ANALYTICAL, INC.	16-Apr-20	300.00	IRWD Check	Reconciled
407775	EVERETT DOREY LLP	16-Apr-20	4,063.27	IRWD Check	Reconciled
407776	EXECUTIVE LIGHTING & ELECTRIC	16-Apr-20	15,988.09	IRWD Check	Reconciled
407777	FEDEX	16-Apr-20	71.20	IRWD Check	Reconciled
407778	FERGUSON ENTERPRISES, LLC	16-Apr-20	366.06	IRWD Check	Reconciled
407779	FIDELITY SECURITY LIFE INSURANCE COMPANY	16-Apr-20	686.04	IRWD Check	Reconciled
407780	FIDELITY SECURITY LIFE INSURANCE COMPANY	16-Apr-20	5,716.88	IRWD Check	Reconciled
407781	FIRE EXTINGUISHING SAFETY & SERVICE	16-Apr-20	1,127.66	IRWD Check	Reconciled
407782	FIRST CHOICE SERVICES	16-Apr-20	1,501.82	IRWD Check	Reconciled
407783	FISHER SCIENTIFIC COMPANY LLC	16-Apr-20	6,034.87	IRWD Check	Reconciled
407784	FLORASOURCE, LTD	16-Apr-20	1,963.59	IRWD Check	Reconciled
407785	FRONTIER CALIFORNIA INC.	16-Apr-20	57.39	IRWD Check	Reconciled
407786	GALLADE CHEMICAL INC	16-Apr-20	1,068.88	IRWD Check	Reconciled
407787	GEICO INDEMNITY COMPANY	16-Apr-20	4,906.38	IRWD Check	Reconciled
407788	GEIGER BROS	16-Apr-20	2,185.61	IRWD Check	Reconciled
407789	GOLDMAN, SACHS & CO. LLC	16-Apr-20	13,674.86	IRWD Check	Reconciled
407790	GRAINGER	16-Apr-20	363.40	IRWD Check	Reconciled
407791	GRAYBAR ELECTRIC COMPANY	16-Apr-20	2,359.70	IRWD Check	Reconciled
407792	HACH COMPANY	16-Apr-20	14,205.67	IRWD Check	Reconciled
407793	HALL GRIFFIN LLP	16-Apr-20	2,390.24	IRWD Check	Reconciled
407794	HARRINGTON INDUSTRIAL PLASTICS LLC	16-Apr-20	6,373.97	IRWD Check	Reconciled
407795	HARRISON, JARED	16-Apr-20	161.94	IRWD Check	Reconciled
407796	HAZEN AND SAWYER	16-Apr-20	6,175.00	IRWD Check	Reconciled
407797	HDR ENGINEERING INC	16-Apr-20	56,276.19	IRWD Check	Reconciled
407798	HELPMATES STAFFING SERVICES	16-Apr-20	9,401.74	IRWD Check	Reconciled
407799	HGCPM, INC	16-Apr-20	709.77	IRWD Check	Reconciled
407800	HI-LINE INC	16-Apr-20	25.88	IRWD Check	Reconciled
407801	HILL BROTHERS CHEMICAL COMPANY	16-Apr-20	2,290.00	IRWD Check	Reconciled
407802	HOYA OPTICAL LABS OF AMERICA, INC.	16-Apr-20	472.00	IRWD Check	Reconciled
407803	HUERTA, ANAYARELI	16-Apr-20	28.28	IRWD Check	Reconciled
407804	INDEPENDENT ELECTRIC SUPPLY INC	16-Apr-20	7,024.82	IRWD Check	Reconciled
407805	INFOSEND, INC.	16-Apr-20	38,401.79	IRWD Check	Reconciled
407806	INTRACORP SOUTHERN CALIFORNIA, LLC	16-Apr-20	1,409.02	IRWD Check	Negotiable
407807	IRVINE GATEWAY DEVELOPMENT, LLC	16-Apr-20	1,148.67	IRWD Check	Negotiable
407808	IRVINE PIPE & SUPPLY INC	16-Apr-20	65.21	IRWD Check	Reconciled
407809	KAN VENTURES, INC	16-Apr-20	7,548.40	IRWD Check	Reconciled
407810	KHACHIKIAN, ARVIN	16-Apr-20	36.77	IRWD Check	Reconciled

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407811	KRONICK MOSKOVITZ TIEDEMANN & GIRARD	16-Apr-20	3,651.15	IRWD Check	Reconciled
407812	LA PORTE, DAN	16-Apr-20	778.23	IRWD Check	Negotiable
407813	LAMMING, NICOLE	16-Apr-20	58.09	IRWD Check	Reconciled
407814	LANDCARE HOLDINGS, INC.	16-Apr-20	5,154.28	IRWD Check	Reconciled
407815	LEE & RO, INC.	16-Apr-20	25,524.93	IRWD Check	Reconciled
407816	LUBRICATION ENGINEERS, INC.	16-Apr-20	851.72	IRWD Check	Reconciled
407817	MAP COMMUNICATIONS, INC.	16-Apr-20	1,097.67	IRWD Check	Reconciled
407818	MARK KADESH	16-Apr-20	10,000.00	IRWD Check	Reconciled
407819	MC MASTER CARR SUPPLY CO	16-Apr-20	586.32	IRWD Check	Reconciled
407820	MCCROMETER, INC.	16-Apr-20	4,919.10	IRWD Check	Reconciled
407821	MISSION COMMUNICATIONS, LLC	16-Apr-20	1,126.80	IRWD Check	Reconciled
407822	NEW PIG CORPORATION	16-Apr-20	3,759.07	IRWD Check	Reconciled
407823	NEWPORT REAL ESTATE SERVICES, INC.	16-Apr-20	13,100.00	IRWD Check	Reconciled
407824	NEWPORT RIDGE HOA	16-Apr-20	697.24	IRWD Check	Reconciled
407825	NMG GEOTECHNICAL INC	16-Apr-20	6,578.60	IRWD Check	Reconciled
407826	NOVACOAST INC	16-Apr-20	11,300.00	IRWD Check	Reconciled
407827	OLIN CORPORATION	16-Apr-20	10,132.27	IRWD Check	Reconciled
407828	ONESOURCE DISTRIBUTORS LLC	16-Apr-20	11,635.75	IRWD Check	Reconciled
407829	ORANGE COUNTY AUTO PARTS CO	16-Apr-20	620.81	IRWD Check	Reconciled
407830	ORANGE LINE OIL COMPANY	16-Apr-20	1,832.44	IRWD Check	Reconciled
407831	PACIFIC HYDROTECH CORPORATION	16-Apr-20	153,601.33	IRWD Check	Reconciled
407832	PACIFIC HYDROTECH CORPORATION	16-Apr-20	8,084.29	IRWD Check	Reconciled
407833	PACIFIC PARTS & CONTROLS INC	16-Apr-20	493.37	IRWD Check	Reconciled
407834	PAPER DEPOT DOCUMENT DESTRUCTION LLC	16-Apr-20	360.00	IRWD Check	Reconciled
407835	PARKWAY C&A LP	16-Apr-20	3,422.91	IRWD Check	Reconciled
407836	PAULUS ENGINEERING, INC.	16-Apr-20	30,162.00	IRWD Check	Reconciled
407837	PENN ARCHIVE SERVICES	16-Apr-20	47.50	IRWD Check	Reconciled
407838	PETRUSSE-NORRIS PAINTING, INC.	16-Apr-20	1,176.00	IRWD Check	Reconciled
407839	PROCARE WORK INJURY CENTER	16-Apr-20	715.00	IRWD Check	Negotiable
407840	PRUDENTIAL OVERALL SUPPLY	16-Apr-20	5,832.01	IRWD Check	Reconciled
407841	PSOMAS	16-Apr-20	2,397.50	IRWD Check	Reconciled
407842	PTI SAND & GRAVEL INC	16-Apr-20	619.04	IRWD Check	Reconciled
407843	PYRO-COMM SYSTEMS INC	16-Apr-20	760.00	IRWD Check	Reconciled
407844	QUINTANA, WATTS & HARTMANN, LLC	16-Apr-20	5,000.00	IRWD Check	Reconciled
407845	RAM AIR ENGINEERING INC	16-Apr-20	4,395.00	IRWD Check	Reconciled
407846	RCE CONSULTANTS, INC.	16-Apr-20	12,478.17	IRWD Check	Negotiable
407847	REACH EMPLOYEE ASSISTANCE INC	16-Apr-20	1,069.60	IRWD Check	Reconciled
407848	RED HAWK FIRE & SECURITY (CA) LLC	16-Apr-20	250.00	IRWD Check	Reconciled
407849	RENTOKIL NORTH AMERICA, INC	16-Apr-20	2,878.00	IRWD Check	Reconciled
407850	RODEO HOMES INC	16-Apr-20	1,727.19	IRWD Check	Reconciled
407851	ROSE PAVING LLC	16-Apr-20	41,506.76	IRWD Check	Reconciled
407852	SAFETY-KLEEN SYSTEMS, INC	16-Apr-20	760.00	IRWD Check	Reconciled
407853	SANTA ANA BLUE PRINT	16-Apr-20	1,613.49	IRWD Check	Reconciled
407854	SCHWEITZER ENGINEERING LABORATORIES, INC.	16-Apr-20	2,251.98	IRWD Check	Reconciled
407855	SHOFFEITT PIPELINE	16-Apr-20	77,784.00	IRWD Check	Reconciled
407856	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	16-Apr-20	3,344.52	IRWD Check	Reconciled
407857	SOUTH COAST WATER DISTRICT	16-Apr-20	949.82	IRWD Check	Reconciled
407858	SOUTH ORANGE COUNTY WASTEWATER AUTHORITY	16-Apr-20	42,307.00	IRWD Check	Reconciled
407859	SOUTHERN CALIFORNIA EDISON COMPANY	16-Apr-20	19,666.40	IRWD Check	Reconciled
407860	SOUTHERN CALIFORNIA GAS COMPANY	16-Apr-20	10,403.01	IRWD Check	Reconciled
407861	STRADLING YOCCA CARLSON & RAUTH	16-Apr-20	84.00	IRWD Check	Reconciled
407862	STREAKWAVE WIRELESS, INC.	16-Apr-20	904.34	IRWD Check	Reconciled
407863	SUEZ TREATMENT SOLUTIONS INC.	16-Apr-20	276.36	IRWD Check	Reconciled
407864	SUMMIT CHEMICAL SPECIALTY PRODUCTS	16-Apr-20	12,241.36	IRWD Check	Reconciled
407865	SUNSHINE SUPPLY COMPANY, INC.	16-Apr-20	3,418.37	IRWD Check	Reconciled
407866	TALEISNIK, JULIO	16-Apr-20	719.41	IRWD Check	Reconciled
407867	THERMO ELECTRON NORTH AMERICA LLC	16-Apr-20	1,790.59	IRWD Check	Reconciled
407868	THOMPSON INDUSTRIAL SUPPLY	16-Apr-20	901.45	IRWD Check	Reconciled
407869	TOLL BROS., INC.	16-Apr-20	179.74	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

CHECK OR ELECTRONIC #	SUPPLIERS	PAYMENT DATE	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
407870	TUTTLE-CLICK FORD LINCOLN	16-Apr-20	32,425.34	IRWD Check	Reconciled
407871	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA	16-Apr-20	2,135.15	IRWD Check	Negotiable
407872	UNITED PARCEL SERVICE INC	16-Apr-20	99.51	IRWD Check	Reconciled
407873	UNIVAR SOLUTIONS USA INC.	16-Apr-20	5,242.38	IRWD Check	Reconciled
407874	US BANK NAT'L ASSOC N.DAKOTA	16-Apr-20	9,572.40	IRWD Check	Reconciled
407875	VWR INTERNATIONAL, LLC	16-Apr-20	547.87	IRWD Check	Reconciled
407876	WANG, KENNY	16-Apr-20	343.79	IRWD Check	Reconciled
407877	WASTE MANAGEMENT OF CALIFORNIA, INC.	16-Apr-20	1,978.72	IRWD Check	Reconciled
407878	WAXIE'S ENTERPRISES, INC	16-Apr-20	1,065.54	IRWD Check	Reconciled
407879	WECK LABORATORIES INC	16-Apr-20	3,949.00	IRWD Check	Reconciled
407880	WESTAMERICA COMMUNICATIONS, INC.	16-Apr-20	600.00	IRWD Check	Reconciled
407881	WIRELESS WATCHDOGS, LLC	16-Apr-20	1,360.00	IRWD Check	Reconciled
407882	WOODARD & CURRAN INC	16-Apr-20	8,081.57	IRWD Check	Reconciled
407883	WOODBURY COMMUNITY ASSOCIATION	16-Apr-20	2,510.57	IRWD Check	Negotiable
407884	YORK INSURANCE SERVICES GROUP INC - CA	16-Apr-20	8,175.50	IRWD Check	Reconciled
407885	YSI, INC	16-Apr-20	33,994.61	IRWD Check	Reconciled
407886	ORANGE COUNTY BUSINESS COUNCIL	16-Apr-20	5,000.00	IRWD Check	Reconciled
407887	Corral, Edward Jr (Ed)	23-Apr-20	117.42	IRWD Check	Negotiable
407888	Tran, Jason M (Jason)	23-Apr-20	192.00	IRWD Check	Negotiable
407889	ABDELMALAK, SHERIF	23-Apr-20	557.86	IRWD Check	Negotiable
407890	ABSOLUTE STANDARDS, INC.	23-Apr-20	635.50	IRWD Check	Negotiable
407891	ACCURATE MEASUREMENT SYSTEMS INC	23-Apr-20	2,049.53	IRWD Check	Reconciled
407892	AECOM TECHNICAL SERVICES, INC.	23-Apr-20	239,036.95	IRWD Check	Reconciled
407893	AMAZON CAPITAL SERVICES, INC.	23-Apr-20	3,095.23	IRWD Check	Reconciled
407894	ANACAPA APARTMENTS	23-Apr-20	766.94	IRWD Check	Negotiable
407895	ANTHONY N. LARSEN	23-Apr-20	450.00	IRWD Check	Negotiable
407896	APEX SYSTEMS, LLC	23-Apr-20	4,160.00	IRWD Check	Reconciled
407897	APPLIED ENGINEERING CONCEPTS	23-Apr-20	4,823.25	IRWD Check	Negotiable
407898	ARCHROCK SERVICES, L.P.	23-Apr-20	20,102.29	IRWD Check	Reconciled
407899	AT&T	23-Apr-20	173.55	IRWD Check	Reconciled
407900	AT&T	23-Apr-20	13,120.01	IRWD Check	Negotiable
407901	AT&T	23-Apr-20	64.29	IRWD Check	Reconciled
407902	ATHENS SERVICES	23-Apr-20	2,777.04	IRWD Check	Reconciled
407903	ATHENS SERVICES	23-Apr-20	7,746.73	IRWD Check	Reconciled
407904	AUTOZONE PARTS, INC.	23-Apr-20	2,792.63	IRWD Check	Reconciled
407905	BECKMAN COULTER INC	23-Apr-20	313.83	IRWD Check	Negotiable
407906	BEE EMERGENCY RESPONSE TEAM	23-Apr-20	175.00	IRWD Check	Negotiable
407907	BENSON, MADDY	23-Apr-20	300.00	IRWD Check	Negotiable
407908	BOLGEN, MEHMET	23-Apr-20	217.60	IRWD Check	Negotiable
407909	BORCHARD SURVEYING & MAPPING, INC.	23-Apr-20	11,555.00	IRWD Check	Negotiable
407910	C WELLS PIPELINE MATERIALS INC	23-Apr-20	23,160.18	IRWD Check	Reconciled
407911	CAIOZZO, KRIS	23-Apr-20	171.00	IRWD Check	Negotiable
407912	CALIFORNIA BARRICADE RENTAL, INC.	23-Apr-20	7,880.00	IRWD Check	Negotiable
407913	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	23-Apr-20	111.34	IRWD Check	Negotiable
407914	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	23-Apr-20	798.42	IRWD Check	Negotiable
407915	CAMPOS, ADRIANA	23-Apr-20	1,104.28	IRWD Check	Negotiable
407916	CAPTIVE AUDIENCE MARKETING INC.	23-Apr-20	79.00	IRWD Check	Reconciled
407917	CAROLLO ENGINEERS, INC	23-Apr-20	7,510.50	IRWD Check	Negotiable
407918	CDW GOVERNMENT LLC	23-Apr-20	643.47	IRWD Check	Reconciled
407919	CHEN, STEWART	23-Apr-20	25.70	IRWD Check	Negotiable
407920	CITY OF IRVINE	23-Apr-20	576.00	IRWD Check	Negotiable
407921	CITY OF IRVINE	23-Apr-20	10,172.25	IRWD Check	Negotiable
407922	CITY OF SANTA ANA	23-Apr-20	492.82	IRWD Check	Reconciled
407923	CLARIS STRATEGY INC.	23-Apr-20	6,225.00	IRWD Check	Reconciled
407924	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	23-Apr-20	3,828.90	IRWD Check	Reconciled
407925	CONSTELLATION NEWENERGY, INC.	23-Apr-20	10,382.85	IRWD Check	Negotiable
407926	CPC SYSTEMS, INC.	23-Apr-20	1,200.00	IRWD Check	Negotiable
407927	DAN'S MACHINE TOOL, INC.	23-Apr-20	10,706.43	IRWD Check	Reconciled
407928	DATASITE INC	23-Apr-20	1,964.00	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT  
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<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
407929	DEVELOPMENT AND CONSERVATION MANAGEMENT, INC.	23-Apr-20	2,000.00	IRWD Check	Reconciled
407930	DILYTICS INC	23-Apr-20	2,700.00	IRWD Check	Reconciled
407931	DIRECTV INC	23-Apr-20	145.99	IRWD Check	Reconciled
407932	DISCOVER HOME LOANS	23-Apr-20	3,508.59	IRWD Check	Negotiable
407933	DIVERSIFIED COMMUNICATIONS SERVICES, INC.	23-Apr-20	9,073.88	IRWD Check	Reconciled
407934	DLT SOLUTIONS LLC	23-Apr-20	49,104.51	IRWD Check	Reconciled
407935	DRONE NERDS INC	23-Apr-20	6,500.00	IRWD Check	Reconciled
407936	ENTERPRISE HOLDINGS, INC.	23-Apr-20	17,888.06	IRWD Check	Reconciled
407937	ENVIRONMENTAL RESOURCE ASSOCIATES	23-Apr-20	378.70	IRWD Check	Negotiable
407938	FEDEX	23-Apr-20	98.97	IRWD Check	Reconciled
407939	FERGUSON ENTERPRISES, LLC	23-Apr-20	16,653.84	IRWD Check	Reconciled
407940	FIONA HUTTON & ASSOCIATES, INC.	23-Apr-20	4,638.75	IRWD Check	Negotiable
407941	FIRST CHOICE SERVICES	23-Apr-20	657.51	IRWD Check	Reconciled
407942	FISERV	23-Apr-20	22,244.78	IRWD Check	Reconciled
407943	FISHER SCIENTIFIC COMPANY LLC	23-Apr-20	13,166.26	IRWD Check	Reconciled
407944	FRANCHISE TAX BOARD	23-Apr-20	80.00	IRWD Check	Negotiable
407945	FRONTIER CALIFORNIA INC.	23-Apr-20	506.73	IRWD Check	Negotiable
407946	GAYDOS, TERRI	23-Apr-20	673.76	IRWD Check	Negotiable
407947	GEI CONSULTANTS INC	23-Apr-20	56,977.00	IRWD Check	Reconciled
407948	GENERAL MONITORS INC.	23-Apr-20	1,069.28	IRWD Check	Reconciled
407949	GEORGE HILLS COMPANY, INC.	23-Apr-20	140.80	IRWD Check	Negotiable
407950	GLENN LUKOS ASSOCIATES, INC.	23-Apr-20	2,376.34	IRWD Check	Reconciled
407951	GRAINGER	23-Apr-20	2,232.01	IRWD Check	Reconciled
407952	GRAYBAR ELECTRIC COMPANY	23-Apr-20	1,046.58	IRWD Check	Reconciled
407953	HACH COMPANY	23-Apr-20	3,083.78	IRWD Check	Reconciled
407954	HALDEMAN INC	23-Apr-20	3,106.23	IRWD Check	Reconciled
407955	HDR ENGINEERING INC	23-Apr-20	59,929.05	IRWD Check	Reconciled
407956	HELPMATES STAFFING SERVICES	23-Apr-20	12,809.03	IRWD Check	Reconciled
407957	HILL BROTHERS CHEMICAL COMPANY	23-Apr-20	3,722.48	IRWD Check	Negotiable
407958	HILLCREST CONTRACTING, INC.	23-Apr-20	1,605.33	IRWD Check	Negotiable
407959	HOME DEPOT USA INC	23-Apr-20	4,096.42	IRWD Check	Negotiable
407960	HSG INC	23-Apr-20	1,151.00	IRWD Check	Negotiable
407961	HUANG, MING- HSUAN	23-Apr-20	562.11	IRWD Check	Reconciled
407962	INFRASTRUCTURE ENGINEERING CORPORATION	23-Apr-20	1,627.50	IRWD Check	Negotiable
407963	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	23-Apr-20	2,753.23	IRWD Check	Negotiable
407964	IRELAND INC.	23-Apr-20	4,370.40	IRWD Check	Reconciled
407965	IRVINE COMMUNITY DEVELOPMENT COMPANY LLC	23-Apr-20	12,000.00	IRWD Check	Negotiable
407966	IRVINE MANAGEMENT COMPANY	23-Apr-20	1,181.65	IRWD Check	Negotiable
407967	IRVINE PIPE & SUPPLY INC	23-Apr-20	7,594.31	IRWD Check	Reconciled
407968	IRWD-PETTY CASH CUSTODIAN	23-Apr-20	842.66	IRWD Check	Reconciled
407969	JCI JONES CHEMICALS INC	23-Apr-20	9,946.45	IRWD Check	Reconciled
407970	JPR SYSTEMS INC	23-Apr-20	3,413.27	IRWD Check	Reconciled
407971	JUST ENERGY SOLUTIONS INC.	23-Apr-20	263.18	IRWD Check	Reconciled
407972	KNOWBE4, INC.	23-Apr-20	9,900.00	IRWD Check	Reconciled
407973	KOMOLAFE, SAM	23-Apr-20	71.23	IRWD Check	Reconciled
407974	KONECRANES INC	23-Apr-20	2,787.50	IRWD Check	Reconciled
407975	LAGUNA BEACH COUNTY WATER DISTRICT	23-Apr-20	2,982.50	IRWD Check	Negotiable
407976	LAKE FOREST CHAMBER OF COMMERCE INC	23-Apr-20	305.00	IRWD Check	Reconciled
407977	LANDCARE HOLDINGS, INC.	23-Apr-20	10,270.43	IRWD Check	Reconciled
407978	LCS TECHNOLOGIES, INC.	23-Apr-20	2,700.00	IRWD Check	Reconciled
407979	LEPORE, PAUL M	23-Apr-20	47.31	IRWD Check	Reconciled
407980	MBC AQUATIC SCIENCES, INC.	23-Apr-20	5,000.00	IRWD Check	Reconciled
407981	MC FADDEN-DALE INDUSTRIAL	23-Apr-20	246.63	IRWD Check	Reconciled
407982	MERCER (US) INC.	23-Apr-20	3,963.21	IRWD Check	Reconciled
407983	MERRIMAC PETROLEUM, INC.	23-Apr-20	23,823.76	IRWD Check	Reconciled
407984	MEURER RESEARCH, INC	23-Apr-20	35,449.75	IRWD Check	Reconciled
407985	MICROSOFT CORPORATION	23-Apr-20	506.82	IRWD Check	Reconciled
407986	MIRASOL APARTMENTS	23-Apr-20	1,504.06	IRWD Check	Negotiable
407987	MUTUAL PROPANE	23-Apr-20	36.00	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
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<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
407988	NALCO US 2 INC	23-Apr-20	346.14	IRWD Check	Reconciled
407989	NATIONAL READY MIXED CONCRETE SALES, LLC	23-Apr-20	770.35	IRWD Check	Reconciled
407990	NATURALWELL, LLC	23-Apr-20	1,182.50	IRWD Check	Reconciled
407991	NEPTUNE TECHNOLOGY GROUP, INC.	23-Apr-20	69,337.13	IRWD Check	Reconciled
407992	NEWAGE INDUSTRIES INC	23-Apr-20	1,892.98	IRWD Check	Negotiable
407993	NIXON-EGLI EQUIPMENT COMPANY INC.	23-Apr-20	7,794.46	IRWD Check	Reconciled
407994	NORTHWOOD PLACE APTS	23-Apr-20	2,881.78	IRWD Check	Negotiable
407995	OLIN CORPORATION	23-Apr-20	10,013.42	IRWD Check	Reconciled
407996	ORANGE COUNTY AUTO PARTS CO	23-Apr-20	2,161.26	IRWD Check	Reconciled
407997	ORANGE COUNTY SHERIFF'S OFFICE	23-Apr-20	62.50	IRWD Check	Negotiable
407998	PACIFIC COAST BOLT CORP	23-Apr-20	6,700.86	IRWD Check	Negotiable
407999	PACIFIC STAR CHEMICAL, LLC	23-Apr-20	1,320.41	IRWD Check	Reconciled
408000	PAULUS ENGINEERING INC	23-Apr-20	1,138.83	IRWD Check	Reconciled
408001	PCL CONSTRUCTION, INC.	23-Apr-20	28,122.85	IRWD Check	Negotiable
408002	PERS LONG TERM CARE	23-Apr-20	538.89	IRWD Check	Reconciled
408003	PINNACLE TOWERS LLC	23-Apr-20	779.18	IRWD Check	Reconciled
408004	PLUMBERS DEPOT INC.	23-Apr-20	692.99	IRWD Check	Reconciled
408005	PMC ENGINEERING LLC.	23-Apr-20	1,830.18	IRWD Check	Reconciled
408006	POLLARDWATER.COM	23-Apr-20	3,437.77	IRWD Check	Negotiable
408007	PRUDENTIAL OVERALL SUPPLY	23-Apr-20	952.44	IRWD Check	Reconciled
408008	R&B AUTOMATION, INC.	23-Apr-20	8,087.06	IRWD Check	Reconciled
408009	RAM AIR ENGINEERING INC	23-Apr-20	3,165.00	IRWD Check	Negotiable
408010	RANCHO SANTA FE APTS	23-Apr-20	111.20	IRWD Check	Negotiable
408011	RED HAWK FIRE & SECURITY (CA) LLC	23-Apr-20	1,025.00	IRWD Check	Negotiable
408012	REFRIGERATION SUPPLIES DISTRIBUTOR	23-Apr-20	199.38	IRWD Check	Reconciled
408013	RENTOKIL NORTH AMERICA, INC	23-Apr-20	5,091.00	IRWD Check	Reconciled
408014	ROBERTS ROOFING INC	23-Apr-20	800.00	IRWD Check	Reconciled
408015	ROSE PAVING LLC	23-Apr-20	44,152.00	IRWD Check	Negotiable
408016	S&S SEEDS INC	23-Apr-20	1,928.72	IRWD Check	Reconciled
408017	SAN DIEGO FLUID SYSTEM TECH	23-Apr-20	94.57	IRWD Check	Reconciled
408018	SANTA ANA BLUE PRINT	23-Apr-20	2,694.96	IRWD Check	Negotiable
408019	SAUL, MATT	23-Apr-20	45.25	IRWD Check	Reconciled
408020	SCOTT DAWSON	23-Apr-20	4,275.00	IRWD Check	Reconciled
408021	SHAAFI, HOSSEIN	23-Apr-20	84.35	IRWD Check	Reconciled
408022	SHAMROCK SUPPLY CO INC	23-Apr-20	654.22	IRWD Check	Reconciled
408023	SIERRA VISTA APTS	23-Apr-20	765.44	IRWD Check	Negotiable
408024	SKORUZ TECHNOLOGIES	23-Apr-20	19,800.00	IRWD Check	Reconciled
408025	SOLANA APTS	23-Apr-20	1,558.23	IRWD Check	Negotiable
408026	SOORISSETTY, GNANA SAI VENKATESH	23-Apr-20	5.39	IRWD Check	Negotiable
408027	SOUTHERN CALIFORNIA EDISON COMPANY	23-Apr-20	440,072.30	IRWD Check	Reconciled
408028	SOUTHERN CALIFORNIA EDISON COMPANY	23-Apr-20	3.56	IRWD Check	Reconciled
408029	SOUTHERN CALIFORNIA GAS COMPANY	23-Apr-20	5,356.38	IRWD Check	Negotiable
408030	SOUTHERN CALIFORNIA GRADING, INC.	23-Apr-20	1,002.23	IRWD Check	Negotiable
408031	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	23-Apr-20	688.05	IRWD Check	Negotiable
408032	SPARLING INSTRUMENTS LLC	23-Apr-20	198.89	IRWD Check	Reconciled
408033	SPATIAL WAVE, INC.	23-Apr-20	5,936.00	IRWD Check	Reconciled
408034	STANTEC CONSULTING SERVICES INC.	23-Apr-20	10,951.50	IRWD Check	Reconciled
408035	STATE OF CALIFORNIA, EDD	23-Apr-20	75.00	IRWD Check	Reconciled
408036	STERIS CORPORATION	23-Apr-20	5,222.73	IRWD Check	Reconciled
408037	STETSON ENGINEERS INC.	23-Apr-20	6,301.25	IRWD Check	Reconciled
408038	TAFT, GIOVANNA	23-Apr-20	25.19	IRWD Check	Reconciled
408039	THE IRVINE COMPANY	23-Apr-20	1,998.83	IRWD Check	Reconciled
408040	THE PARKLANDS	23-Apr-20	604.78	IRWD Check	Negotiable
408041	TIC-RETAIL PROPERTIES	23-Apr-20	1,006.37	IRWD Check	Negotiable
408042	TOLL BROS., INC.	23-Apr-20	483.14	IRWD Check	Negotiable
408043	TONY VALENTINE CONSTRUCTION	23-Apr-20	1,396.63	IRWD Check	Negotiable
408044	TOTAL RESOURCE MANAGEMENT, INC.	23-Apr-20	2,725.48	IRWD Check	Reconciled
408045	TROPICAL PLAZA NURSERY INC	23-Apr-20	328.00	IRWD Check	Reconciled
408046	TRUCK CRANE RENTAL	23-Apr-20	1,609.20	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

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408047	TRUCPARCO	23-Apr-20	266.31	IRWD Check	Negotiable
408048	UNITED PARCEL SERVICE INC	23-Apr-20	44.15	IRWD Check	Reconciled
408049	UNITED SERVICES INC.	23-Apr-20	1,799.22	IRWD Check	Reconciled
408050	UNITED SITE SERVICES OF CALIFORNIA INC	23-Apr-20	567.31	IRWD Check	Reconciled
408051	VAUGHAN'S INDUSTRIAL REPAIR CO INC	23-Apr-20	23,399.07	IRWD Check	Reconciled
408052	VERTEX INC	23-Apr-20	5,838.00	IRWD Check	Reconciled
408053	WALTER R. ZECH, INC.	23-Apr-20	80,000.00	IRWD Check	Reconciled
408054	WARE MALCOMB	23-Apr-20	6,506.00	IRWD Check	Reconciled
408055	WATERLINE TECHNOLOGIES INC	23-Apr-20	2,429.12	IRWD Check	Reconciled
408056	WATSON, JASON	23-Apr-20	241.72	IRWD Check	Reconciled
408057	WAXIE'S ENTERPRISES, INC	23-Apr-20	534.95	IRWD Check	Reconciled
408058	WEST YOST & ASSOCIATES	23-Apr-20	40,101.00	IRWD Check	Reconciled
408059	ZEBRON CONTRACTING INC	23-Apr-20	66,380.00	IRWD Check	Reconciled
408060	Fike, Ethan O (Ethan)	30-Apr-20	296.00	IRWD Check	Negotiable
408061	Fites, Michael E (Michael)	30-Apr-20	150.00	IRWD Check	Negotiable
408062	Matheis, Mary Aileen	30-Apr-20	1,184.90	IRWD Check	Negotiable
408063	Vasquez, Jonathan	30-Apr-20	105.00	IRWD Check	Negotiable
408064	A&Y ASPHALT CONTRACTORS, INC.	30-Apr-20	18,077.00	IRWD Check	Negotiable
408065	ACCURATE AIR ENGINEERING INC	30-Apr-20	975.21	IRWD Check	Negotiable
408066	AGILENT TECHNOLOGIES, INC.	30-Apr-20	53.03	IRWD Check	Negotiable
408067	ALLIANT INSURANCE SERVICES, INC	30-Apr-20	59,059.00	IRWD Check	Negotiable
408068	AMAZON CAPITAL SERVICES, INC.	30-Apr-20	419.58	IRWD Check	Negotiable
408069	ANDERSONPENNA PARTNERS, INC.	30-Apr-20	40,984.00	IRWD Check	Negotiable
408070	ANTHEM BLUE CROSS	30-Apr-20	257.88	IRWD Check	Negotiable
408071	ARMORCAST PRODUCTS COMPANY	30-Apr-20	20,046.13	IRWD Check	Negotiable
408072	ARROYO, GARRETT	30-Apr-20	225.11	IRWD Check	Negotiable
408073	AT&T	30-Apr-20	54.07	IRWD Check	Negotiable
408074	AT&T	30-Apr-20	384.01	IRWD Check	Negotiable
408075	AT&T	30-Apr-20	248.38	IRWD Check	Negotiable
408076	AUTOZONE PARTS, INC.	30-Apr-20	38.18	IRWD Check	Negotiable
408077	BASSETT, OLIVIA	30-Apr-20	21.67	IRWD Check	Negotiable
408078	BECKMAN COULTER INC	30-Apr-20	572.05	IRWD Check	Negotiable
408079	BEST MANAGEMENT CONSTRUCTION, INC.	30-Apr-20	17,540.41	IRWD Check	Negotiable
408080	BLACK & VEATCH CORPORATION	30-Apr-20	53,237.00	IRWD Check	Negotiable
408081	BOYLE, LAWRENCE	30-Apr-20	28.00	IRWD Check	Negotiable
408082	BRENDA JO PUEPKE	30-Apr-20	200.00	IRWD Check	Negotiable
408083	BROOKFIELD EASTWOOD TRIPLEX LLC	30-Apr-20	47.62	IRWD Check	Negotiable
408084	C WELLS PIPELINE MATERIALS INC	30-Apr-20	1,697.07	IRWD Check	Negotiable
408085	CALIFORNIA BARRICADE RENTAL, INC.	30-Apr-20	14,711.25	IRWD Check	Negotiable
408086	CANON SOLUTIONS AMERICA, INC.	30-Apr-20	17.05	IRWD Check	Negotiable
408087	CHEM TECH INTERNATIONAL INC	30-Apr-20	8,579.46	IRWD Check	Negotiable
408088	CITY OF NEWPORT BEACH	30-Apr-20	1,748.48	IRWD Check	Negotiable
408089	CITY OF ORANGE	30-Apr-20	161.28	IRWD Check	Negotiable
408090	COLONIAL LIFE & ACCIDENT INSURANCE CO.	30-Apr-20	1,103.26	IRWD Check	Negotiable
408091	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	30-Apr-20	5,510.77	IRWD Check	Negotiable
408092	CONSTELLATION NEWENERGY, INC.	30-Apr-20	4,149.91	IRWD Check	Negotiable
408093	CORNELL COURT APTS	30-Apr-20	50.25	IRWD Check	Negotiable
408094	COX COMMUNICATIONS, INC.	30-Apr-20	3,353.78	IRWD Check	Negotiable
408095	D & G SIGNS	30-Apr-20	269.38	IRWD Check	Negotiable
408096	DAN'S MACHINE TOOL, INC.	30-Apr-20	2,637.52	IRWD Check	Negotiable
408097	DATASITE INC	30-Apr-20	9,356.00	IRWD Check	Negotiable
408098	DC FROST ASSOCIATES, INC.	30-Apr-20	1,165.84	IRWD Check	Negotiable
408099	DELL MARKETING LP	30-Apr-20	2,773.13	IRWD Check	Negotiable
408100	DEMARIA ELECTRIC MOTOR SERVICES, INC.	30-Apr-20	188.56	IRWD Check	Negotiable
408101	DIRECTV INC	30-Apr-20	139.54	IRWD Check	Negotiable
408102	DISCOUNT COURIER SERVICE INC.	30-Apr-20	222.01	IRWD Check	Negotiable
408103	DIVERSIFIED COMMUNICATIONS SERVICES, INC.	30-Apr-20	9,979.20	IRWD Check	Negotiable
408104	DUDEK	30-Apr-20	1,779.00	IRWD Check	Negotiable
408105	DUNN, PHILLIP	30-Apr-20	50.39	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
408106	DWYER INSTRUMENTS INC	30-Apr-20	3,178.51	IRWD Check	Negotiable
408107	ECO SERVICES LLC	30-Apr-20	5,356.19	IRWD Check	Negotiable
408108	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.	30-Apr-20	28,755.00	IRWD Check	Negotiable
408109	ENVIRONMENTAL SCIENCE ASSOCIATES	30-Apr-20	21,065.93	IRWD Check	Negotiable
408110	EUGENIO H. NEARNS	30-Apr-20	10,920.00	IRWD Check	Negotiable
408111	EUROFINS CALSCIENCE, LLC	30-Apr-20	1,192.80	IRWD Check	Negotiable
408112	EVANTEC CORPORATION	30-Apr-20	730.22	IRWD Check	Negotiable
408113	FEDEX	30-Apr-20	147.72	IRWD Check	Negotiable
408114	FERGUSON ENTERPRISES, LLC	30-Apr-20	786.58	IRWD Check	Negotiable
408115	FIDELITY SECURITY LIFE INSURANCE COMPANY	30-Apr-20	91.64	IRWD Check	Negotiable
408116	FIDELITY SECURITY LIFE INSURANCE COMPANY	30-Apr-20	146.01	IRWD Check	Negotiable
408117	FIDELITY SECURITY LIFE INSURANCE COMPANY	30-Apr-20	82.09	IRWD Check	Negotiable
408118	FIDELITY SECURITY LIFE INSURANCE COMPANY	30-Apr-20	91.64	IRWD Check	Negotiable
408119	FISHER SCIENTIFIC COMPANY LLC	30-Apr-20	5,676.66	IRWD Check	Negotiable
408120	FITCH RATINGS, INC.	30-Apr-20	10,000.00	IRWD Check	Negotiable
408121	FLW SERVICE CORPORATION	30-Apr-20	1,838.52	IRWD Check	Negotiable
408122	FRONTIER CALIFORNIA INC.	30-Apr-20	394.24	IRWD Check	Negotiable
408123	GANAHL LUMBER CO.	30-Apr-20	13,941.02	IRWD Check	Negotiable
408124	GEIGER BROS	30-Apr-20	3,900.82	IRWD Check	Negotiable
408125	GEORGE T HALL CO INC	30-Apr-20	31,250.00	IRWD Check	Negotiable
408126	GRAINGER	30-Apr-20	4,929.96	IRWD Check	Negotiable
408127	GUIDEHOUSE INC.	30-Apr-20	4,391.50	IRWD Check	Negotiable
408128	HABITAT RESTORATION SCIENCES, INC.	30-Apr-20	800.00	IRWD Check	Negotiable
408129	HACH COMPANY	30-Apr-20	1,325.33	IRWD Check	Negotiable
408130	HARRINGTON INDUSTRIAL PLASTICS LLC	30-Apr-20	4,677.85	IRWD Check	Negotiable
408131	HATCHER, JUDITH L	30-Apr-20	100.95	IRWD Check	Negotiable
408132	HAZEN AND SAWYER	30-Apr-20	23,074.59	IRWD Check	Negotiable
408133	HELPMATES STAFFING SERVICES	30-Apr-20	13,835.47	IRWD Check	Negotiable
408134	HI-LINE INC	30-Apr-20	57.03	IRWD Check	Negotiable
408135	HILL BROTHERS CHEMICAL COMPANY	30-Apr-20	9,017.97	IRWD Check	Negotiable
408136	HILL, GRANT	30-Apr-20	39.84	IRWD Check	Negotiable
408137	HOME DEPOT USA INC	30-Apr-20	308.47	IRWD Check	Negotiable
408138	HONGPEI, LU	30-Apr-20	29.55	IRWD Check	Negotiable
408139	HOWDEN ROOTS LLC	30-Apr-20	833.99	IRWD Check	Negotiable
408140	HUMANA INSURANCE COMPANY	30-Apr-20	56.60	IRWD Check	Negotiable
408141	ICP DAS USA INC	30-Apr-20	2,512.00	IRWD Check	Negotiable
408142	IDEXX DISTRIBUTION, INC	30-Apr-20	8,594.10	IRWD Check	Negotiable
408143	IRVINE PIPE & SUPPLY INC	30-Apr-20	884.26	IRWD Check	Negotiable
408144	JACKSON, ELIZABETH	30-Apr-20	106.44	IRWD Check	Negotiable
408145	JCI JONES CHEMICALS INC	30-Apr-20	2,208.92	IRWD Check	Negotiable
408146	JOHN MICHAEL COVAS	30-Apr-20	210.20	IRWD Check	Negotiable
408147	KEY INFORMATION SYSTEMS, INC.	30-Apr-20	2,050.00	IRWD Check	Negotiable
408148	LAM, SALLY	30-Apr-20	166.95	IRWD Check	Negotiable
408149	LEHN, RHONDA	30-Apr-20	17.31	IRWD Check	Negotiable
408150	LENNAR HOMES	30-Apr-20	169.50	IRWD Check	Negotiable
408151	LUBRICATION ENGINEERS, INC.	30-Apr-20	1,566.81	IRWD Check	Negotiable
408152	MC MASTER CARR SUPPLY CO	30-Apr-20	809.72	IRWD Check	Negotiable
408153	MERRIMAC PETROLEUM, INC.	30-Apr-20	120.00	IRWD Check	Negotiable
408154	MESA INTERNATIONAL TECHNOLOGIES, INC.	30-Apr-20	410.96	IRWD Check	Negotiable
408155	MICRO FOCUS SOFTWARE INC.	30-Apr-20	16,729.38	IRWD Check	Negotiable
408156	MOBILE MODULAR MANAGEMENT CORPORATION	30-Apr-20	1,212.19	IRWD Check	Negotiable
408157	MOODY'S INVESTORS SERVICE INC	30-Apr-20	8,000.00	IRWD Check	Negotiable
408158	MORRISROE, EDWARD	30-Apr-20	266.37	IRWD Check	Negotiable
408159	NCL OF WISCONSIN INC	30-Apr-20	314.10	IRWD Check	Negotiable
408160	NEPTUNE TECHNOLOGY GROUP, INC.	30-Apr-20	85,208.70	IRWD Check	Negotiable
408161	NORTHWOOD PARK APTS	30-Apr-20	111.59	IRWD Check	Negotiable
408162	OLIN CORPORATION	30-Apr-20	16,873.80	IRWD Check	Negotiable
408163	ORANGE COUNTY AUTO PARTS CO	30-Apr-20	357.28	IRWD Check	Negotiable
408164	PAYNE & FEARS LLP	30-Apr-20	93.00	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

CHECK OR ELECTRONIC #	SUPPLIERS	PAYMENT DATE	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
408165	PRAXAIR DISTRIBUTION INC	30-Apr-20	1,685.17	IRWD Check	Negotiable
408166	PSOMAS	30-Apr-20	8,723.01	IRWD Check	Negotiable
408167	PTI SAND & GRAVEL INC	30-Apr-20	1,194.84	IRWD Check	Negotiable
408168	PYRO-COMM SYSTEMS INC	30-Apr-20	8,531.70	IRWD Check	Negotiable
408169	RAM AIR ENGINEERING INC	30-Apr-20	785.38	IRWD Check	Negotiable
408170	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT	30-Apr-20	8,429.22	IRWD Check	Negotiable
408171	S&S SEEDS INC	30-Apr-20	3,006.23	IRWD Check	Negotiable
408172	SAN CARLO APARTMENTS	30-Apr-20	23.09	IRWD Check	Negotiable
408173	SAN MARCO APARTMENTS	30-Apr-20	25.91	IRWD Check	Negotiable
408174	SAN REMO APTS	30-Apr-20	34.02	IRWD Check	Negotiable
408175	SCHINDLER ELEVATOR CORPORATION	30-Apr-20	221.90	IRWD Check	Negotiable
408176	SHADY CANYON GOLF CLUB, INC.	30-Apr-20	10,800.00	IRWD Check	Negotiable
408177	SHAMROCK SUPPLY CO INC	30-Apr-20	753.07	IRWD Check	Negotiable
408178	SHBEEB, AMIR	30-Apr-20	456.24	IRWD Check	Negotiable
408179	SOFTCHOICE CORPORATION	30-Apr-20	13,556.00	IRWD Check	Negotiable
408180	SOUTH COAST MOLD, INC.	30-Apr-20	955.15	IRWD Check	Negotiable
408181	SOUTHERN CALIFORNIA EDISON COMPANY	30-Apr-20	99,150.87	IRWD Check	Negotiable
408182	SOUTHERN CALIFORNIA EDISON COMPANY	30-Apr-20	53.56	IRWD Check	Negotiable
408183	SOUTHERN CONTRACTING COMPANY	30-Apr-20	46,166.20	IRWD Check	Negotiable
408184	SOUTHWEST VALVE & EQUIPMENT	30-Apr-20	6,359.66	IRWD Check	Negotiable
408185	SPARKLETTS	30-Apr-20	190.08	IRWD Check	Negotiable
408186	STANTEC CONSULTING SERVICES INC.	30-Apr-20	130,199.70	IRWD Check	Negotiable
408187	SUKLE ADVERTISING INC.	30-Apr-20	120,655.76	IRWD Check	Negotiable
408188	SUMMIT CHEMICAL SPECIALTY PRODUCTS	30-Apr-20	11,924.48	IRWD Check	Negotiable
408189	THOMPSON INDUSTRIAL SUPPLY	30-Apr-20	617.08	IRWD Check	Negotiable
408190	TRENCH SHORING COMPANY	30-Apr-20	264.47	IRWD Check	Negotiable
408191	TRI POINTE HOMES, INC.	30-Apr-20	284.63	IRWD Check	Negotiable
408192	TROPICAL PLAZA NURSERY INC	30-Apr-20	62,739.84	IRWD Check	Negotiable
408193	TURTLE ROCK CANYON APTS	30-Apr-20	35.24	IRWD Check	Negotiable
408194	UNITED HEALTHCARE INSURANCE COMPANY	30-Apr-20	284.07	IRWD Check	Negotiable
408195	UNITED PARCEL SERVICE INC	30-Apr-20	67.12	IRWD Check	Negotiable
408196	US BANK NAT'L ASSOCIATION NORTH DAKOTA	30-Apr-20	30,259.88	IRWD Check	Negotiable
408197	UTILITY SYSTEMS SCIENCE & SOFTWARE INC.	30-Apr-20	1,000.00	IRWD Check	Negotiable
408198	V&A CONSULTING ENGINEERS	30-Apr-20	7,628.53	IRWD Check	Negotiable
408199	VERIZON WIRELESS SERVICES LLC	30-Apr-20	7,744.28	IRWD Check	Negotiable
408200	VWR INTERNATIONAL, LLC	30-Apr-20	884.58	IRWD Check	Negotiable
408201	WALTERS WHOLESALE ELECTRIC	30-Apr-20	858.50	IRWD Check	Negotiable
408202	WATERSMART SOFTWARE, INC	30-Apr-20	13,547.22	IRWD Check	Negotiable
408203	WAXIE'S ENTERPRISES, INC	30-Apr-20	2,308.98	IRWD Check	Negotiable
408204	WECK LABORATORIES INC	30-Apr-20	1,402.00	IRWD Check	Negotiable
408205	WEST COAST SAND & GRAVEL INC.	30-Apr-20	910.26	IRWD Check	Negotiable
408206	WILLIAM LYON HOMES, INC.	30-Apr-20	150.00	IRWD Check	Negotiable
408207	WONG, KAM-LUNG	30-Apr-20	139.81	IRWD Check	Negotiable
408208	YORKE ENGINEERING, LLC	30-Apr-20	10,548.64	IRWD Check	Negotiable
408209	YOUNG CAPITAL LLC	30-Apr-20	146.09	IRWD Check	Negotiable
<b>SUB-TOTAL CHECK DISBURSEMENTS</b>			<b>10,012,068.64</b>		

13709	CHARD SNYDER & ASSOCIATES, INC.	1-Apr-20	1,344.05	IRWD Wire	Negotiable
13710	BANK OF NEW YORK MELLON TRUST COMPANY NA	2-Apr-20	177,911.21	IRWD Wire	Negotiable
13711	U.S. BANK NATIONAL ASSOCIATION	2-Apr-20	71,817.13	IRWD Wire	Negotiable
13712	U.S. BANK NATIONAL ASSOCIATION	2-Apr-20	125,312.87	IRWD Wire	Negotiable
13713	BANK OF AMERICA	2-Apr-20	114,583.31	IRWD Wire	Negotiable
13714	U.S. BANK NATIONAL ASSOCIATION	2-Apr-20	1,703,975.03	IRWD Wire	Negotiable
13715	CHARD SNYDER & ASSOCIATES, INC.	6-Apr-20	4,027.83	IRWD Wire	Negotiable
13716	YORK INSURANCE SERVICES GROUP INC - CA	7-Apr-20	8,659.51	IRWD Wire	Negotiable
13717	CHARD SNYDER & ASSOCIATES, INC.	8-Apr-20	192.50	IRWD Wire	Negotiable
13718	CALPERS	8-Apr-20	538,780.87	IRWD Wire	Negotiable
13719	CALPERS	8-Apr-20	2,953.07	IRWD Wire	Negotiable
13720	CALPERS	8-Apr-20	231,834.46	IRWD Wire	Negotiable

**IRVINE RANCH WATER DISTRICT  
AP DISBURSEMENTS AND VOIDS FOR APRIL 2020**

<b>CHECK OR ELECTRONIC #</b>	<b>SUPPLIERS</b>	<b>PAYMENT DATE</b>	<b>PAYMENT AMOUNT</b>	<b>PAYMENT METHOD</b>	<b>STATUS</b>
13721	U.S. BANK NATIONAL ASSOCIATION	8-Apr-20	62,197.49	IRWD Wire	Negotiable
13722	SUMITOMO MITSUI BANKING CORPORATION	9-Apr-20	112,667.22	IRWD Wire	Negotiable
13723	CHARD SNYDER & ASSOCIATES, INC.	9-Apr-20	26,305.31	IRWD Wire	Negotiable
13724	INTERNAL REVENUE SERVICE	9-Apr-20	220,220.50	IRWD Wire	Negotiable
13725	FRANCHISE TAX BOARD	9-Apr-20	67,808.38	IRWD Wire	Negotiable
13726	EMPLOYMENT DEVELOPMENT DEPARTMENT	9-Apr-20	15,992.85	IRWD Wire	Negotiable
13727	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	9-Apr-20	3,026.40	IRWD Wire	Negotiable
13728	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	9-Apr-20	178,737.88	IRWD Wire	Negotiable
13729	CALPERS	9-Apr-20	235,863.32	IRWD Wire	Negotiable
13730	BANK OF AMERICA	13-Apr-20	42,174.55	IRWD Wire	Negotiable
13731	CHARD SNYDER & ASSOCIATES, INC.	13-Apr-20	1,286.31	IRWD Wire	Negotiable
13732	CHARD SNYDER & ASSOCIATES, INC.	13-Apr-20	3,364.02	IRWD Wire	Negotiable
13733	YORK INSURANCE SERVICES GROUP INC - CA	14-Apr-20	3,652.10	IRWD Wire	Negotiable
13734	WELLS FARGO BANK, N.A.	14-Apr-20	7,309.36	IRWD Wire	Negotiable
13735	SUMITOMO MITSUI BANKING CORPORATION	15-Apr-20	38,323.40	IRWD Wire	Negotiable
13736	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	16-Apr-20	764,555.94	IRWD Wire	Negotiable
13737	U.S. BANK NATIONAL ASSOCIATION	16-Apr-20	750.00	IRWD Wire	Negotiable
13738	CHARD SNYDER & ASSOCIATES, INC.	20-Apr-20	3,896.27	IRWD Wire	Negotiable
13739	CHARD SNYDER & ASSOCIATES, INC.	20-Apr-20	2,974.61	IRWD Wire	Negotiable
13740	YORK INSURANCE SERVICES GROUP INC - CA	21-Apr-20	9,560.19	IRWD Wire	Negotiable
13741	INTERNAL REVENUE SERVICE	22-Apr-20	231,552.31	IRWD Wire	Negotiable
13742	FRANCHISE TAX BOARD	22-Apr-20	70,791.85	IRWD Wire	Negotiable
13743	EMPLOYMENT DEVELOPMENT DEPARTMENT	22-Apr-20	15,975.30	IRWD Wire	Negotiable
13744	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	22-Apr-20	3,026.40	IRWD Wire	Negotiable
13745	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	22-Apr-20	175,938.37	IRWD Wire	Negotiable
13746	CALPERS	27-Apr-20	231,320.44	IRWD Wire	Negotiable
13747	BANK OF NEW YORK MELLON TRUST COMPANY NA	27-Apr-20	55,520.83	IRWD Wire	Negotiable
13748	SOUTHERN CALIFORNIA EDISON COMPANY	27-Apr-20	6,570.00	IRWD Wire	Negotiable
13749	CHARD SNYDER & ASSOCIATES, INC.	27-Apr-20	4,661.50	IRWD Wire	Negotiable
13750	CHARD SNYDER & ASSOCIATES, INC.	27-Apr-20	1,664.99	IRWD Wire	Negotiable
13751	BANK OF NEW YORK MELLON TRUST COMPANY NA	28-Apr-20	877.78	IRWD Wire	Negotiable
13752	YORK INSURANCE SERVICES GROUP INC - CA	28-Apr-20	876.82	IRWD Wire	Negotiable
13753	FILANC-BALFOUR BEATTY JV	28-Apr-20	130,757.26	IRWD Wire	Negotiable
13754	U.S. BANK NATIONAL ASSOCIATION	30-Apr-20	5,794,250.00	IRWD Wire	Negotiable
<b>SUB-TOTAL ELECTRONIC DISBURSEMENTS</b>			<b>11,505,841.79</b>		
<b>SUB-TOTAL AP CHECK AND ELECTRONIC DISBURSEMENTS</b>			<b>21,517,910.43</b>		
<b>SUB-TOTAL CHECK AND ELECTRONIC ISSUED AND VOIDED IN APRIL 2020</b>			<b>-</b>		
<b>TOTAL AP DISBURSEMENTS AND VOIDS FOR APRIL 2020</b>			<b>21,517,910.43</b>		

Exhibit "E"

**MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS**

**April  
2020**

	AMOUNT	VENDOR	PURPOSE
4/10/2020	1,547,911.81	BANK OF AMERICA	ACH Payments for Payroll
4/24/2020	1,562,520.77	BANK OF AMERICA	ACH Payments for Payroll
	<u><b>\$3,110,432.58</b></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-APR-20 to 30-APR-20

NAME	CHECK NO.	CHECK DATE	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Borowski, Michael	407578	9-Apr-20	244.00	Certification Renewal	Journeyman Electrician Certification
Corral, Ed	407887	23-Apr-20	117.42	Other(Misc)	Safety shoes allowance
Fike, Ethan	408060	30-Apr-20	296.00	Certification Renewal	CWEA Electrical/Instrumentation Tech Grade IV
Fites, Michael	408061	30-Apr-20	150.00	Certification Renewal	SWRCB Wastewater Grade II Treatment Plant Operator
Hall, William	407458	2-Apr-20	288.00	Certification Renewal	Backflow Certification Test
Matheis, Mary Aileen	408062	30-Apr-20	235.78	Lodging	ACWA 2019 Fall Conf., San Diego, CA - December 2, 2019
Matheis, Mary Aileen	408062	30-Apr-20	235.78	Lodging	ACWA 2019 Fall Conf., San Diego, CA - December 3, 2019
Matheis, Mary Aileen	408062	30-Apr-20	235.78	Lodging	ACWA 2019 Fall Conf., San Diego, CA - December 4, 2019
Matheis, Mary Aileen	408062	30-Apr-20	235.78	Lodging	ACWA 2019 Fall Conf., San Diego, CA - December 5, 2019
Parra, Dennis	407720	16-Apr-20	192.00	Membership Renewal	CWEA membership
Parra, Dennis	407720	16-Apr-20	175.00	Certification Renewal	CWEA Collections Systems Maintenance Grade I
Prewoznik, Frank	407583	9-Apr-20	275.90	Lodging	ACWA Conf., Washington, D.C. - February 27, 2020
Reyes, Jennifer	407584	9-Apr-20	288.00	Certification Renewal	Backflow Certification Test
Reynoso, Pio	407722	16-Apr-20	192.00	Membership Renewal	CWEA membership
Tran, Jason	407888	7-May-20	192.00	Membership Renewal	CWEA membership
Vasquez, Jonathan	408063	30-Apr-20	105.00	Certification Renewal	SWRCB Distribution Operator Grade IV
<b>Total Amount:</b>			<b>\$3,458.44</b>		

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May 26, 2020

Prepared by: O. O'Neill / R. Mykitta

Submitted by: W. Chambers

Approved by: Paul A. Cook



## CONSENT CALENDAR

### CAPSTONE THREE-YEAR FACTORY PROTECTION PLAN AGREEMENT FOR THE BIOSOLIDS AND ENERGY RECOVERY FACILITY PROJECT

#### SUMMARY:

Once the Biosolids and Energy Recovery Facility Project becomes fully operational, power-generating microturbines will convert biogas to electricity. The microturbine manufacturer requires that only authorized service providers maintain the microturbines during the warranty period. Staff recommends the Board authorize the General Manager to execute a three-year Capstone Microturbine Factory Protection Plan Agreement with the authorized service provider Cal Microturbine for a total amount of \$320,796.

#### BACKGROUND:

As part of the Biosolids and Energy Recovery Facilities Project, power-generating Capstone Microturbines were installed. Capstone, as the manufacturer, requires that only authorized service providers maintain the microturbines and associated systems during the warranty period. Staff has negotiated with Cal Microturbine, Capstone's authorized service provider, a three-year Factory Protection Plan Agreement which covers all scheduled and unscheduled maintenance for an annual cost of \$106,932.

#### FISCAL IMPACTS:

Sufficient funds for the first two years of the contract are included in the approved FY 2019-2020 and FY 2020-2021 Operating budgets. Funds for the remaining term will be requested through the District's budget process.

#### ENVIRONMENTAL COMPLIANCE:

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

#### COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 19, 2020.

#### RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A THREE-YEAR CAPSTONE MICROTURBINE FACTORY PROTECTION PLAN AGREEMENT WITH AUTHORIZED SERVICE PROVIDER CAL MICROTURBINE FOR A TOTAL OF \$320,796.

Consent Calendar: Capstone Three-year Factory Protection Plan Agreement for the Biosolids  
and Energy Recovery Facility Project

May 26, 2020

Page 2

LIST OF EXHIBITS:

Exhibit "A" – Capstone Factory Protection Plan Agreement

EXHIBIT "A"



3100 Airway Ave, Suite 128  
 Costa Mesa, CA 92626  
 Phone: (714) 486-1140  
[www.calmicroturbine.com](http://www.calmicroturbine.com)

CAPSTONE FACTORY PROTECTION PLAN – END USER AGREEMENT

AGREEMENT NUMBER	AGREEMENT EXECUTION DATE 6/1/2020
PURCHASER COMPANY NAME (BILL-TO) Irvine Ranch Water District	
ADDRESS (BILL-TO) 3512 Michelson Dr. Irvine, CA 92612	
BILLING CONTACT NAME Owen Oneill	SERVICE CONTACT
NUMBER/TYPE OF TURBINES (5) C200 DGSTR Gas, GC, UL	ADDRESS (TURBINE LOCATION(S)) 3512 Michelson Dr. Irvine, CA 92612
GAS PACKS or FGB N/A	OTHER CLC
ANNUAL PRICE: \$ 106,932.00	BILLING CYCLE: Annual

A. Factory Protection Plan Types and Optional Services

FACTORY PROTECTION PLAN TYPES <sup>1</sup>	
Plan A – 5 year or 39,999 system hours, Parts ONLY, NO Overhaul	<input type="checkbox"/> <4000 hrs/yr. <input type="checkbox"/> 4000-6000 hrs/yr. <input type="checkbox"/> >6000 hrs/yr.
Plan B – 5 year or 39,999 system hours, Parts & Labor, NO Overhaul	<input type="checkbox"/> <4000 hrs/yr. <input type="checkbox"/> 4000-6000 hrs/yr. <input type="checkbox"/> >6000 hrs/yr.
Plan C – 10 year or 79,999 system hours, Parts ONLY, with Overhaul	<input type="checkbox"/> <4000 hrs/yr. <input type="checkbox"/> 4000-6000 hrs/yr. <input type="checkbox"/> >6000 hrs/yr.
Plan D – 10 year or 79,999 system hours, Parts & Labor, with Overhaul	<input type="checkbox"/> <4000 hrs/yr. <input type="checkbox"/> 4000-6000 hrs/yr. <input type="checkbox"/> >6000 hrs/yr.
<input checked="" type="checkbox"/> Other –3 year, Parts & Labor, NO Overhaul	<input type="checkbox"/> <4000 hrs/yr. <input type="checkbox"/> 4000-6000 hrs/yr. <input checked="" type="checkbox"/> >6000 hrs/yr.

<sup>1</sup> See Section B below for description of included services for each type of Factory Protection Plan.

# EXHIBIT "A"

## B. Description of Factory Protection Plan Services

FACTORY PROTECTION PLAN INCLUDED SERVICES	PLAN A	PLAN B	PLAN C	PLAN D	Other
<b>Maintenance Parts:</b>					
• Scheduled maintenance parts as needed. <sup>1</sup>	✓	✓	✓	✓	✓
• Scheduled maintenance engine overhaul at ~40,000 engine hours.	No	No	✓	✓	No
<ul style="list-style-type: none"> <li>• Unscheduled maintenance parts as needed, including:</li> <li>• Engine assembly (Engine/Generator)</li> <li>• All power electronics components</li> <li>• All fuel system components</li> <li>• Optional/Accessory equipment (if installed)</li> <li>• Main battery pack</li> <li>• Heat Recovery Module (HRM) coil</li> <li>• Advanced Power Server (APS)</li> <li>• Dual Mode Controller (DMC)</li> <li>• External Fuel Filter</li> <li>• External Regulator</li> </ul>	✓	✓	✓	✓	✓
<b>Maintenance Labor:</b>					
• Scheduled maintenance labor.	No	✓	No	✓	✓
• Unscheduled maintenance labor.	No	✓	No	✓	✓
<b>Additional Services:</b>					
• Access to Capstone's Support Center, including 24/7 access to Emergency Technical Support.	✓	✓	✓	✓	✓
• Priority response to unscheduled maintenance service requests.	No	✓	No	✓	✓
• System software upgrades as released by Capstone.	✓	✓	✓	✓	✓
• Installation of system software upgrades.	No	✓	No	✓	✓

<sup>1</sup>: Pursuant to the then current Capstone Standard Maintenance Schedule (Capstone document number 440000).

## C. Service Conditions

1. Sites must be clean, free of debris and any other obstructions, well lit, and operating in an environment that will not cause equipment damage or excessive usage, or need for replacement of consumables and filters outside the parameters of Capstone's standard service intervals.

2. Sites must be installed in accordance with all Capstone installation requirements. Installation must be performed or supervised by a currently certified Capstone Factory Trained Installer (FTI). A completed Installation Check List (ICL), signed by the FTI who performed/supervised the installation, must be on file with Capstone.

3. Sites must be commissioned in accordance with all Capstone specifications, and Capstone must have an approved Commissioning Checklist on file. Commissioning must be performed or supervised by a Capstone Authorized Service Provider (ASP), currently certified for the applicable equipment model(s).

4. Sites must be safe for personnel access and performance of all required troubleshooting and scheduled and unscheduled maintenance procedures. Where installation conditions require assistive equipment to access equipment and/or perform procedures (e.g. forklifts, ladders, etc.), site conditions and site standard operating procedures must allow for safe usage of such equipment.

## EXHIBIT "A"

5. Fuel must meet Capstone's then current Capstone Fuel Specification as defined in Capstone Technical Reference 410002 Capstone Microturbine Fuel Requirements Technical Reference.

6. For purposes of this Service Agreement, customers shall communicate directly with Distributor, and Capstone shall communicate directly with Distributor. Distributor shall coordinate any communications between Distributor's customers and Capstone.

### D. Term of Agreement

1. *Start of Services*: The Services shall commence on June 1, 2020.

2. *End of Services*: The Services shall expire as specified by the Plan elected, either by years or by total run hours, whichever comes first.

### E. Payment Terms

1. Payment for the Service Agreement will be made in equal annual installments as listed for each site. The first installment is due upon the Start of Services Date (see Section D above). The remaining periodic payments will be due 30 days prior to the start of each succeeding billing period.

2. Unless otherwise provided for in the payment descriptions above, payments for Services are due 30 calendar days from date of the invoicing, are stated in U.S. dollars, and exclude sales and other taxes.

3. Overdue payments shall be subject to a late charge, calculated from the date of invoice on the date of payment, equal to the lesser of 1.5% per month or the highest applicable rate allowed by law. The foregoing shall in no way limit any other remedy that may be available to Cal Microturbine, Inc.

4. Purchaser's obligations to Cal Microturbine, Inc. to pay in full all amounts owed to Cal Microturbine, Inc. as of the termination or expiration of this Agreement shall survive the termination for any reason or expiration of this Agreement.

5. Cal Microturbine, Inc. may adjust pricing for the services provided hereunder upon written notice to Purchaser should the total Consumer Price Index (CPI) exceed 3% for the 12 months immediately preceding.

6. All prices/discounts set forth are provided with the expectation that the contract will continue to be in effect for the entire duration of its specified term. However, in the event that the contract is cancelled prior to the contract end date, client will be subject to (i) repayment of any special discounts provided herein, (ii) reimbursement to Capstone for any amounts owed pertaining to parts shipped and/or services provided, and (iii) any additional cancellation fees which Capstone may deem appropriate to be charged on a case by case basis.

### F. Excluded Services

The following are specifically excluded from the Agreement:

1. Changes to the original design and configuration (alterations from "as commissioned").
2. Application engineering and installation; correction of latent or discovered defects or equipment failure due to application engineering, installation, settings and/or connections. For example, damages due to inadequate ventilation.
3. Operation of the Covered Equipment outside of Capstone's then current standard operating guidelines defined in the Capstone User Manual.
4. Usage/consumption of consumables (i.e. filters) outside the parameters of Capstone's standard service intervals.
5. Operation of Covered Equipment on a day-to-day basis.

## EXHIBIT "A"

6. Emissions testing or testing of exhaust gas.
7. Fuel analysis or laboratory analysis to confirm fuel composition.
8. Operator classroom training.
9. Any expenses resulting from failure to meet, or incurred as a result of, correcting deficiencies in order to meet Service Conditions specified in Section C above.
10. Operator classroom training
11. Tooling required to support performing Services on the Covered Equipment, e.g. maintenance tools, assistive lifting devices, trucks, crane or forklift rentals, etc.
12. Any expenses resulting from improper maintenance of Covered Equipment performed by any non-Capstone Authorized Service Provider.
13. Any expenses resulting from Force Majeure events.
14. Any expenses resulting from power quality disturbances (e.g. sags, surges, and harmonics) in grid-connected operation.
15. Any services requested by or performed by Customer which are determined, in Capstone's sole discretion, to be outside the scope of this Agreement.
16. Internet connection or related fees.
17. Balance of plant equipment: Cal Microturbine will provide Services for the Covered Equipment listed in Exhibit 1 only, as may be amended by the parties from time to time in writing.

**Pursuant to this Services Agreement (the "Agreement"), Purchaser hereby authorizes Cal Microturbine, Inc. to provide the services described above (the "Services"), including the provision of any necessary parts (the "Parts"), on the Capstone Turbine generator systems, controls and/ or accessories identified above (the "Covered Equipment") in accordance with and subject to the terms and conditions described above.**

1. The price, payment terms and scope of services for each of the Services (the "Scope of Services") are set forth in above section. If repairs or additional labor outside of the applicable Scope of Services are determined to be necessary and the required repairs are authorized by Purchaser, then additional labor and other costs and expenses will be ( i) billed by CM to Customer at the then effective CM Factory Service Rates, as such terms and provisions are revised by CM from time to time and ( ii) Parts will be billed at the then prevailing Capstone list price. If any action of CM is required outside the scope of this Agreement, mobilization charges will be as described in Capstone's then current Factory Service Rates.
2. This Agreement shall continue in effect for the term indicated in Section D of this Agreement unless Cal Microturbine terminates this Agreement by delivering to Purchaser written notice in the event of: (i) Purchaser's breach of any material term or condition of this Agreement; or (ii) Purchaser's failure to pay when due any amount owed by Purchaser to Cal Microturbine under any agreement with Cal Microturbine. If Purchaser fails to pay when due any amount owed by Purchaser to Cal Microturbine and this Agreement is not terminated Immediately by Cal Microturbine, Cal Microturbine may delay or cease performance of Services under this Agreement until payment in full is received or other payment arrangements are agreed to, at Cal Microturbine' reasonable discretion. The foregoing does not limit or restrict in any way Cal Microturbine' right to terminate this Agreement at any time following an event described in this Section.
3. **Cal Microturbine' Services; Warranty.** Cal Microturbine agrees that it will comply with applicable laws and regulations relating to its provision of the Services and such Services will be provided in a professional and workmanlike manner consistent with the applicable Scope of Services and with generally accepted industry standards and practices with regard to the type of services provided hereunder. Cal Microturbine on behalf of Capstone Turbine provides the warranties with respect to Parts and labor provided by Cal Microturbine for the applicable Covered Product
4. **Purchaser's Representations.** Purchaser represents, warrants, and covenants that: (i) it has the right, power, and authority to enter into this Agreement and to perform fully its obligations hereunder; (ii) the making of this Agreement

## EXHIBIT "A"

does not violate any agreement existing between it and any other person or entity; (iii) it has obtained or will obtain all licenses and permits necessary for Cal Microturbine to perform the Services; (iv) all information provided by Purchaser to Cal Microturbine related to the Services and its ability to pay for the Services is complete and accurate; (v) it will arrange for Cal Microturbine's access to the facilities where the Covered Equipment is located as needed to perform the Services; and (vi) it will perform all of its obligations under this Agreement to the reasonable satisfaction of Cal Microturbine.

5. **Purchaser's Obligations.** In addition to all other obligations stated in this Agreement, when requested, Purchaser shall provide Cal Microturbine with: (i) records and information concerning the Covered Equipment; and (ii) any special tools or instruments needed for the Covered Equipment which Purchaser already possesses. Purchaser shall designate an authorized representative who shall be available to Cal Microturbine at all times while Cal Microturbine is performing the Services on Purchaser's premises. Purchaser agrees that the Scope of Services excludes all trade labor work and any supervision, management or regulation of Purchaser's employees, agents or contractors and work related thereto, and it does not include responsibility for planning, scheduling, monitoring or management of the work to be performed by Purchaser. Purchaser agrees that any written or oral reports and advice provided by Cal Microturbine to Purchaser in connection with the provision of Services shall be utilized solely by Purchaser and shall not be used or conveyed by Purchaser to any third party without a need to know for proper operation or maintenance for the Covered Equipment.

6. **Disclaimer.** EXCEPT AS SET FORTH IN SECTION 3, THE SERVICES ARE PROVIDED ON AN "AS IS" BASIS AND NO OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY ARE GIVEN FOR THE SERVICES, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH WARRANTIES ARE EXPRESSLY DISCLAIMED.

7. **Limitation of Liability in General.**

7.1 THE EXCLUSIVE REMEDY OF PURCHASER UNDER THIS AGREEMENT SHALL BE THE: CORRECTION OF NON-CONFORMITIES OF SERVICES; THE CORRECTION OF NON-CONFORMITIES OF PARTS; OR AS OTHERWISE PROVIDED IN THE SERVICE-RELATED WARRANTY.

7.2 Independent of, severable from, and to be enforced independently of any other enforceable provision of this Agreement, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES OF ANY KIND, OR FOR LOST GOODWILL, LOST PROFITS, LOST BUSINESS, COST OF COVER OR OTHER INDIRECT ECONOMIC DAMAGES, AND FURTHER INCLUDING INJURY TO PROPERTY, WHETHER SUCH CLAIM IS BASED ON THEORIES OF CONTRACT, CAL MICROTURBINE'S NEGLIGENCE, TORT (INCLUDING STRICT LIABILITY), AS A RESULT OF BREACH OF ANY WARRANTY OR OTHER TERM OF THIS AGREEMENT, OR OTHERWISE WITH RESPECT TO ANY NON-CONFORMANCE OF OR NON-CONFORMITY OR DEFICIENCY IN THE SERVICES OR PARTS, REGARDLESS OF WHETHER CAL MICROTURBINE WAS HAD REASON TO KNOW OR IN FACT KNEW OF THE POSSIBILITY OF SUCH DAMAGES. Purchaser shall indemnify, defend and hold Cal Microturbine harmless from and against all costs, fees (including attorneys' fees), losses, liabilities and expenses related to any personal injury, damage, or death related to Purchaser's improper use or operation of the Covered Equipment including, without limitation, those costs, losses, liabilities and expenses resulting from any product liability claim, to the extent such claim involves improper use or operation of the Covered Equipment.

7.3 The limitations of Cal Microturbine's obligations and Purchaser's remedies, as provided for in this Section, shall prevail over any conflicting or inconsistent provisions contained in any of the documents comprising this Agreement or any other document issued by Purchaser hereto or in any conflicting or inconsistent statement made by any representative of Cal Microturbine.

7.4 The rights, remedies and obligations of the Parties set forth in this Agreement, together with the attached exhibits, are the exclusive rights, remedies and obligations of the Parties hereunder and are in lieu of any other right, remedy, or obligation available at law or in equity.

8. **Dispute Resolution.** All disputes and claims arising out of this Agreement or any document referenced herein shall be settled by arbitration in Santa Ana, California by a panel of three arbitrators under the commercial arbitration rules of the American Arbitration Association or the Judicial Arbitration and Mediation Service. Such arbitration shall be conducted by three (3) arbitrators, one (1) chosen promptly by Cal Microturbine, one (1) chosen promptly by Purchaser and one (1) neutral arbitrator, selected by the first two arbitrators. The award of the arbitrators shall be final and binding and the parties' consent to the exclusive jurisdiction of any federal or state court in Orange County, California for purposes of enforcing any decision of the arbitration panel. The Parties agree that the prevailing Party in an arbitration proceeding shall be entitled to recover its reasonable attorneys' fees and expenses such prevailing Party incurred.

## EXHIBIT "A"

9. **Confidential Information, Intellectual Property Rights.** Purchaser shall not, directly or indirectly, modify or disassemble for the purpose of reverse engineering any Covered Equipment or components thereof. All intellectual property rights and confidential information relating to the Covered Equipment, and any information provided by Cal Microturbine to Purchaser under this Agreement, shall remain the sole property of Cal Microturbine. To the extent that the Parties have entered into a nondisclosure agreement ("NOA"), the terms of such NOA are incorporated into this Agreement. Purchaser's obligations related to confidentiality shall remain in effect and continue to bind Purchaser for five (5) years after the expiration or termination of this Agreement and Purchaser's obligation to maintain the secrecy of Cal Microturbine ' trade secret information shall continue for so long as such information is entitled to trade secret protection under California law. Purchaser acknowledges that a breach of its confidentiality obligations will cause irreparable rights, Cal Microturbine shall be entitled to temporary and permanent injunctive relief for the protection of its confidential information and intellectual property rights without posting a bond and without having to prove any actual damages.

### 10. **Miscellaneous**

10.1 **Governing Law.** This Agreement is governed by the laws of the State of California (as such laws are applied to contracts made and performed entirely within California, without regard to California 's conflicts of laws provisions) and federal laws applicable to patents and trademarks.

10.2 **Survival.** All provisions of this Agreement will survive its termination to the fullest extent necessary to give the Parties the full benefit of the bargain expressed in this Agreement. Notwithstanding the foregoing, Purchaser agrees that upon completion of the Services, any and all Service-Related Warranties shall expire as of such date.

10.3 **Assignment.** Purchaser may not assign this Agreement without the prior written consent of Cal Microturbine. Cal Microturbine may assign this Agreement to an entity wholly-owned by Cal Microturbine without the consent of Purchaser.

10.4 **Severability.** If any provision of this Agreement or the terms and conditions set forth herein is declared or found to be illegal, unenforceable, or void, the remaining provisions of this Agreement shall remain in full force and effect, subject to the immediately following provisions. In the event any provision of this Agreement is declared or found to be illegal, unenforceable or void, the Parties agree to negotiate in good faith a substitute provision that is legal and enforceable and is as nearly as possible consistent with the intentions underlying the original provision. If the remainder of the Agreement is not materially affected by such declaration or finding and is capable of substantial performance, then such remainder will be enforced to the extent permitted by law.

10.5 **Independent Review and Advice.** Each Party has full knowledge of the contents of this Agreement its legal consequences and any and all rights which each may have with respect to one another. Each Party has had the opportunity to receive Independent legal advice with respect to this Agreement and each Party enters into this Agreement of its own free will. The Parties expressly agree that there are no expectations contrary to the Agreement and no usage of trade or regular practice in the industry shall be used to modify any of the terms and provisions of the Agreement.

10.6 **Entire and Sole Agreement.** This Agreement constitutes the complete agreement with respect to the Services and supersedes all prior or contemporaneous proposals, agreements, representations, discussions and literature, written or oral, concerning the Services. This Agreement is not intended to change or alter any of the rights, duties, obligations, liabilities or limitations set forth in any other agreements between the Parties. The Parties' obligations with respect to confidential information reverse engineering and/or trade secrets shall be governed by, if applicable, the Direct Sales Agreement, the End User License, or any confidentiality agreements the Parties have entered into.

10.7 **Amendments .** This Agreement may not be modified or amended except in writing signed by a duly authorized representative of each Party.

10.8 **Force Majeure.** Each Party's performance shall be suspended (other than the obligation to pay monies due) for so long as such performance is hindered by events beyond its reasonable control. ("**Force Majeure**"), such as, but not limited to, riots, labor disputes of a general nature, national or civil wars, insurrections, rebellions, terrorist acts, embargoes, civil disturbances, earthquakes, dispositions or orders of governmental authority, acts of civil or military authority , fires, strikes, delays in transportation, inability to obtain necessary labor, manufacturing facilities or materials from usual sources and acts of God. Any delays resulting from a Force Majeure shall extend the time for performance correspondingly. If a failure to perform results from a governmental law, rule, regulation, disposition or order and the affected Party is unable to perform, after making reasonable efforts to comply, the matter shall be deemed a Force Majeure.

10.9 **No Third-Party Beneficiaries.** None of the terms of this Agreement are intended to confer to or benefit any person or entity other than the Parties to this Agreement any rights, remedies or other benefits under or by reason of this Agreement.

EXHIBIT "A"

10.10 **Waiver.** No waiver by either Party of any term contained herein (or any breach thereof) shall be effective unless it is in writing executed by the party waiving such term (or any breach thereof). No waiver shall be deemed or construed as a further or continuing waiver of any such term (or any breach thereof) on any other occasion or as a waiver of any other term (or any breach thereof) on the same or any other occasion. The delay or failure of any Party in providing written notice hereunder shall not constitute a waiver by such Party of any default or any further default under the Agreement.

CAL MICROTURBINE, INC.

CUSTOMER: IRVINE RANCH WATER DISTRICT

SIGNED: \_\_\_\_\_

SIGNED: \_\_\_\_\_

NAME: : \_\_\_\_\_

NAME: \_\_\_\_\_

TITLE: : \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: : \_\_\_\_\_

DATE: \_\_\_\_\_

EXHIBIT "A"

**FACTORY PROTECTION PLAN – END USER AGREEMENT**

**Exhibit 1**

SITE NAME	DESCRIPTION	MANUFACTURER	MODEL CONFIGURATION	SERIAL NO	*TRH
IRWD	C200	Capstone	DGSTR GAS, GC, UL	8825	1
IRWD	C200	Capstone	DGSTR GAS, GC, UL	8826	1
IRWD	C200	Capstone	DGSTR GAS, GC, UL	8827	1
IRWD	C200	Capstone	DGSTR GAS, GC, UL	8858	1
IRWD	C200	Capstone	DGSTR GAS, GC, UL	8859	1
IRWD	CLC	Capstone	Logic Controller	N/A	N/A
END	-	-	-	-	END

\*Turbine Run Hours

May 26, 2020

Prepared by: O. O'Neill / R. Mykitta

Submitted by: W. Chambers

Approved by: Paul A. Cook



## CONSENT CALENDAR

### THREE-YEAR CONTRACT AWARD FOR OPERATION AND MAINTENANCE OF MICROTURBINE AND BIOGAS TREATMENT SYSTEMS AT THE MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES

#### SUMMARY:

To ensure effective operation and maintenance of the Biosolids Energy Recovery Facilities, staff recommends approval to enter into an agreement for professional operation and maintenance (O&M) services from a qualified O&M contractor. Staff recommends the Board authorize the General Manager to execute a three-year contract with GI Energy for the Operation and Maintenance of Microturbine and Biogas Treatment Systems at the Michelson Water Recycling Plant (MWRP) Biosolids and Energy Recovery Facilities for a total amount of \$1,431,754.

#### BACKGROUND:

Construction of the Biosolids Energy Recovery Facilities is nearing completion and start-up activities are underway. To ensure efficient start-up and operation of the Microturbine and Biogas Treatment systems, a professional O&M contractor is needed. Staff received proposals from two pre-qualified O&M service providers: GI Energy and Synagro. Following its submittal, Synagro withdrew its proposal as it prefers to provide O&M services for the entire Biosolids Recovery Facility rather than the microturbine and biogas treatment systems only.

After a review of GI Energy's proposal, which is provided as Exhibit "A", and a visit to its facility, staff determined that GI Energy has the necessary experience and qualifications to perform the work. Provided as Exhibit "B" is GI Energy's Request for Information. Following discussions with staff regarding estimated costs and an enhanced understanding of the components of the project, GI Energy revised its proposal. The revisions are provided in Exhibit "C". The average annual cost for GI Energy's services is \$477,251, for a total three-year cost of \$1,431,754.

#### FISCAL IMPACTS:

Sufficient funding for the first 12 months of the contract are included in the approved FY 2019-2020 and FY 2020-2021 Operating budgets with the remaining term to be requested through the District's budget process.

#### ENVIRONMENTAL COMPLIANCE:

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

Consent Calendar: Three-year Contract Award for Operation and Maintenance of Microturbine and Biogas Treatment Systems at MWRP Biosolids and Energy Recovery Facilities

May 26, 2020

Page 2

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on May 19, 2020.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A THREE-YEAR OPERATION AND MAINTENANCE CONTRACT WITH GI ENERGY FOR THE OPERATION AND MAINTENANCE OF MICROTURBINE AND BIOGAS TREATMENT SYSTEMS AT THE MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES IN THE AMOUNT OF \$1,431,754.

LIST OF EXHIBITS:

- Exhibit "A" – GI Energy's Proposal for Operation and Maintenance of Microturbine and Biogas Treatment Systems
- Exhibit "B" – GI Energy's Request for Information
- Exhibit "C" – GI Energy's Proposal Amendment



ENERGY

*An affiliate of Shell New Energies US LLC*



## GI Energy Proposal for Irvine Ranch Water District O&M Project

January 10, 2020



## 1. Identification of Proposer

GI Energy ("GIE") has assembled a very qualified and experienced Project Operations & Maintenance ("Project O&M") team comprised of our own team of project management and O&M professionals in addition to Biogas Engineering as our nominated subcontractor. We believe the team we have assembled coupled with the Project O&M approach detailed in this proposal will provide the Irvine Ranch Water District (IRWD) with environmentally-compliant and high cogeneration plant availability O&M services that will meet or exceed all RFP requirements and reliably deliver performance for the 3-year contract period.

### 1.1. GI Energy

Locally-based team that will serve as project prime contractor and provide permit compliance, gas boosting station and cogeneration system operations and maintenance ("O&M") and overall project management and contract compliance services. GIE, majority owned by and an affiliate of Shell New Energies US LLC (Shell), specializes in distributed energy resources (DERs) and provides consulting, development, financial, engineering, management, construction and O&M services to hospitals, educational institutions, building owners, property developers, and utilities. We work with clients to develop outstanding reliable, resilient, clean and cost-effective energy infrastructure solutions, harnessing the best available technologies and world-class O&M services. GI Energy has designed, installed, recommissioned and provided maintenance services to over 33 megawatts of cogeneration assets.



#### 1.1.1. Biogas Engineering (Subcontractor)

GI Energy has appointed Biogas Engineering as the O&M Project subcontractor (major subcontractor to GI Energy). Biogas Engineering based in Signal Hill, California specializes in engineering, design, construction, project management, operations and maintenance for biogas collection and utilization projects – specifically digester gas and landfill gas. The company's expertise and focus are in providing cost effective solutions for complex engineering projects comprised of experienced industry professionals in civil, chemical and mechanical engineers.



The GI Energy team believes our proposal strikes the right balance between the IRWD's requirement to partner with GI Energy for the operations and maintenance of the Microturbine and Biogas Treatment Systems for the O & M project and comply with all regulatory and environmental permitting requirements.

### 1.1.2. Project O&M Responsibilities

<b>Scope/Responsibility</b>	<b>GI Energy</b>	<b>Biogas Engineering</b>
Prime O&M Project Contractor	✓	
O&M Project Subcontractor		✓
Start-Up and Commissioning Support, Observation and Guidance	✓	✓
SCAQMD PTO Conditions Compliance	✓	
Environmental Compliance	✓	✓
Biogas Pre-Treatment System O&M		✓
Biogas Post-Treatment System O&M		✓
Gas Blending and Booster Station O&M	✓	
Microturbine Cogeneration System O&M	✓	
System Availability Reporting	✓	
Monitoring, Reporting and Project Management	✓	✓

### 3. Scope

#### Operations & Maintenance Scope of Work Summary

GI Energy's proposed 3rd-party services to the IRWD will be focused on the core operations and maintenance activities associated with the MBT System while achieving compliance with emissions limits specified under the South Coast Air Quality Management District (SCAQMD) permit to construct and NPDES permit.

Additionally, GIE will provide value-added monitoring, reporting, project management and communications services.



The key sub-systems and equipment included in the GI Energy's scope and proposed pricing based on our understanding of the RFP scope includes the following:

- **Digester Gas Pre-Treatment System**
  - (2) Upstream raw gas separation units with single cartridge mesh filters
  - (2) SS 316 Hydrogen sulfide removal vessels with air spargers and 7.5 HP roots blower
  - (2) Iron sponge media charges
  - (2) Downstream raw gas separation units with single cartridge mesh filters
  - (3) 30 HP centrifugal booster blowers with PLC and HMI
  - (1) Biogas booster recycle line
  - (1) Economizing heat exchanger
  - (1) Glycol/gas heat exchanger with expansion tank
  - (1) Moisture removal coalescing filter
  - (1) 40-ton capacity glycol chiller with PLC and HMI
  - (1) Condensate trap
  - Balance of plant SS 316 piping, sensors, metering devices, electrical and controls wiring and valves
  
- **Digester Gas Post-Treatment System**
  - (2) 3-vessel siloxane removal trains (6 vessels total) with PLC and HMI
  - (6) Sil-X media charges
  - (2) Single cartridge type gas particulate filters
  - (1) Gas holding tank
  - (1) Gas blending controller

- (3) Vilters screw compressors with PLC and HMI
  - (1) Gas compressor recycle line
  - (1) Compressed gas heat exchanger
  - (1) 304 SS gas receiver tank
  - Balance of plant SS 316/304 piping, sensors, metering devices, electrical and controls wiring and valves
- **Microturbine Cogeneration System**
    - (5) 200 kW Capstone C200 microturbines with main PLC and HMI
    - (5) Cain heat recovery units
    - Balance of plant gas and hot water piping, sensors, metering devices, electrical and controls wiring and valves
  - **NOTE:** Electrical switchgear and high voltage device O&M responsibility to be initially retained by Owner.

Our scope also includes, but is not limited to, the supply, support and procurement of all consumables including H<sub>2</sub>S media, siloxane media, chemicals, lubricants, remote systems monitoring, equipment warranty monitoring, emissions equipment monitoring and service/calibration, necessary upgrades, preventive maintenance and periodic servicing, fuel management, equipment overhaul and/or repair and provision of generator-related services.

Please note, that GI Energy has not included budget estimates for H<sub>2</sub>S and siloxane charging and disposal in Section 7 "Budget" because media specifications and volumes are currently unavailable and it is not yet known of spent media will test as a hazardous waste.

The normal operation of the MWRP MBT System will follow the recommendations of the vendor supplied installation, operations and maintenance manuals (IOM) and general good practices for facility operations. In addition, GI Energy has proposed that an IRWD-approved O&M Plan be adopted with period updates based on actual field conditions and learnings incorporated as updates over the term of the O&M contract.

Safety is of utmost priority and all operations are to follow the required IRWD safety procedures and training including, but not limited to:

- Task Hazard Analysis
- Personal Protective Equipment (PPE)
- Lock Out Tag Out energy isolation
- Fall Protection
- Hazard Notifications
- Spill Response
- Fire prevention & response

In addition, good site cleanliness and good “housekeeping” can improve safety by reducing trip hazards and allowing egress pathways to remain clear.

The following sections summarize tasks are indicative of those required for the installed MBT System following with the commencement of Normal and Emergency Operation and Maintenance activities. More detailed information is contained in the vendor IOM manuals and experience with the system may require modifications to these tasks or addition of new tasks as needed to provide reliable performance. These O&M tasks are first described in general and then in project specific terms.

Please refer to the Process Flow Diagrams and P&ID documents along with this description.

### **3.1. General O&M Activities**

#### **3.1.1. Daily general tasks:**

- 3.1.1.1. Walk the facility and identify and correct any unsafe conditions.
- 3.1.1.2. Look and listen for any signs of unusual operation.
- 3.1.1.3. Check pressure, temperature, flow and level gauges and transmitter outputs and record in daily reports as needed.
- 3.1.1.4. Identify any signs of abnormal wear or deterioration of equipment.
- 3.1.1.5. Identify and correct any obstructions or poor housekeeping practices.
- 3.1.1.6. Identify any leaks of liquids or gases and take appropriate corrective and clean up actions.
- 3.1.1.7. Report any safety or compliance issues to the Supervisor or GIE Project Manager.
- 3.1.1.8. Review logs, faults, alarms and remote monitoring telemetry.

#### **3.1.1 Weekly general tasks:**

In addition to the daily tasks;

- 3.1.1.1 Record performance parameters as needed.
- 3.1.1.2 Compile weekly reports.
- 3.1.1.3 Follow up on any actions indicated by daily inspections that require resolution.
- 3.1.1.4 Request guidance from the IRWD, Project Manager or Service Manager as appropriate and as needed for upcoming tasks or issues.
- 3.1.1.5 Compile and analyze operation data and inform the IRWD of any issues.
- 3.1.1.6 Perform visual observation to check the system operation and performance.
- 3.1.1.7 Coordinate sub-contractor activities such as lab sample analysis, permit required testing, instrument calibrations.

- 3.1.1.8 Check and maintain stock of spare parts and expendable materials such as calibration gases, belts, hoses, gaskets, fuses, PPE and other (assumed to be stored at MWRP)
- 3.1.1.9 Notify of the IRWD of upcoming preventive and routine maintenance activities, expected scheduling and activity duration, and estimated MBT System downtime, if any.
- 3.1.1.10 Perform preventive and routine maintenance as necessary to keep the MBT System available at 100% of design for the maximum amount of availability in a safe manner.
- 3.1.1.11 Standing GI Energy Project Manager briefing and status report with IRWD O&M Project staff.

### 3.1.2 Monthly general tasks:

In addition to the daily and weekly tasks;

- 3.1.2.1 Compile and provide monthly report data and documentation.
- 3.1.2.2 Summarize previous months key activities and issues.
- 3.1.2.3 Preview the upcoming months planned activities including any planned outages or planned non-routine activities.
- 3.1.2.4 Discuss and review potential controls and programming enhancements to improve system availability and electricity production.
- 3.1.2.5 Request guidance from the IRWD, Project Manager or O&M Service Manager, as appropriate and as needed, for upcoming tasks or issues.
- 3.1.2.6 1- and/or 2-hour O&M Project meetings as requested by the IRWD.

### 3.1.3 Quarterly general tasks:

In addition to the daily, weekly and monthly tasks;

- 3.1.3.1 Compile and provide quarterly report data and documentation.
- 3.1.3.2 Assemble monthly reports into quarterly report and amend as needed.
- 3.1.3.3 Calibration of analyzers, sensors and gauges, if necessary.
- 3.1.3.4 Discuss and review potential equipment replacements.

### 3.1.4 Annual general tasks:

In addition to the daily, weekly, monthly and quarterly tasks;

- 3.1.4.1 Plan and execute annual outage for required maintenance activities.
- 3.1.4.2 Calibration of analyzers, sensors and gauges.
- 3.1.4.3 Report any issues that may require changes to the coming contract year budget or schedule.

- 3.1.4.4 Identify performance optimization and cost reduction measures and estimated benefits and impacts.
- 3.1.4.5 Create and distribute annual report.
- 3.1.4.6 Review annual report with IRWD O&M Project staff if requested.

## 3.2 MBT Sub-System Key O&M Tasks

### 3.2.1 Biogas Pre-Treatment System:

- 3.2.1.1 Moisture Pad Separator Filters (40-DGL-FLT-0150 and 40-DGL-FLT-0160)
  - Monitor pressure drop during regular inspections, daily
  - Open & Inspect element, during annual shutdown
  - Replace elements as needed
- 3.2.1.2 Hydrogen Sulfide Removal Vessels (40-DGL-TK-0210, 40-DGL-TK-0220)
  - Monitor H<sub>2</sub>S removal efficiency with manual (Dräger Tube) measurements. The frequency will depend upon operation. Initially monitoring will be daily but reduce to weekly or bi-weekly based on performance. Increase frequency of testing if the outlet H<sub>2</sub>S levels start to increase.
  - Initially plan on replacement of H<sub>2</sub>S media at first 6 months of continuous operation, but adjust interval with IRWD approval based on test results and system performance.
  - NOTE:** Prior to the first replacement, the GI Energy team will prepare a media replacement procedure for IRWD review that will include a worker safety & PPE plan, media testing plan, disposal plan, required rolling stock, access requirements, and needed physical containments to eliminate the risk of media being introduced into the MWRP stormwater system (NPDES compliance).
  - Test and/or replace pressure vessel safety valves (PSV) as needed during annual shutdown.
  - Report any opening of the H<sub>2</sub>S vessels PSV, determine the cause and perform corrective action as needed.
- 3.2.1.3 Air Regeneration (40-AIR-BWR-0250)
  - Monitor operation with visual inspection daily.
  - Lubricate motor bearings per manufacturer's recommendations
  - Lubricate blower bearings per manufacturer's recommendations.
  - Replace wear items such as belts, expansion joints at annual shutdown based on observable wear or manufacturer's recommendations.

- 3.2.1.4 Gas Booster Blowers (40-DGL-BWR-0310, 40-DGL-BWR-0410, 40-DGL-BWR-0510)  
Monitor operation with visual inspection daily.  
Lubricate motor bearings per manufacturer's recommendations  
Lubricate blower bearings per manufacturer's recommendations.  
Replace wear items such as belts, expansion joints at annual shutdown or as needed based on observable wear.
- 3.2.1.5 Biogas Booster Recycle Line (40-DGM-FCV-0625)  
Monitor valve actuator during daily inspections  
Adjust limit switches as needed.
- 3.2.1.6 Economizing Heat Exchanger (40-DGM-EXR-0611)  
Monitor operation during daily inspections.  
Trend temperatures weekly and note any changes that would indicate loss of performance. Note pressure drops and record for reports.  
Take corrective action for pressure or temperature changes that indicate plugging, fouling or other performance issues.  
Clean air side per supplier's recommendations.  
Check fan belt tension, as applicable. Adjust as needed.  
Lubricate motor as required by manufacturer.
- 3.2.1.7 Glycol Heat Exchanger (40-DGM-EXR-0610)  
Monitor operations daily.  
Note pressure drops and fluid temperatures and record for reports.  
Clean air side per supplier's recommendations.  
Check fan belt tension, as applicable. Adjust as needed.  
Lubricate motor as required by manufacturer.
- 3.2.1.8 Coalescing Filter (40-DGM-FLT-0610)  
Monitor pressure drop during regular inspections, daily  
Open & Inspect element, during annual shutdown  
Replace elements as needed

### 3.2.1.9 Chiller (40-DGM-CHR-0620)

Monitor Glycol fluid temperatures daily.

Check and add to fluid level as needed

Perform motor, compressor and pump maintenance per manufacturers recommendations.



## 3.2.2 Biogas Post-Treatment System

### 3.2.2.1 Siloxane Removal System (40-DGM-TK1410/1420/1430/1440/1450/1460)

Monitor Siloxane removal efficiency by taking samples and sending to a qualified lab test facility (see 3.3.2 below). The frequency will depend upon operation. Initially monitoring will be weekly or bi-weekly based but may be increased to monthly or quarterly based on performance, if acceptable to the IRWD.

Increase frequency of testing if the outlet Siloxane levels start to increase.

Initially plan on replacement of Siloxane media at first 6 months of continuous operation, but adjust interval with IRWD approval based on test results and system performance.

**NOTE:** Prior to the first replacement, the GI Energy team will prepare a media replacement procedure for IRWD review that will include a worker safety & PPE plan, media testing plan, disposal plan, required rolling stock, access requirements, and needed physical containments to eliminate the risk of media being introduced into the MWRP stormwater system (NPDES compliance).



Test and/or replace pressure vessel safety valves (PSV) as needed during annual shutdown.

Report any opening of the H<sub>2</sub>S vessels PSV, determine the cause and perform corrective action as needed.

### 3.2.2.2 Siloxane Sampling and Testing Method

Apply CAS AQL Method 111 for gas chromatography/mass spectrometry which tests for a 9-compound siloxane target list

Assemble and connect silicone tubing, rotameter and calibration tube, prepared slip stream and sampling tube(s) at designated sampling ports.

Take samples per Method and complete the Chain of Custody (COC) with the start and stop time flow rate and total sample volume and place in labeled Ziploc bag.

Send samples to ALS Environmental.

Receive and review laboratory results and provide reporting documentation.

### 3.2.2.3 Treated Gas Filter (40-DGM-FLT-1510 and 40-DGM-FLT-1520)

Monitor pressure drop during regular daily inspections

Open & Inspect element, during annual shutdowns

Replace elements as needed

## 3.2.3 Gas Blending and Compression

### 3.2.3.1 Gas Blending Station

Monitor valve actuators during daily inspections

Adjust limit switches as needed.

Confirm Natural Gas pressure regulator setting and performance whenever blending is used.

Monitoring, record-keeping and reporting of treated biogas flow, treated biogas Btu value, natural gas flow and blend ratio

### 3.2.3.2 Gas Compressors (40-DGH-CMP-1610, 40-DGH-CMP-1620, 40-DGH-CMP-1630)

Monitor operation with visual inspection daily.

Lubricate motor bearings per manufacturer's recommendations

Lubricate compressor bearings per manufacturer's recommendations.

Replace wear items such as expansion joints at annual shutdown or as needed

Monitor vibration records and consult the manufacturer if any excess vibration is observed.

Check lubricant level daily, add as needed.

Send oil samples for lab analysis as recommended by the supplier.



If any PSV has opened, determine cause and rectify.

Perform interval-based preventive maintenance per manufacturer's recommendations.

Monitoring, record-keeping and reporting of inlet and outlet gas pressure

Review spare parts requirements annually.

### 3.2.3.3 Gas Compressor Recycle Line

Monitor valve actuator during daily inspections

Adjust limit switches as needed.

Correct any air or gas leaks found.

### 3.2.3.4 Compressed Gas Heat Exchanger (40-DGH-EXR-1645)

Monitor operation during daily inspections.

Trend temperatures weekly and note any changes that would indicate loss of performance. Note pressure drops and record for reports.

Take corrective action for pressure or temperature changes that indicate plugging, fouling or other performance issues.

Clean air side per supplier's recommendations.

Check fan belt tension, as applicable. Adjust as needed.

Lubricate motor as required by manufacturer.

### 3.2.3.5 Gas Receiver (40-DGH-TK)

Test and/or replace pressure vessel safety valves (PSV) as needed during annual shutdown.

Report any opening of the H<sub>2</sub>S vessels PSV, determine the cause and perform corrective action as needed.

Monitoring, record-keeping and reporting of inlet and outlet gas pressure

## 3.2.4 **Microturbine System**

### 3.2.4.1 Microturbines (40-DGH-TUR-1710, 40-DGH-TUR-1720, 40-DGH-TUR-1730, 40-DGH-TUR-1740, 40-DGH-TUR-1750)

Establish a site air-quality profile following commissioning per manufacturer's recommendations

Monitoring, record-keeping and reporting of inlet blended biogas temperature and pressure

Monitoring, record-keeping and reporting of process hot water return pressure and temperature

Replace batteries as required (if equipped)



General Cleaning and Inspection (actual battery limits of executed Capstone Factory Protection plan must be reviewed):

- Inspect all enclosure panel/door seals and exhaust stack seal(s)/gasket(s).
- Ensure all gaskets are present, intact and that there are no gaps between gaskets and doors.
- Replace any damaged seal(s)/gasket(s).
- Inspect all air intake paths – engine combustion air and electronics cooling air.
- Remove dirt and debris, clean air paths as necessary.
- Inspect all engine exhaust paths. Remove dirt and debris, clean exhaust paths as necessary.
- Inspect and remove debris from enclosure interior. Use vacuum cleaner and/or damp, lint-free cloths as necessary to remove debris.
- Inspect all fuel system fittings and components for leaks. Tighten fittings, repair leaks, and/or replace damaged components, as required.
- Inspect and secure any loose cables and harnesses.
- Ensure that no cables or flexible conduits rest on either the brake resistors or High Power Connection Module (HPCM).
- Inspect surrounding area (3m/10ft radius where possible) for excessive dirt, dust or other sources of air contamination. Clean surrounding area thoroughly to reduce dirt and dust intake into microturbine. Refresh gravel at sites where gravel is used to reduce fine ground-level dirt.
- Inspect enclosure sides and roof for damage and chipped/peeling paint. Touch up paint if necessary.

Clean or replace engine intake air and enclosure air filters per manufacturer's recommendations.

Fuel System Inspection and Maintenance:

- Inspect all fittings, connections, filters, valves, and gas compressors for leaks, from the fuel supply inlet into the microturbine.
- Tighten fittings, repair leaks, and/or replace damaged components, as required



Start/stop/restart microturbines as necessary to ensure proper utilization of biogas.

Perform SCAQMD-approved handheld emissions testing for NOx and CO on a weekly basis and record results

Monitoring, record-keeping and reporting of microturbine runtime, cumulative hours, percent online, electrical power per microturbines (kWh/day), electricity supplied to MWRP, parasitic power, electrical efficiency and online factor,

### 3.2.4.2 (5) Heat Recovery Units (need to clarify if HRUs are included in the Capstone scope of work)

On a daily basis, perform visual inspections, record analog gauge readings recorded.

Any leaks discovered during inspections will be addressed and repair work schedule in accordance to the severity of the leak.

Major leaks will be contained immediately after inspection and reported to the Site Supervisor or Service Manager.

On a weekly basis, perform water treatment testing, testing water samples at each unit unless they are tied to a common loop then testing will be done at the intersection of the loop. Samples will be cooled prior to performing tests. Water Chemistry will be adjusted according to test results. Note: method of testing TBD once



chemistry data has been provided. Any major swing in water chemistry will be treated as an internal leak if a visual leak is not detected and will be addressed accordingly.

On a quarterly basis, all onboard safeties will be tested.

On an annual basis, the following inspections, repairs and replacements will be performed in conjunction with the scheduled MBT System outage:

- Exhaust damper actuator gaskets and O-rings will be replaced due to them being outside in the elements and containing sensitive electronic components, any needed lubrication will also be done at this time. Test actuator operation. A ladder will be needed to access the actuators so a spotter will accompany the tech servicing the actuators.
- Grease exhaust damper pillow block bearings during actuator service.
- Pressure gauge check for accuracy.
- Temperature gauge check for accuracy.
- Thermal couple check for accuracy.
- Air release valve replacement, due to the small orifices within, they tend to clog and not vent entrained air and gasses as designed so a PM replacement is scheduled. Isolation valve will be closed, air release valve will be vented of pressure then removed and replaced with a new one.

Monitoring, record-keeping and reporting of recoverable heat (Btu/microturbine), inlet temperature, outlet temperature, flow rate (gpm), calculated thermal efficiency, cooling water supply inlet/outlet temperatures and flow rate (gpm).

## 7 Budget

### Non-Recurring Budgets

Task	Duration	Labor	Mileage/ Vehicles	Parts/Services/ Consumables	Total Budget
<b>Task 1</b> - Operation during Construction Contractor's Startup Testing and Commissioning	6 Weeks (1.5 Months)	\$27,500.00	\$1300.00	\$0.00	\$28,800.00
<b>Task 2</b> - Operation to Achieve Performance Criteria  Final Acceptance Test Plan	6 Weeks (1.5 Months)	\$72,000.00	\$2240.00	\$0.00	\$74,240.00
<b>Task 2a – Project Plan</b>	4 Weeks (1 Month)	\$21,200.00	\$0.00	\$0.00	\$21,200.00
<b>TOTAL NON-RECURRING</b>		<b>\$120,700.00</b>	<b>\$3540.00</b>	<b>\$0.00</b>	<b>\$124,240.00</b>

### Assumptions

- Pre-Treatment System startup, commissioning, performance testing and final acceptance assumed to precede Post-Treatment and Microturbine Systems
- We assume that GI Energy will prepare an acceptance plan and conduct an onsite meeting with the IRWD prior to the acceptance test. This plan will include:
  - Objective
  - Parameters to be monitored for capacity, reliability and system current conditions (oil levels etc.)
  - Measures/testing procedure if the DG is not available at full capacity
  - Anticipated preventive maintenance schedule
  - Reporting schedule
  - Plan of operation for test (if it is not a continuous operation)
  - Who will be attending the tests
- It is assumed that system acceptance test will be comprised of full 5 days continuous operation and analysis of gathered data for the Pre-Treatment System and that the GI Energy team will be in attendance for evaluation, monitoring and reporting purposes
- It is assumed that system acceptance test will be comprised of full 5 days continuous operation and analysis of gathered data for the Post-Treatment and Microturbine system and that the GI Energy team will be in attendance
- Designated GI Energy and Biogas Engineering staff will attend all training

### Recurring Budgets – Contract Year 1

Task	Duration	Labor	Mileage/ Vehicles	Parts/Services/ Consumables	Total Budget
<b>Task 3</b> – Operations, Maintenance,	40 Weeks (9 Months)	\$385,000.00	\$28,800.00	\$60,000.00	\$473,800.00

EXHIBIT "A"

Monitoring, Reporting and Compliance					
<b>TOTAL NON-RECURRING ANNUAL</b>		<b>\$385,000.00</b>	<b>\$28,800.00</b>	<b>\$60,000.00</b>	<b>\$473,800.00</b>
<b>TOTAL NON-RECURRING MONTHLY</b>		<b>\$42,777.00</b>	<b>\$3200.00</b>	<b>\$6,666.00</b>	<b>\$52,644.44</b>

Assumptions

- Does not include H2S and Siloxane media replacement and disposal costs
- Assumes 1 replacement of H2S and Siloxane media
- 2.5% annual escalation applied for contract Year 2

**Recurring Budgets – Contract Year 2 (Full Year Operations & Maintenance)**

Task	Duration	Labor	Mileage/Vehicles	Parts/Services/Consumables	Total Budget
<b>Task 3</b> – Operations, Maintenance, Monitoring, Reporting and Compliance	52 Weeks (12 Months)	\$478,000.00	\$39,400.00	\$131,500.00	\$648,900.00
<b>TOTAL NON-RECURRING ANNUAL</b>		<b>\$478,000.00</b>	<b>\$39,400.00</b>	<b>\$60,000.00</b>	<b>\$648,900.00</b>
<b>TOTAL NON-RECURRING MONTHLY</b>		<b>\$39,833.33</b>	<b>\$3283.33</b>	<b>\$10,958.33</b>	<b>\$54,075.00</b>

Assumptions

- Does not include H2S and Siloxane media replacement and disposal costs
- Assumes 2 annual replacements of H2S and Siloxane media
- 2.5% annual escalation applied for contract Year 3

**Annual On-Call Budget Allowance**

Task	Duration	Labor	Mileage/Vehicles	Parts/Services/Consumables	Total Budget Allowance
<b>Task 4</b> – Emergency Operations	On-Call	\$97,000.00	\$3500.00	\$5000.00	\$105,500.00
<b>TOTAL ON-CALL</b>		<b>\$97,000.00</b>	<b>\$3500.00</b>	<b>\$5,000.00</b>	<b>\$105,000.00</b>

Assumptions

- Applicable overtime rates for GI Energy and Biogas Energy staff included
- Unused balance of Emergency Operation On-Call Budget Allowance to be credited towards next contract year Allowance budget

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**To:** Owen O'Neill, Electrical & Instrumentation Manager, Irvine Ranch Water District  
**From:** Jeff Bogg, Senior Vice President, GI Energy  
**Cc:** Leti Rodriguez, Sales Manager, GI Energy  
**Date:** January 22, 2020  
**Re: RFP for the Operation and Maintenance of Microturbine and Biogas Treatment Systems – Request for Information (RFI) #1**

Dear Owen:

On behalf of GI Energy, I am pleased to present you with answers and supplemental information in connection with your January 16<sup>th</sup> email to GI Energy. Our RFI responses are as follows:

**IRWD Question #1** - *On Page 5, there is a matrix outlining project O&M responsibilities. A impactful, perhaps the most impactful, portion of the project (Biogas pre and post treatment) will be subcontracted to Biogas engineering. Biogas engineering appears to have a significant amount of experience with projects similar to ours. Given their experience level, could you please speak to the statement on page 10 as to why media replacement and disposal costs were excluded from the price proposal? The current price proposal indicates to us that the media replacement and disposal costs were included.*

**GI Energy Response #1** – The GI Energy team was unsure of the gas composition and the trace impurities that could be potentially present in the biogas. In our judgment at the time of proposal preparation, it would have been premature to assume that the media will be nonhazardous, without knowing the time of operation (how long the media was in service) and other parameters which would impact that classification. Accordingly, we excluded this cost in our proposal to err on the side of caution.

However, assuming the media will be nonhazardous (which can be disposed in nonhazardous [27 CCR 20220](#) landfills) and the removal and replacement work can be performed in 3 days (for H<sub>2</sub>S vessels and for Siloxane removal vessel), the cost per changeout is roughly estimated to be as follows:

- **Siloxane Media** - Approximately \$165,000 to \$175,000/change out (excluding taxes) for Siloxane vessels (3 vessels/1 train) – assuming the media is sSorb Silica Gel Beads (\$7.16/lbs of media), Type A – Colorless. Please note that the media currently specified in the O&M plan is proprietary, and we were unable to receive a quotation. GI Energy

## EXHIBIT "B"

is providing you a media which we believe to be nearly identical, if the media cost is different, we will revise the budgetary estimate.

- H2S Media - Approximately \$40,000 to \$50,000/changeout for the replacement of H2S media (both vessels) – assuming the media is iron sponge.

The proposal budget estimates presented above include media replacement, shipping and disposal costs. Labor, equipment, rolling stock and nitrogen purge of each vessel during the changeout costs are already included in GI Energy's budget. GI Energy will update and amend and amend Section 7 Budgets Non-Recurring Task 3 – Operations, Maintenance, Monitoring, Reporting and Compliance under separate cover.

**IRWD Question #2** - *On Page 10, does GI energy or Biogas Engineering expect the spent H2S and Siloxane media to be HAZ waste?*

**GI Energy Response #2** - No, we do not anticipate the media to be hazardous, however, it will be imperative that it be laboratory tested prior to final disposal. If an independent and qualified laboratory concludes that media is hazardous, a revised budget estimate for disposal will be prepared for the IRWD.

**IRWD Question #3** - *Does GI Energy have a contingency in the event their relationship with Biogas Engineering is severed mid contract period?*

**GI Energy Response #3** – Yes. GI Energy's business plan for IRWD O&M includes Biogas Engineering as a qualified subcontractor to provide consulting, advisory, training, operations and maintenance support services for the Pre- and Post-Treatment Systems for the critical first year of operations.

During the first year of operations Biogas Engineering will lead activities related to the O&M of the Pre- and Post-Treatment systems under GI Energy's direction in addition to providing GI Energy's O&M service technicians' training on the operation and maintenance of these systems. During the second contract year, GI Energy will assume lead responsibility for the daily, weekly and monthly activities and provide Biogas Engineering with scope to deliver oversight, troubleshooting and quality assurance services.

While GI Energy is highly confident that Biogas Engineering's interests in reliably serving us and the IRWD are aligned, if there is cause to terminate their contract after a year or more, GI Energy will be capable of delivering the services and performance required in the RFP as a consequence of the knowledge transfer and training received during the first year of operations.

**IRWD Question #4** - *Would it be possible for IRWD to tour Biogas Engineering's operation?*

**GI Energy Response #4** – Absolutely, we will be happy to provide you with both site and office tours. For the site tour, the most relevant and conveniently-located site will be the Victor Valley Wastewater Reclamation Authority, where Biogas Engineering provides on-call O&M services and is currently supporting several projects. Arnold Ramirez has been providing consulting and

## EXHIBIT "B"

engineering services for that site for past 6-8 years. Other site visits can of course be arranged at your request.

Please feel free to reach out to me or Leti directly with any additional questions you have.

Best regards,

Jeff Bogg  
Senior Vice President, Service Solutions  
Tel: (714) 916-2305  
jbogg@gienergyus.com

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EXHIBIT "C"

GI Energy Proposal Amendment #2  
Irvine Ranch Water District Biogas Operations & Maintenance Project  
March 10<sup>th</sup> 2020

**7 Budget**

GI Energy and Biogas Engineering met with the Irvine Ranch Water District on February 24<sup>th</sup>, 2020 to discuss Operations and Maintenance Project scope, risk and budget assumptions with the objective of reducing proposal Section 7 Budget pricing. Following the meeting, GI Energy and Biogas Engineering developed revised pricing which is presented herein.

**Task 1 and 2 Non-Recurring Budgets**

For Task 1 – “Operation during Construction Contractor’s Startup, Testing and Commissioning” and Task 2 – “Operations to Achieve Performance Criteria” - collectively referred to by GI Energy as the “Non-Recurring Budgets” - we now propose that these Tasks be billed to the IRWD on a time and materials basis. The reason for this relates to the inherent uncertainty around frequencies, durations and level of effort for Tasks 1 and 2.

With this proposed commercial approach, the IRWD can control the scope and budget on an “on call” and/or approved task order basis and be assured that the GI Energy team will be there to receive training and provide support and deliverables as requested. The 2020 rate schedule is as follows:

**Table 1. GI Energy 2020 Time and Material Rate Schedule for Tasks 1 and 2**

<b>Labor Category</b>	<b>Base Hourly Rate - \$/Hour</b>	<b>Overtime Rate - \$/Hour</b>
Principal	\$220.00	-
Project Manager	\$175.00	-
Project Engineer	\$175.00	-
O&M Field Technician	\$145.00	\$200.00
Administrative Assistant	\$75.00	-
	<b>\$/Mile</b>	
Mileage	\$2.75	-
	<b>Markup</b>	
Parts & Materials	15%	

Assumptions

- Field labor costs are prevailing wage.
- No budget ceiling proposed at this time due to scope and duration uncertainty.
- All T&M budgets authorized in writing advance by IRWD.
- Mileage charges assessed from point departure to MWRP.
- We assume that GI Energy will prepare an acceptance plan and conduct an onsite meeting with the IRWD prior to the acceptance test. This plan will include:
  - Objective
  - Parameters to be monitored for capacity, reliability and system current conditions (oil levels etc.)
  - Measures/testing procedure if the DG is not available at full capacity
  - Anticipated preventive maintenance schedule

EXHIBIT "C"

GI Energy Proposal Amendment #2

Irvine Ranch Water District Biogas Operations & Maintenance Project

March 10<sup>th</sup> 2020

- Reporting schedule
- Plan of operation for test (if it is not a continuous operation)
- Who will be attending the tests
- Approved and designated GI Energy and Biogas Engineering staff will attend all training required by IRWD.
- If the test conditions do not match with the design conditions, or the digester gas is not available due to issues beyond our control, we reserve the right to request an amendment to the operation and maintenance contract performance guarantees.
- Since the Microturbine and Biogas Treatment Systems were not designed or installed by the GI Energy team, we assume no liability for any equipment performance deficiencies for the existing system or any equipment, process or controls design deficiencies which might be observed during the acceptance or performance testing.
- Programming changes/setpoint changes will be performed by others, setpoints changes will be recommended and shared with IRWD prior to programming.

**Task 3 Recurring Budget – First 12 Months of Operations & Maintenance**

<b>Task</b>	<b>Duration</b>	<b>Labor</b>	<b>Mileage/ Field Service Trucks</b>	<b>Routine Parts/Services/ Consumables</b>	<b>Total Budget</b>
<b>Task 3 – Operations, Maintenance, Monitoring, Reporting and Compliance</b>	52 Weeks (12 Months)	\$292,000.00	\$32,200.00	\$60,800.00	\$385,000.00
<b>TOTAL RECURRING ANNUAL</b>		<b>\$292,000.00</b>	<b>\$32,200.00</b>	<b>\$60,800.00</b>	<b>\$385,000.00</b>
<b>TOTAL RECURRING MONTHLY</b>		<b>\$24,333.00</b>	<b>\$2,683.00</b>	<b>\$5,067.00</b>	<b>\$32,083.00</b>

Assumptions

- The cost does not include any allocation of budget to replace existing system or equipment in the event of failure, we expect the equipment warranty will be provided and maintained by the owner (IRWD) with the exception of the Capstone Protection Plan which will be administered by GI Energy.
- If a piece of equipment, system, parts or service in excess of \$5,000 value is required, GI Energy will notify IRWD immediately and an approval will be sought prior to performing the replacement/service. Any costs excess of \$5,000 will be billed outside the contract overall limit on a time and material basis.

## EXHIBIT "C"

### GI Energy Proposal Amendment #2

### Irvine Ranch Water District Biogas Operations & Maintenance Project

March 10<sup>th</sup> 2020

- We assume an inventory of equipment manufacturer recommended spare parts will be maintained by IRWD at the site and Biogas will have access to these parts 24x7. Any items which require more than \$2,000 of non-routine service/parts (up to \$20,000/year) from outside vendors will be billed under non routine maintenance. GI Energy will update client regarding the status of the inventory on a monthly basis so that the spare parts can be reordered and restocked by the client.
- IRWD will be notified prior to procuring parts and services.
- 2.0% annual contract escalation assumed.

### Task 4 Media Change-Out Schedule Pricing

Per IRWD's request from the February 24<sup>th</sup> 2020 meeting, GI Energy prepared schedule pricing (contract Task 4) for hydrogen sulfide (H<sub>2</sub>S) and siloxane media changeouts. The 2020 schedule prices are as follows:

- 2 Vessel H<sub>2</sub>S Media (Iron Sponge) Changeout: \$60,000.00
- 3 Vessel (1 train) Siloxane Media (Silica Gel Beads) Changeout: \$180,000.00

#### Assumptions

- Includes all direct and 3<sup>rd</sup>-party labor costs.
- Assumes work will be completed in 3 days.
- Vessel nitrogen purge costs included.
- Includes required rolling stock, equipment, tools and PPE to perform the work safely and efficiently.
- Non-hazardous waste transportation and disposal costs included.
- Media costs subject to change at time of IRWD media change-out approval.
- Labor and third-party annual cost escalation of 2.0%.

### Task 5 Annual On-Call Budget Allowance

Task	Duration	Labor	Mileage/ Vehicles	Parts/Services/ Consumables	Total Budget Allowance
Task 5 – Emergency Operations	On-Call	\$76,000.00	\$3500.00	\$5000.00	\$84,500.00
<b>TOTAL ON-CALL</b>		<b>\$76,000.00</b>	<b>\$3500.00</b>	<b>\$5,000.00</b>	<b>\$84,500.00</b>

#### Assumptions

- MWRP normal business hours assumed to be 7:00 AM to 6:00 PM. Emergency call outs during non-business hours.
- We assume 25% of the overall emergency hours spent by the O&M Field Technicians will be overtime hours and about 15% time will be double time.
- Applicable overtime rates for GI Energy team staff included
- Unused balance of Emergency Operation On-Call Budget Allowance to be credited towards next contract year Allowance budget

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May 26, 2020  
Prepared by: C. Smithson / D. Pardee  
Submitted by: C. Clary  
Approved by: Paul A. Cook 

## ACTION CALENDAR

### MID-CYCLE OPERATING BUDGET AND RATES FOR FISCAL YEAR 2020-21

#### SUMMARY:

A two-year operating budget for FY 2019-20 and FY 2020-21 was approved by the Board on April 22, 2019, and rates were adopted on June 24, 2019. Considering the hardships to many IRWD customers created by the impacts of COVID-19, staff recommends that the previously approved FY 2020-21 water and sewer rate increases, scheduled to become effective on July 1, 2020, be deferred.

#### BACKGROUND:

Staff conducted a detailed review of the approved budget for FY 2020-21 and will summarize the mid-cycle operating budget and assumptions in a PowerPoint presentation, provided as Exhibit "A". Staff recommends use of the Rate Stabilization Fund to cover any shortfall in revenues and expenses.

#### Water and Sewer Rates:

COVID-19 and its ramifications to IRWD customers has caused staff to recommend deferring the rate increase for FY 2020-21. In addition, changes in budget expenditure assumptions have occurred, including certain third-party agencies not passing through previously planned cost increases. Below is a summary of the net forecasted changes:

	(in millions)
Proposed Rate Revenue Reduction	\$ (4.6)
Forecasted Expense Variance	1.1
Projected Change in Net Income	\$ (3.5)

Staff recommends using the Rate Stabilization Fund to cover this difference. Deferment of a previously approved rate increase does not need to be noticed through the Proposition 218 process. IRWD would notify its customers of the deferment through messaging that would include the District's newsletter, website, social media, and on-hold messaging.

#### FISCAL IMPACTS:

Fiscal impacts are outlined above and are included in the exhibit provided.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on May 12, 2020.

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE MID-CYCLE OPERATING BUDGET UPDATE FOR FISCAL YEAR 2020-21 AND APPROVE DEFERRING THE POTABLE WATER, RECYCLED WATER, AND SEWER RATE INCREASES FOR FY 2020-21.

LIST OF EXHIBITS:

Exhibit "A" – Mid-cycle Operating Budget and Rates for FY 2020-21 PowerPoint Presentation

# Mid-Cycle Operating Budget and Rates for Fiscal Year 2020-21

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IRWD Board of Directors Meeting

May 26, 2020



# Presentation Agenda

## FY 2020-21 Operating Budget and Rates

- Key Assumptions
- Forecast Variances
- Use of Rate Stabilization Fund
- Rate Review
- Staff Recommendation

# Operating Budget and Rates



# Operating Budget Key Assumptions

	Approved Budget		Updated Assumptions
Assumptions	FY 2019-20	FY 2020-21	FY 2020-21
<b>Revenues:</b>			
Sales in Acre Feet (AF)	85,117	86,434	
Customer growth rate	3%	3%	
Revenue Rate Increase (millions)	\$6.70	\$4.60	\$0
<b>Expenses:</b>			
OCWD RA rate/AF	\$487	\$511	\$487
MWDOC potable rate /AF (effective January 1)	\$1,078	\$1,111	\$1,104
MWDOC non-potable rate /AF (effective January 1)	\$755	\$777	
Electricity rate increase*	0.0%	4.5%	

\* Increase may be postponed

# Other Operating Budget Key Assumptions

Approved Budget FY 2020-21	Updated Assumptions
<b>Labor:</b>	
Cost of living (COLA) at 3% per year	COLA expected to be 1.0%
Headcount - 4.5 positions	Headcount - 2 unbudgeted new positions
Vacancies at 7% and filled at midpoint of salary range	Vacancies at 6% and some positions filled above midpoint
<b>Operations:</b>	
Customer budget allocations	
BEA	
PERS funding at 25% - No OPEB funding	
Biosolids facility online for entire Fiscal Year	

# Operating Budget FY 2020-21

<b>Updated Assumptions</b>	<b>Expense Change*</b>
(in millions)	
Lower COLA increase	\$ (0.7)
Lower vacancy rate and some starting salaries above mid-point	1.5
Unbudgeted positions	0.4
Reduction in RA	(1.2)
Reduction in imported water due to higher use of native water	(1.1)
Additional Cybersecurity software services	0.3
Over-allocation projects funded by outside agencies	(0.3)
<b>Total Expense Variance</b>	<b>\$ (1.1)</b>

\* Increased expense / (reduced expense)

# Operating Budget FY 2020-21

## Forecast Variances from Approved Budget

(in millions)

<b>Proposed Rate Revenue Reduction</b>	<b>\$ (4.6)</b>
<b>Forecasted Expense Variance</b>	<b>1.1</b>
<b>Projected Change in Net Income</b>	<b>\$ (3.5)</b>
<b>Use of Rate Stabilization Fund</b>	<b>\$ 3.5</b>

# Replacement Fund Policy

## Replacement Fund Uses

	Category	Target
1	Capital Facilities	Long term replacement (RPM model data Min: 1-5 years 100% and 6-10 years 50%; Max: 1-10 years 100%)
2	Insurance	Catastrophic events and unplanned emergency repairs: 5 times the deductible (\$125K for property; \$100K general liability)
3	Variable Rate Hedge	Excluded based on current debt ratio (variable to fixed)
4	System Refurbishments	(included in # 1)
5	Environmental Compliance	(included in # 1)
6	Rate Stabilization	Mitigate the impact of short-term effects on user rates (3 year average net operating working capital)

# Customer Rates Review



# FY 2020-21 Rates

Potable Water				
	Low Volume	Base Rate	Inefficient	Wasteful
FY 2020-21 rates (approved)	\$1.54	\$2.12	\$4.91	\$13.65
FY 2019-20 rates (approved)	\$1.47	\$2.00	\$4.86	\$13.63
FY 2020-21 rates (recommended)	\$1.47	\$2.00	\$4.86	\$13.63
Recycled Water				
FY 2020-21 rates (approved)	\$1.25	\$1.72	\$3.28	\$6.97
FY 2019-20 rates (approved)	\$1.19	\$1.57	\$3.15	\$6.62
FY 2020-21 rates (recommended)	\$1.19	\$1.57	\$3.15	\$6.62
Fixed Service Charge				
	5/8" meter			
FY 2020-21 rates (approved)	\$10.40			
FY 2019-20 rates (approved)	\$10.35			
FY 2020-21 rates (recommended)	\$10.35			

# FY 2020-21 Rates

<b>Sewer</b>			
<b>Fixed Service Charge</b>			
Average Water Usage	Exceeds 10 ccfs per month	Falls between 5 and 10 ccfs	Falls below 5 ccfs
FY 2020-21 rates (approved)	\$26.35	\$23.70	\$19.75
FY 2019-20 rates (approved)	\$26.10	\$23.50	\$19.55
FY 2020-21 rates (recommended)	\$26.10	\$23.50	\$19.55

# Proposed Rates – FY 2020-21

## Typical Residential Customer

	Approved Rate	Proposed Rate
<b>Water</b>		
Service Charge *	\$10.40	\$10.35
Commodity Charge **	<u>22.54</u>	<u>21.35</u>
<i>Total Water Charge</i>	\$32.94	\$31.70
<b>Sewer</b>		
Service Charge *	<u>\$23.70</u>	<u>\$23.50</u>
<b>Total Typical Residential Monthly Bill</b>	<b>\$56.64</b>	<b>\$55.20</b>
Difference		<u>(\$1.44)</u>

\* Treated water service charge assumes a 5/8" x 3/4" meter. Both the water and sewer service charges include components for enhancement and replacement capital.

\*\* Commodity charges for a typical residential customer are based on 12 ccf (District average).

Approved FY 2020-21: Low Volume \$1.54

Base \$2.12

Proposed FY 2020-21: Low Volume \$1.47

Base \$2.00

## Staff Recommendation

*That the Board receive and file the Mid-Cycle Operating Budget Update for Fiscal Year 2020-21, and approve the deferment of the potable water, recycled water, and sewer rate increases for FY 2020-21.*

# Questions / Discussion



May 26, 2020

Prepared by: A. Murphy / M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook



## ACTION CALENDAR

### SEWER SIPHON IMPROVEMENTS CONSTRUCTION AWARD

#### SUMMARY:

IRWD's sewer system includes 19 sewer siphons in various locations. In 2016, the District completed a preliminary condition assessment which ranked the siphons using criticality analysis and prioritized them based on a preliminary condition assessment, flow capacity, proximity to waterways, and age. This project will rehabilitate the four most critical sewer siphons. Staff recommends the Board:

- Authorize a budget increase in the amount of \$3,114,000, from \$6,632,000 to \$9,746,000, and
- Authorize the General Manager to execute a construction contract with Vido Artukovich & Son, Inc. in the amount of \$8,355,349.67 for the Sewer Siphons Improvements Project.

#### BACKGROUND:

IRWD's sewer system includes 19 sewer siphons in various locations. In 2016, the District completed a preliminary condition assessment and ranked these siphons using a criticality analysis, considering risk and consequence of failure. This analysis prioritized the siphons based on factors such as preliminary condition assessment, flow capacity, proximity to waterways and age. Staff identified the top four priority siphons for rehabilitation and retained Woodard and Curran to perform a condition assessment of the siphons and design improvements to address deficiencies. The siphons are located at: 1) San Diego Creek at Harvard Avenue, 2) Main Street and Veneto, 3) Harvard Avenue and Barranca Parkway, and 4) Orange County Transit Authority at Jamboree Road, and shown in Exhibit "A".

The assessment revealed that the siphon barrels and structures require significant rehabilitation due to age, corrosion caused by the highly corrosive sewer environment, partial or complete obstruction of siphon barrels, and inoperable flow control equipment. Woodard and Curran designed the required improvements to restore full capacity to the siphon barrels, improve reliability, enhance operation and maintenance of the siphons and reduce odors. The project improvements will include cleaning and cured-in-place pipe (CIPP) lining of the siphon barrels, rehabilitation of the vaults, new flow control structures, site and vault access improvements, construction of two grit traps, and installation of an odor control injection facility. After the completion of this project, the 15 remaining sewer siphons, which are less critical, will be rehabilitated through similar projects.

Construction Bid Process:

The project was advertised to a select bidders list of 31 mechanical and pipeline contractors on February 19, 2020. The bid opening was originally scheduled for March 19, 2020. Due to COVID-19, staff extended the bid period to April 30 and waived the pre-bid meeting requirement to increase contractor interest. Despite the extension, only two bids were received: one from Leatherwood Construction and the other from Vido Artukovich & Son, Inc. The bids are summarized in the table below.

<b>Bidder</b>	<b>Bid Amount</b>
Vido Artukovich & Son, Inc.	\$8,355,349.67
Leatherwood Construction	\$9,572,854.67
<i>Engineer's Estimate</i>	<i>\$5,884,350</i>

Vido Artukovich & Son, Inc. is the apparent low bidder with a bid of \$8,355,349.67, and its bid information is provided as Exhibit "B". Both contractor bids were significantly higher than the engineer's estimate of \$5,884,350. Receiving two bids from a select bidders list of 31 contractors, along with the higher bid amounts, reflect the complex nature of this project and the high volume of current construction work. The activities of cleaning, dewatering, and siphon rehabilitation by CIPP are complex and involved processes that were underestimated in the engineer's estimate. After researching the current market costs for each bid item with recent public agency construction bids, staff concluded that the bidders' prices are within the range of the current market and are not likely to be reduced significantly if the project is re-bid.

Staff has determined that Vido Artukovich & Son is well qualified to construct the improvements with extensive experience with sewer rehabilitation projects.

FISCAL IMPACTS:

Project 07886 is included in the FY 2019-20 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
07886	\$6,632,000	\$3,114,000	\$9,746,000

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 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption for the project was filed with the County of Orange on March 5, 2019.

RECOMMENDATION:

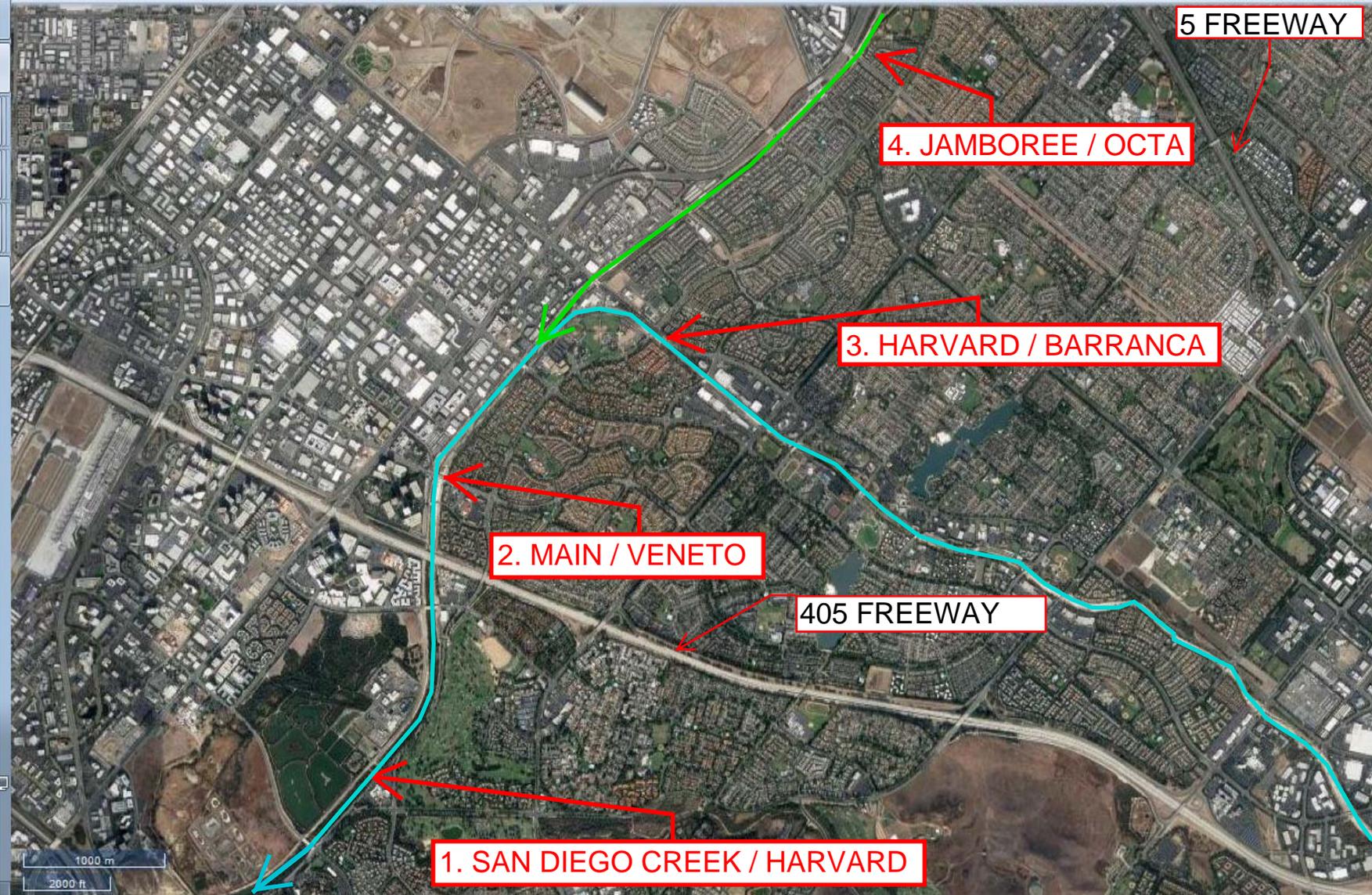
THAT THE BOARD AUTHORIZE A BUDGET INCREASE FOR PROJECT 07886 IN THE AMOUNT OF \$3,114,000, FROM \$6,632,000 TO \$9,746,000, AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH VIDO ARTUKOVICH & SON, INC. IN THE AMOUNT OF \$8,355,349.67 FOR THE SEWER SIPHON IMPROVEMENTS, PROJECT 07886.

LIST OF EXHIBITS:

Exhibit "A" – Project Location Map

Exhibit "B" – Bid Results

# EXHIBIT A-SEWER SIPHON IMPROVEMENTS LOCATION MAP



SAN DIEGO CREEK	
PETERS CANYON CREEK	

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Sewer Siphon Improvements (07886), bidding on April 30, 2020 2:30 PM (Pacific)

Printed 04/30/2020

**Bid Results****Bidder Details**

**Vendor Name** Vido Artukovich & Son, Inc./ Vidmar Inc. A JV  
**Address** 11155 Rush Street  
 South El Monte, CA 91733  
 United States

**Respondee** Anthony Artukovich  
**Respondee Title** Estimator  
**Phone** 626-444-4286 Ext.  
**Email** info@artukovich.com

**Vendor Type** CADIR  
**License #**  
**CADIR** 1000004168

**Bid Detail**

**Bid Format** Electronic  
**Submitted** April 30, 2020 2:02:19 PM (Pacific)  
**Delivery Method**  
**Bid Responsive**  
**Bid Status** Submitted  
**Confirmation #** 203571  
**Ranking** 0

**Respondee Comment****Buyer Comment****Attachments**

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

**Line Items**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
<b>BASE BID ITEMS</b>						
1	Mobilization/demobilization (excluding for CIPP-related activities), furnishing contract bonds and project permits, temporary traffic controls, potholing, project closeout, and cleanup.	LS	1	\$400,000.00	\$400,000.00	
2	Demolition including, but not limited to, demolition of hardscape, fencing, tree removal, clearing, and grubbing.	LS	1	\$200,000.00	\$200,000.00	
3	Construct site access improvements at each siphon site (i.e., at each of the upstream and downstream structure locations for the S2, S4, S6, and S10 Siphons) including, but not limited to: excavation, over-excavation and re-compaction, import/export, backfill, precise grading, constructing AC pavement, concrete curbs and gutters, retaining walls, fencing, pavement markings, traffic signage, and manhole frame and cover replacements (excluding procurement of manhole frames and covers) complete in place.	LS	1	\$600,000.00	\$600,000.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
4						Construct siphon upstream and downstream vault improvements including but not limited to: removal of top slabs, removal tops of walls to accommodate retrofit with new precast concrete slabs fitted with composite manhole frames and covers, removal of T-lock PVC sheet liner from all interior surfaces including chipping out of embedded portions, removal of all existing flow control devices, removal of all catwalks, coating of concrete surfaces, modifications to benches, installation of new flow control devices, installation of flow-through plug bypass system as-needed to complete work within the siphon vaults and barrels, dewatering of vaults, and abandonment of pipes as shown on the construction plans.
		LS	1	\$2,430,000.00	\$2,430,000.00	
5						Shallow concrete spall repairs for all siphon vault structure interior surfaces as needed, including areas from which existing PVC liner is removed.
		SF	7400	\$15.00	\$111,000.00	
6						Deep concrete spall repairs and rebar repair for all siphon vault structure interior surfaces as needed.
		SF	1000	\$100.00	\$100,000.00	
7						Joint sealant replacements for all siphon vault structures as needed.
		LF	380	\$100.00	\$38,000.00	
8						Concrete spot repairs for siphon vault structures as needed, including the top wall perimeter of all siphon vaults.
		LF	380	\$150.00	\$57,000.00	
9						Crack injection repairs for all siphon vault structures as needed.
		LF	40	\$125.00	\$5,000.00	
10						Perform initial cleaning, dewatering, and CCTV inspection of all Siphon barrels (i.e., each of the three barrels at the S2, S4, S6, and S10 Siphons).
		LS	1	\$900,000.00	\$900,000.00	
11						Decant debris removed from initial cleaning of all Siphon barrels and provide offsite disposal.
		CY	172	\$1,500.00	\$258,000.00	
12						Clean South Irvine Interceptor (SII) sewer and perform CCTV inspection in live flow post-cleaning (see construction plans for estimated debris quantities).
		LS	1	\$350,000.00	\$350,000.00	
13						Decant debris removed from SSI sewer and provide offsite disposal.
		CY	33	\$1,500.00	\$49,500.00	
14						Construct S2 Grit Trap and Air Vents.
		LS	1	\$250,000.00	\$250,000.00	
15						Construct slurry seal and restore pavement markings at S2 Air Vent site on Harvard Ave and S4 Air Jumper site on Main Street.
		LS	1	\$50,000.00	\$50,000.00	
16						Repair S4 air jumper as shown on the construction plans, followed by cleaning and CCTV inspection.
		LS	1	\$100,000.00	\$100,000.00	
17						Replace S6 Air Jumper, including abandonment of existing air jumper and construction of new 18" air jumper as shown on the construction plans, complete in place.
		LS	1	\$200,000.00	\$200,000.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
18	Construct S10 Grit Trap, Air Vent, Odor Control Chemical Dosing System (excluding procurement of chemical dosing skid), and abandon existing air jumper.	LS	1	\$585,000.00	\$585,000.00	
19	Procure chemical dosing skid in accordance with the pre-negotiated pricing provided in the Appendix.	LS	1	\$20,333.75	\$20,333.75	
20	Procure composite manhole frames and covers with locking mechanisms in accordance with the pre-negotiated pricing provided in the Appendix.	LS	1	\$69,015.92	\$69,015.92	
21	Mobilization and demobilization for S2 CIPP activities.	LS	1	\$45,000.00	\$45,000.00	
22	Provide and install CIPP lining of the S2 Siphon 30" barrel, including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	426	\$340.00	\$144,840.00	
23	Provide and install CIPP lining of the S2 Siphon 24" barrel, including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	426	\$320.00	\$136,320.00	
24	Provide and install CIPP lining of the S2 Siphon 15" barrel, including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	426	\$220.00	\$93,720.00	
25	Mobilization and demobilization for S4 CIPP activities.	LS	1	\$45,000.00	\$45,000.00	
26	Provide and install CIPP lining of the S4 Siphon 42" barrel, including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	455	\$460.00	\$209,300.00	
27	Provide and install CIPP lining of the S4 Siphon 24" barrel, including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	455	\$320.00	\$145,600.00	
28	Provide and install CIPP lining of the S4 Siphon 18" barrel, including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	455	\$220.00	\$100,100.00	
29	Mobilization and demobilization for S6 CIPP activities.	LS	1	\$45,000.00	\$45,000.00	
30	Provide and install CIPP lining of a S6 Siphon 24" barrel (North), including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	147	\$340.00	\$49,980.00	
31	Provide and install CIPP lining of the S6 Siphon 24" barrel (Center), including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	147	\$340.00	\$49,980.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
32	Provide and install CIPP lining of the S6 Siphon 24" barrel (South), including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	147	\$340.00	\$49,980.00	
33	Mobilization and demobilization for S10 CIPP activities.	LS	1	\$45,000.00	\$45,000.00	
34	Provide and install CIPP lining of the S10 Siphon 24" barrel (North), including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	183	\$330.00	\$60,390.00	
35	Provide and install CIPP lining of the S10 Siphon 18" barrel, including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection.	LF	183	\$300.00	\$54,900.00	
36	Provide and install CIPP lining of the S10 Siphon 24" barrel (South), including pre-CIPP installation cleaning, dewatering, and CCTV inspection and post-CIPP installation CCTV inspection	LF	183	\$330.00	\$60,390.00	
37	Furnish and Install Erosion Control Measures at all project sites and maintain compliance with the stormwater construction general permit.	LS	1	\$70,000.00	\$70,000.00	
38	Prepare and submit a Spill Prevention Control and Countermeasure Plan (SPCC) and an Odor Assessment and Odor Control Plan (OAOCP) to facilitate the work.	LS	1	\$35,000.00	\$35,000.00	
39	Dewatering of excavations including but not limited to the S2 and S10 grit trap sites.	LS	1	\$50,000.00	\$50,000.00	
40	State required line item for Labor Code sections 6705 and 6707, furnish and install Excavation and Trenching Safety Measures.	LS	1	\$75,000.00	\$75,000.00	
41	Provide startup testing and training, including submittal of Operations & Maintenance (O&M) Manuals.	LS	1	\$15,000.00	\$15,000.00	
42	Maintain redline markup set of drawings and submit final redline markup set.	LS	1	\$2,000.00	\$2,000.00	
				<b>Subtotal</b>	<b>\$8,355,349.67</b>	
43	<b>ADDITIVE AND DEDUCTIVE BID ITEMS</b> ADDITION (+) OR DEDUCTION (-)	LS	1	0	0	
				<b>Subtotal</b>	<b>0</b>	
				<b>Total</b>	<b>\$8,355,349.67</b>	

**Subcontractors**

Name & Address	Description	License Num	CADIR	Amount	Type
<b>Insituform Technologies, LLC</b> 10260 Matern Place Santa Fe Springs, CA 90670 United States	cipp	758411	1000009689	\$729,685.00	CADIR
<b>Zebron Contracting, Inc.</b> P.O. Box 2874 Newport Beach, CA 92659 United States	lining	855170	1000004993	\$372,560.00	

**B - 4**

PlanetBids, Inc.

**Bid Results**

<b>Name &amp; Address</b>	<b>Description</b>	<b>License Num</b>	<b>CADIR</b>	<b>Amount</b>	<b>Type</b>
<b>POWER JET ENGINEERING</b> 13941 Summit Drive Whitteri, CA 90602 United States	clean, dewater, cctv	1027586	1000048857	\$567,019.14	

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