

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

July 25, 2022

CALL TO ORDER 5:00 p.m.

PLEDGE OF ALLEGIANCE

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

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

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

Via Web: <https://irwd.webex.com/irwd/j.php?MTID=me94975bb693ac2a655576bb7e77f0db5>
Meeting Number (Access Code): 2492 147 4169
Meeting Password: TUhRPCip242

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

PUBLIC COMMENT NOTICE

Public comments are limited to three minutes per speaker on each subject. If you wish to address the Board of Directors on any item, you may attend the meeting in person and submit a “speaker slip” to the Secretary. Forms are provided outside of IRWD’s Board Room. If attending via Webex, please submit your request to speak, or your comment, via the “chat” feature and your remarks will be read into the record at the meeting. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 12:00 p.m. on Monday, July 25, 2022.

COMMUNICATIONS TO THE BOARD

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

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

PUBLIC HEARING

4. REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS

Recommendation:

- a. Open the hearing.
- b. Inquire of the Secretary how the hearing was noticed.
- c. Receive and file the affidavit of posting and proof of publication.
- d. Inquire of the Secretary if there have been any written communication.
- e. Request legal counsel to describe the nature of the proceedings.
- f. Inquire of the staff to provide a report.
- g. Inquire whether there are any individuals who wish to speak regarding the report on water quality relative to public health goals.
- h. Inquire of the Board if it has any comments or questions.
- i. Close the hearing and receive and file the report.

CONSENT CALENDAR – ITEMS 5 through 7

5. BOARD MEETING MINUTES

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

6. JUNE 2022 TREASURY REPORTS

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 June 2022 summary of payroll ACH payments in the total amount of \$2,171,526, and approve the June 2022 accounts payable disbursement summary of warrants 427729 through 428808, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$25,432,594.

7. FISCAL YEAR 2021-22 IRWD GUIDING PRINCIPLES SCORECARD

Recommendation: Receive and file.

ACTION CALENDAR

8. FLEMING ZONE 8 RESERVOIR AND ZONE 8 TO 9 PUMP STATION BUDGET INCREASE, CONSULTANT SELECTION, AND CONSTRUCTION AWARD

Recommendation: That the Board authorize a budget increase in the amount of \$7,739,000, from \$9,001,000 to \$16,740,000; authorize the General Manager to execute a Professional Services Agreement with Tetra Tech in the amount of \$330,000 for engineering support services during construction; and authorize the General Manager to execute a Construction Contract with Pacific Hydrotech Corporation in the amount of \$13,765,100 for the Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station, Project 10101.

9. COASTAL ZONE 1-2 AND 2-4 PUMP STATIONS REHABILITATION CONSULTANT SELECTION

Recommendation: That the Board authorize General Manager to execute a Professional Services Agreement with GHD in the amount of \$446,243 for design engineering services for the Coastal Zone 1-2 and 2-4 Pump Stations Rehabilitation, Project 11912.

OTHER BUSINESS

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

10. General Manager's Report
11. Receive oral update(s) from District liaison(s) regarding communities within IRWD's service area and provide information on relevant community events.
12. Directors' Comments

OTHER BUSINESS, continued

13. Closed Sessions

- A. CONFERENCE WITH LEGAL COUNSEL — ANTICIPATED LITIGATION – Pursuant to Government Code Section 54956.9(d)(2): significant exposure to litigation. (One potential case; California Barricade claim on file with the District.)
- B. CLOSED SESSION CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION – Pursuant to Government Code Section Gov. Code § 54956.9(d)(4) – *Initiation of litigation (one case)* – Potential condemnation action for mitigation lands
- C. CONFERENCE WITH REAL PROPERTY NEGOTIATORS – Pursuant to Government Code Section 54956.8:
 - Property:* Capacity rights in the SOCWA Effluent Transmission Main and Aliso Creek Ocean Outfall
 - Agency Negotiator:* Paul Cook, General Manager, and Kevin Burton, Executive Director of Technical Services
 - Negotiating Parties:* El Toro Water District
 - Under negotiation:* Price and Terms of Payment

14. Open Session


15. Adjournment

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the 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.

July 25, 2022

Prepared by: L. Oldewage

Submitted by: J. Colston / K. Burton

Approved by: Paul A. Cook 

PUBLIC HEARING

REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS

SUMMARY:

The 2022 Report on Water Quality Relative to Public Health Goals is a triennial report required by the California Health and Safety Code summarizing constituents detected in the District's water supply at levels exceeding applicable Public Health Goals or Maximum Contaminant Level Goals during calendar years 2019, 2020 and 2021. A Public Hearing regarding the report will be held at this Board meeting to accept any public comments that may be provided regarding the report.

BACKGROUND:

The California Health and Safety Code, Section 116470, requires public water systems with more than 10,000 service connections to prepare a brief written report that provides information regarding the detection of any contaminants above the Public Health Goals adopted by the State Office of Environmental Health Hazard Assessment or the Maximum Contaminant Level Goals set by the United States Environmental Protection Agency. These reports are intended to provide information to the public in addition to the Consumer Confidence Report that is mailed annually to each customer. The California Department of Public Health does not require public water systems to take any action to reduce or eliminate any exceedance of a public health goal.

A public water system that is required to prepare a Public Health Goal Report is also required to hold a Public Hearing for the purpose of accepting and responding to public comments regarding the report. The Public Hearing may be part of any regularly scheduled meeting. Due to the detection of a number of contaminants detected in the IRWD potable water system above the Public Health Goals, the District is required to prepare a Public Health Goal Report and hold a Public Hearing at which time public comments may be provided regarding the report. Attached as Exhibit "A" is the District's 2022 Report on Water Quality Relative to Public Health Goals.

OUTLINE OF PROCEEDINGS

President: Declare this to be the time and place for the Hearing on the Report on Water Quality Relative to Public Health Goals and declare the Hearing open.

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

Secretary: The Notice of the Hearing was published in the Orange County Register on July 10 and 17, 2022. A Notice was also posted in the District office and on the District website on July 7, 2022.

The Secretary presents an Affidavit of Posting and the Proof of Publication for the Board to receive and file.

Board: RECOMMENDATION: RECEIVE AND FILE THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY.

President: Is there a motion for receiving and filing the Affidavit of posting? Is there a second? All in favor, say aye, opposing, or abstaining. *State if the motion carries, and with the vote.*

President: Inquire of the Secretary whether there have been any written communications.

Secretary: Respond.

President: Request legal counsel to describe the nature of the proceeding.

Counsel: This Public Hearing is required under Health and Safety Code Section 116470(c) for the purpose of the Board accepting and responding to any public comment on the 2022 Report on Water Quality Relative to Public Health Goals, including exceedance of and steps to treat any contaminant to meet any State Public Health Goal or any National Maximum Contaminant Level Goal.

President: Inquire if staff would like to give a report.

Staff: Respond.

President: Inquire whether there is anyone present who wishes to address the Board concerning the Report on Water Quality Relative to Public Health Goals.
Inquire whether there are any comments or questions from members of the Board of Directors. State that the Hearing will be closed and the Board is to receive and file the report.

Board: RECOMMENDATION: THAT THE HEARING BE CLOSED AND THAT THE 2022 REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS BE RECEIVED AND FILED.

President: Is there a motion for closing the Hearing and filing the 2022 Report on Water Quality relative to Public Health Goals? Is there a second? All in favor, say aye, opposing, or abstaining. *State if the motion carries, and with the vote.*

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

The 2022 Report on Water Quality Relative to Public Health Goals was reviewed by the Engineering and Operations Committee on June 21, 2022.

LIST OF EXHIBITS:

Exhibit "A" – 2022 Report on Water Quality Relative to Public Health Goals PWS #3010092

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EXHIBIT "A"

IRVINE RANCH WATER DISTRICT REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS PWS #3010092

BACKGROUND:

Provisions of the California Health and Safety Code¹ specify that larger (>10,000 service connections) water utilities prepare a special report by July 1, 2022, if the utilities' water quality measurements have exceeded any Public Health Goals (PHGs). PHGs are non-enforceable goals established by the California Environmental Protection Agency's (Cal-EPA's) Office of Environmental Health Hazard Assessment (OEHHA). The law also requires that where OEHHA has not adopted a PHG for a constituent, the water suppliers are to use the Maximum Contaminant Level Goals (MCLGs) adopted by United States Environmental Protection Agency (USEPA). Only constituents which have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed.²

There are a few constituents that are routinely detected in water systems at levels usually well below the drinking water standards for which no PHG or MCLG has yet been adopted by OEHHA or USEPA. These will be addressed in a future required report after a PHG has been adopted.

The law specifies what information is to be provided in the report.³

If a constituent was detected in Irvine Ranch Water District's (IRWD) water supply in 2019, 2020 or 2021 at a level exceeding an applicable PHG or MCLG, this report provides the information required by law. Included is the numerical public health risk for associated with the MCL and the PHG or MCLG, the category or type of risk to health that could be associated with each constituent, the best treatment technology available that could be used to reduce the constituent level, and an estimate of the cost to install that treatment if it is appropriate and feasible.

What Are PHGs?

PHGs are set by OEHHA and are based solely on public health risk considerations. None of the practical risk-management factors that are considered by the USEPA or the California State Water Resources Control Board Division of Drinking Water (DDW) in setting drinking water standards (MCLs) are considered in setting the PHGs. These factors include analytical detection capability, treatment technology available, benefits and costs. The PHGs are not enforceable and are not required to be met by any public water system. MCLGs are the federal equivalent to PHGs.

¹ California Health and Safety Code Section 116470

² Table of Regulated Constituents with MCLs, PHGs or MCLGs

³ See footnote 1 above

Water Quality Data Considered:

All of the water quality data collected by the IRWD system from 2019 to 2021 for purposes of determining compliance with drinking water standards was considered. This data was summarized in IRWD's Annual Consumer Confidence Reports which were distributed to all of IRWD's customers in 2019, 2020 and 2021.

Guidelines Followed:

The Association of California Water Agencies (ACWA) formed a workgroup which prepared guidelines for water utilities to use in preparing these required reports.⁴ The ACWA guidelines were used in the preparation of this report including the cost estimates. No guidance was available from state regulatory agencies.

Best Available Treatment Technology and Cost Estimates:

Both the USEPA and DDW adopt what are known as Best Available Technologies (BATs) which are the best-known methods of reducing contaminant levels to the MCL. Costs can be estimated for such technologies. However, since many PHGs and all MCLGs are set much lower than the MCL, it is not always possible or feasible to determine what treatment is needed to further reduce a constituent downward to or near the PHG or MCLG, many of which are set at zero. Estimating the costs to reduce a constituent to zero is not impossible because it is not possible to verify by analytical means that the level has been lowered to zero. In some cases, installing treatment to try and further reduce very low levels of one constituent may have adverse effects on other aspects of water quality.

CONSTITUENTS DETECTED THAT EXCEED A PHG OR A MCLG:

The following is a discussion of constituents that were detected in one or more of the IRWD's drinking water sources at levels above the PHG, or if no PHG, above the MCLG.

Arsenic:

The PHG for arsenic is 0.004 parts per billion (ppb). The MCL, or drinking water standard, for arsenic is 10 ppb. We have detected arsenic in four of IRWD's 18 Dyer Road Well Field (DRWF) wells at the following levels: 2.5 ppb in DRWF Well 4, 9.8 ppb in DRWF Well 5, 3.7 ppb in DRWF Well 6, and 4.7 ppb in DRWF Well 18. The water from all DRWF wells in operation is blended prior to entering the IRWD's drinking water distribution system. The highest concentration of arsenic measured at the entry point was 3.7 ppb. We have detected arsenic in five of IRWD's five Irvine Desalter Project (IDP) wells at the following levels: 3.2 ppb in IDP Well 76, 3.4 ppb in IDP Well 77, 3.7 ppb in IDP Well 107, 6.2 ppb in IDP Well 110 and 4.8 ppb in IDP Well 115. The

⁴ Health Risk Information for Public Health Goal Report, February 2022

highest concentration of arsenic detected in product water from the IDP Potable Treatment Plant (IDP/PTP) was 2.8 ppb. We have detected arsenic in treated imported water produced at the Baker Water Treatment Plant (BWTP); the highest level detected was 2.2 ppb. These levels were below the MCL. The category of health risk associated with arsenic, and the reason that a drinking water standard was adopted for it, is that some people who drink water containing arsenic above the MCL over many years may experience skin damage or circulatory system problems and may have an increased risk of cancer. The numerical health risk for cancer at a PHG of 0.004 ppb is 1×10^{-6} (1 in 1,000,000). The numerical health risk for cancer at a MCL of 10 ppb is 2.5×10^{-3} (2.5 in 1,000). The BATs for arsenic to lower the level below the MCL are Reverse Osmosis (RO), Ion Exchange (IE), activated alumina, lime softening, electro dialysis reversal, oxidation/filtration or coagulation/filtration. RO or IE would be required to attempt to lower the arsenic levels to below the PHG. The IDP Potable Treatment Plant (PTP) is an RO facility which reduces arsenic levels in water from the IDP wells, though the plant would probably need to be operated with 0% bypass to meet the PHG. The estimated cost to install and operate such a treatment system on DRWF Wells 4, 5, 6 and 18 that would reliably reduce the arsenic levels to below the PHG would be approximately \$20,960,000 per year including annualized capital and O&M costs. The estimated cost to install and operate such a treatment system at the BWTP that would reliably reduce the arsenic level to the MCLG would be approximately \$9,396,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$253 per year.

Bromate:

The PHG for bromate is 0.1 ppb. The MCL, or drinking water standard, for bromate is 10 ppb. Bromate was detected in imported water purchased from the MWD, the highest level detected was 5.9 ppb. These levels were below the MCL. The category of health risk associated with bromate, and the reason that a drinking water standard was adopted for it, is that people who drink water containing bromate above the MCL throughout their lifetime could experience an increased risk of cancer. The numerical health risk for a PHG of 0.1 ppb is 1×10^{-6} (1 in 1,000,000). The numerical health risk for a MCL of 10 ppb is 1×10^{-4} (1 in 10,000). The BATs for bromate to lower the level below the MCL is to control ozone dosage at the point of application in the treatment process. RO or IE would be required to attempt to lower the bromate level to below the PHG. The estimated cost to install and operate such a treatment system at each MWD turnout that would reliably reduce the bromate level to the PHG would be approximately \$248,541,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$2,071 per year.

Chlorite:

The PHG for chlorite is 0.05 parts per million (ppm). The MCL, or drinking water standard, for chlorite is 1.0 ppm. We have detected chlorite in the treated imported water produced at the Baker Water Treatment Plant (BWTP); the highest level detected was 0.57 ppm. These levels were below the MCL. The category of health risk associated

with chlorite, and the reason that a drinking water standard was adopted for it, is that people who drink water containing chlorite above the MCL throughout their lifetime could experience an increased risk of anemia (hemotoxicity) or neuro-behavioral effects (neurotoxicity). The numerical health risk for cancer at a PHG of 0.05 ppb is not applicable. The numerical health risk for cancer at a MCL of 10 ppb is not applicable. The BATs for chlorite to lower the level below the MCL is to control chlorine dioxide dosage at the point of application in the treatment process. The most cost-effective means to control chlorite levels to meet the PHG would be to discontinue chlorine dioxide application at the BWTP which would incur no new costs, so no cost estimate was prepared. However, this would eliminate the Santiago Reservoir as an emergency source of raw water supply to the BWTP facility.

Coliform Bacteria:

In the months of July 2019, April 2020, August 2020 and November 2020 1.3%, 0.8%, 0.7% and 0.7%, respectively, of drinking water samples collected from the potable distribution system were positive for total coliform bacteria. All total coliform positive samples were negative for *E. coli* bacteria. The MCL for coliform is 5% positive samples of all samples per month and the MCLG is zero. The reason for the coliform drinking water standard is to minimize the possibility of the water containing pathogens which are organisms that cause waterborne disease. Because coliform is only a surrogate indicator of the potential presence of pathogens, it is not possible to state a specific numerical health risk. While the USEPA normally sets MCLGs “at a level where no known or anticipated adverse effects on persons would occur”, they indicate that they cannot do so with coliforms.

Coliform bacteria are an indicator organism that are ubiquitous in nature and are not generally considered harmful. They are used because of the ease in monitoring and analysis. If a positive sample is found, it indicates a potential problem that needs to be investigated and follow up sampling done. It is not at all unusual for a system to have an occasional positive sample. It is difficult, if not impossible, to assure that a system will never get a positive sample.

We add chlorine at our sources to assure that the water served is microbiologically safe. The chlorine residual levels are carefully controlled to provide the best health protection without causing the water to have undesirable taste and odor or increasing the Disinfection Byproduct (DBP) level. The one single action that would most likely decrease the possibility of a system having positive coliform results would be to significantly increase the disinfectant residual. This would likely result in increased DBPs which have adverse health consequences. The limits to the amount of disinfectant residual allowed in the distribution system are the maximum residual disinfectant levels (MRDLs) as established by the Disinfectants and Disinfection Byproducts Rule (D/DBPR). This careful balance of treatment processes is essential to continue supplying our customers with safe drinking water.

Other equally important measures that we have implemented include: an effective cross-connection control program, maintenance of a disinfectant residual throughout our system, an effective monitoring and surveillance program and maintaining positive pressures in our distribution system. Our system has already taken all of the steps described by DDW as “best available technology” for coliform bacteria in Section 64447, Title 22, California Code of Regulations.

Fluoride:

The PHG for fluoride is 1 ppm. The MCL, or drinking water standard, for fluoride is 2 ppm. We have detected fluoride above the PHG in two of IRWD’s 27 wells at the following levels: 1.2 ppm in DRWF Well C8 and 1.6 ppm in DRWF Well C9. The level detected was below the MCL. The category of health risk associated with fluoride, and the reason that a drinking water standard was adopted for it, is that people who drink water containing fluoride above the MCL throughout their lifetime could experience an increased risk of musculoskeletal disease and tooth mottling. The numerical health risk for cancer at a PHG of 1 ppm is not applicable. The numerical health risk for cancer at a MCL of 2 ppm is not applicable. The water is blended with water pumped from up to 16 other wells located in the DRWF prior to delivery to the drinking water distribution system. The highest level of fluoride detected in the blended DRWF water was 0.91 ppm and the average level of fluoride in the blended DRWF was 0.60 ppm. Since the fluoride level in the blended DRWF water consistently does not exceed the PHG and the optimal level of fluoride in drinking water to prevent dental caries (or cavities) is 0.7 ppm no further treatment is necessary, so no cost estimate has been prepared.

Gross Alpha Activity (excluding Uranium):

OEHHA has not established a PHG for gross alpha activity. The MCLG for gross alpha activity is 0 picocuries per liter (pCi/l). The MCL, or drinking water standard, for gross alpha activity is 15 pCi/l. We have detected gross alpha activity in three of IRWD’s 27 wells at the following levels: 3.4 pCi/l in IDP DRWF Well C8, 3.7 pCi/l in IDP Well 77 and 12 pCi/L in IDP Well 107. Gross alpha activity was detected in imported water purchased from the MWD, and the highest level was 3 pCi/l. Gross alpha activity was detected in Manning Water Treatment Plant (MWTP) product water and the highest level was 4.6 pCi/l. All levels were below the MCL. The category of health risk associated with gross alpha activity, and the reason that a drinking water standard was adopted for it, is that people who drink water containing gross alpha activity above the MCL throughout their lifetime could experience an increased risk of cancer. The numerical health risk for a MCLG of 0 pCi/l is 0. Since gross alpha activity is not a specific chemical contaminant, but rather a group of radioactive elements the numeric health risk at the MCL of 15 pCi/l depends on the specific alpha emitting radionuclides present and is estimated to range from 1.0×10^{-3} (1 in 1,000) to 1.9×10^{-4} (1.9 in 10,000). The BATs for gross alpha activity to lower the level below the MCL are RO, IE, lime softening or coagulation/filtration. RO or IE would be required to attempt to lower the gross alpha activity level to the MCLG. The IDP PTP is an RO facility which reduces gross alpha activity levels in water from the IDP wells, though the plant would probably need to be

operated with 0% bypass to meet the PHG. The estimated cost to install and operate such a treatment system at the BWTP that would reliably reduce the gross alpha activity level to the MCLG would be approximately \$9,396,000 per year including annualized capital and O&M costs. The estimated cost to install and operate such a treatment system at each MWD turnout that would reliably reduce the gross alpha activity level to the MCLG would be approximately \$248,541,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$2,149 per year.

Gross Beta Activity:

OEHHA has not established a PHG for gross beta activity. The MCLG for gross beta activity is 0 pCi/l. The MCL or drinking water standard for gross beta activity is 50 pCi/l. Gross beta activity was detected in imported water purchased from the MWD and the highest level detected was 7 pCi/l. All levels were below the MCL. The category of health risk associated with gross beta activity, and the reason that a drinking water standard was adopted for it, is that people who drink water containing gross beta activity above the MCL throughout their lifetime could experience an increased risk of cancer. The numerical health risk for a MCLG of 0 pCi/l is 0. Since gross beta activity is not a specific chemical contaminant, but rather a group of radioactive elements the numeric health risk at the MCL of 50 pCi/l depends on the specific beta emitting radionuclides present and is estimated to range from 2.3×10^{-3} (2.3 in 1,000) to 4.5×10^{-4} (4.5 in 10,000). The BATs for gross beta activity to lower the level below the MCL are RO, IE, lime softening or coagulation/filtration. RO or IE would be required to attempt to lower the gross beta activity level to the MCLG. The estimated cost to install and operate such a treatment system at each MWD turnout that would reliably reduce the gross beta activity level to the MCLG would be approximately \$248,541,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$2,071 per year.

Uranium:

The PHG for uranium is 0.43 pCi/l. The MCL, or drinking water standard, for uranium is 20 pCi/l. We have detected uranium in five of IRWD's 27 wells at the following levels: 5.0 pCi/l in IDP Well 76, 3.1 pCi/l in IDP Well 77, 11 pCi/l in IDP Well 107, 4.5 pCi/l in IDP Well 107 and 1.1 pCi/l in Well 22. The IDP/PTP is an RO facility which reduces uranium levels in water from the IDP wells. Uranium was detected in the IDP/PTP product water at a level of 2.8 pCi/l. Uranium was detected in product water from the BWTP, the highest level detected was 2.1 pCi/l. Uranium was detected in imported water purchased from the MWD, the highest level detected was 3 pCi/l. These levels were below the MCL. The category of health risk associated with uranium, and the reason that a drinking water standard was adopted for it, is that people who drink water containing uranium above the MCL throughout their lifetime could experience kidney problems or an increased risk of cancer. The numerical health risk for cancer at a PHG of 0.43 pCi/l is 1×10^{-6} (1 in 1,000,000). The numerical health risk for cancer at a MCL of 20 pCi/l is 5×10^{-5} (5 in 100,000). The BATs for uranium to lower the level below the MCL

are RO, IE, lime softening or coagulation/filtration. RO or IE would be required to attempt to lower the uranium level to below the PHG. The IDP PTP and the Well 21/22 Desalter are RO facilities which reduce uranium levels in water from the IDP wells and Well 22, though the plants would probably need to be operated with 0% bypass to meet the PHG. The estimated cost to install and operate such a treatment system at the BWTP that would reliably reduce the uranium level to the MCLG would be approximately \$9,396,000 per year including annualized capital and O&M costs. The estimated cost to install and operate such a treatment system at each MWD turnout that would reliably reduce the uranium level to the MCLG would be approximately \$248,541,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$2,149 per year.

Combined Treatment Cost

Since the same technology is utilized to treat all of the constituents included in this report each of the locations above would only require a single treatment facility each to reduce levels of all of these constituents to below the PHG or MCLG. The estimated cost to install and operate such a treatment system on DRWF Wells 4, 5 6 and 18 that would reliably reduce the levels of arsenic to levels below the PHG or MCLG would be approximately \$20,960,000 per year including annualized capital and O&M costs. The estimated cost to install and operate such a treatment system at the BWTP that would reliably reduce the gross alpha activity and uranium levels (and chlorite levels, also) to the PHG or MCLG would be approximately \$9,396,000 per year including annualized capital and O&M costs. The estimated cost to install and operate such a treatment system at each MWD turnout that would reliably reduce the bromate, gross alpha activity, gross beta activity and uranium levels to the PHG or MCLG would be approximately \$248,541,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$2,324 per year to lower the levels of Arsenic, gross alpha activity, gross beta activity and uranium to levels below the PHG or MCLG.

SUMMARY OF PHG EXCEEDENCES:

CONTAMINANT	UNITS	PHG [MCLG]	MCL	Level of Detection
Arsenic	ppb	0.004	10	ND – 9.8
Bromate	ppb	0.1	10	ND – 5.9
Chlorite	ppm	0.05	1.0	ND – 0.57
Coliform Bacteria	% Present	0	5	0 – 1.3
Fluoride	ppm	1	2	ND – 1.6
Gross Alpha Activity	pCi/L	[0]	15	ND – 12
Gross Beta Activity	pCi/L	[0]	50	ND – 7
Uranium	pCi/L	0.43	20	ND – 11

Perchlorate, nitrate/nitrite nitrogen and nitrate nitrogen were detected in one or more source wells above the PHG. However, the existing treatment processes in place reduced

the concentration of these constituents to nondetectable levels or to levels less than the PHG. No further assessment of these constituents is needed for this report.

RECOMMENDATIONS FOR FURTHER ACTION:

The drinking water quality of the Irvine Ranch Water District meets all DDW and USEPA drinking water standards set to protect public health. To further reduce the levels of the constituents identified in this report that are already significantly below the health-based Maximum Contaminant Levels established to provide “safe drinking water”, additional costly treatment processes would be required. The effectiveness of the treatment processes to provide any significant reductions in constituent levels at these already low values is uncertain. The health protection benefits of these further hypothetical reductions are not at all clear and may not be quantifiable. Therefore, no action is proposed.

REFERENCES:

1. Excerpt from California Health & Safety Code: Section 116470 (b)
2. Table of Regulated Constituents with MCLs, PHGs or MCLGs
3. Health Risk Information for Public Health Goal Report, February 2022

REFERENCE NO. 1

CALIFORNIA PUBLIC HEALTH GOAL REQUIREMENTS

California Health and Safety Code
Section 116470

(b) On or before July 1, 1998, and every three years thereafter, public water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water that exceed the applicable public health goal, shall prepare a brief written report in plain language that does all of the following:

- (1) Identifies each contaminant detected in drinking water that exceeds the applicable public health goal.
- (2) Discloses the numerical public health risk, determined by the office, associated with the maximum contaminant level for each contaminant identified in paragraph (1) and the numerical public health risk determined by the office associated with the public health goal for that contaminant.
- (3) Identifies the category of risk to public health, including, but not limited to, carcinogenic, mutagenic, teratogenic, and acute toxicity, associated with exposure to the contaminant in drinking water, and includes a brief plainly worded description of these terms.
- (4) Describes the best available technology, if any is then available on a commercial basis, to remove the contaminant or reduce the concentration of the contaminant. The public water system may, solely at its own discretion, briefly describe actions that have been taken on its own, or by other entities, to prevent the introduction of the contaminant into drinking water supplies.
- (5) Estimates the aggregate cost and the cost per customer of utilizing the technology described in paragraph (4), if any, to reduce the concentration of that contaminant in drinking water to a level at or below the public health goal.
- (6) Briefly describes what action, if any, the local water purveyor intends to take to reduce the concentration of the contaminant in public drinking water supplies and the basis for that decision.

(c) Public water systems required to prepare a report pursuant to subdivision (b) shall hold a public hearing for the purpose of accepting and responding to public comment on the report. Public water systems may hold the public hearing as part of any regularly scheduled meeting.

(d) The department shall not require a public water system to take any action to reduce or eliminate any exceedance of a public health goal.

(e) Enforcement of this section does not require the department to amend a public water system's operating permit.

(f) Pending adoption of a public health goal by the Office of Environmental Health Hazard Assessment pursuant to subdivision (c) of Section 116365, and in lieu thereof, public water systems shall use the national maximum contaminant level goal adopted by the United States Environmental Protection Agency for the corresponding contaminant for purposes of complying with the notice and hearing requirements of this section.

(g) This section is intended to provide an alternative form for the federally required consumer confidence report as authorized by 42 U.S.C. Section 300g-3(c).

REFERENCE NO. 2
2022 PHG Triennial Report: Calendar Years 2019-2020-2021

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants

(Units are in milligrams per liter (mg/L), unless otherwise noted.)

Last Update: September 14, 2021

This table includes:

California's maximum contaminant levels (MCLs)

Detection limits for purposes of reporting (DLRs)

[Public health goals \(PHGs\) from the Office of Environmental Health Hazard Assessment \(OEHHA\)](#)

Also, the PHG for NDMA (which is not yet regulated) is included at the bottom of this table.

Regulated Contaminant	MCL	DLR	PHG	Date of PHG
Chemicals with MCLs in 22 CCR §64431—Inorganic Chemicals				
Aluminum	1	0.05	0.6	2001
Antimony	0.006	0.006	0.001	2016
Arsenic	0.010	0.002	0.000004	2004
Asbestos (MFL = million fibers per liter; for fibers >10 microns long)	7 MFL	0.2 MFL	7 MFL	2003
Barium	1	0.1	2	2003
Beryllium	0.004	0.001	0.001	2003
Cadmium	0.005	0.001	0.00004	2006
Chromium, Total - OEHHA withdrew the 0.0025-mg/L PHG	0.05	0.01	withdrawn Nov. 2001	1999
Chromium, Hexavalent - 0.01-mg/L MCL & 0.001-mg/L DLR repealed September 2017	--	--	0.00002	2011
Cyanide	0.15	0.1	0.15	1997
Fluoride	2	0.1	1	1997
Mercury (inorganic)	0.002	0.001	0.0012	1999 (rev2005)*
Nickel	0.1	0.01	0.012	2001
Nitrate (as nitrogen, N)	10 as N	0.4	45 as NO3 (=10 as N)	2018
Nitrite (as N)	1 as N	0.4	1 as N	2018
Nitrate + Nitrite (as N)	10 as N	--	10 as N	2018
Perchlorate	0.006	0.004	0.001	2015
Selenium	0.05	0.005	0.03	2010
Thallium	0.002	0.001	0.0001	1999 (rev2004)
Copper and Lead, 22 CCR §64672.3				
<i>Values referred to as MCLs for lead and copper are not actually MCLs; instead, they are called "Action Levels" under the lead and copper rule</i>				
Copper	1.3	0.05	0.3	2008

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Lead	0.015	0.005	0.0002	2009
Radionuclides with MCLs in 22 CCR §64441 and §64443—Radioactivity				
[units are picocuries per liter (pCi/L), unless otherwise stated; n/a = not applicable]				
Gross alpha particle activity - OEHHA concluded in 2003 that a PHG was not practical	15	3	none	n/a
Gross beta particle activity - OEHHA concluded in 2003 that a PHG was not practical	4 mrem/yr	4	none	n/a
Radium-226	--	1	0.05	2006
Radium-228	--	1	0.019	2006
Radium-226 + Radium-228	5	--	--	--
Strontium-90	8	2	0.35	2006
Tritium	20,000	1,000	400	2006
Uranium	20	1	0.43	2001
Chemicals with MCLs in 22 CCR §64444—Organic Chemicals				
(a) Volatile Organic Chemicals (VOCs)				
Benzene	0.001	0.0005	0.00015	2001
Carbon tetrachloride	0.0005	0.0005	0.0001	2000
1,2-Dichlorobenzene	0.6	0.0005	0.6	1997 (rev2009)
1,4-Dichlorobenzene (p-DCB)	0.005	0.0005	0.006	1997
1,1-Dichloroethane (1,1-DCA)	0.005	0.0005	0.003	2003
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005	0.0004	1999 (rev2005)
1,1-Dichloroethylene (1,1-DCE)	0.006	0.0005	0.01	1999
cis-1,2-Dichloroethylene	0.006	0.0005	0.013	2018
trans-1,2-Dichloroethylene	0.01	0.0005	0.05	2018
Dichloromethane (Methylene chloride)	0.005	0.0005	0.004	2000
1,2-Dichloropropane	0.005	0.0005	0.0005	1999
1,3-Dichloropropene	0.0005	0.0005	0.0002	1999 (rev2006)
Ethylbenzene	0.3	0.0005	0.3	1997
Methyl tertiary butyl ether (MTBE)	0.013	0.003	0.013	1999
Monochlorobenzene	0.07	0.0005	0.07	2014
Styrene	0.1	0.0005	0.0005	2010
1,1,2,2-Tetrachloroethane	0.001	0.0005	0.0001	2003
Tetrachloroethylene (PCE)	0.005	0.0005	0.00006	2001
Toluene	0.15	0.0005	0.15	1999
1,2,4-Trichlorobenzene	0.005	0.0005	0.005	1999
1,1,1-Trichloroethane (1,1,1-TCA)	0.2	0.0005	1	2006
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	0.0005	0.0003	2006
Trichloroethylene (TCE)	0.005	0.0005	0.0017	2009
Trichlorofluoromethane (Freon 11)	0.15	0.005	1.3	2014

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1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2	0.01	4	1997 (rev2011)
Vinyl chloride	0.0005	0.0005	0.00005	2000
Xylenes	1.75	0.0005	1.8	1997
(b) Non-Volatile Synthetic Organic Chemicals (SOCs)				
Alachlor	0.002	0.001	0.004	1997
Atrazine	0.001	0.0005	0.00015	1999
Bentazon	0.018	0.002	0.2	1999 (rev2009)
Benzo(a)pyrene	0.0002	0.0001	0.000007	2010
Carbofuran	0.018	0.005	0.0007	2016
Chlordane	0.0001	0.0001	0.00003	1997 (rev2006)
Dalapon	0.2	0.01	0.79	1997 (rev2009)
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0.00001	0.000003	2020
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	0.01	0.02	2009
Di(2-ethylhexyl)adipate	0.4	0.005	0.2	2003
Di(2-ethylhexyl)phthalate (DEHP)	0.004	0.003	0.012	1997
Dinoseb	0.007	0.002	0.014	1997 (rev2010)
Diquat	0.02	0.004	0.006	2016
Endothal	0.1	0.045	0.094	2014
Endrin	0.002	0.0001	0.0003	2016
Ethylene dibromide (EDB)	0.00005	0.00002	0.00001	2003
Glyphosate	0.7	0.025	0.9	2007
Heptachlor	0.00001	0.00001	0.000008	1999
Heptachlor epoxide	0.00001	0.00001	0.000006	1999
Hexachlorobenzene	0.001	0.0005	0.00003	2003
Hexachlorocyclopentadiene	0.05	0.001	0.002	2014
Lindane	0.0002	0.0002	0.000032	1999 (rev2005)
Methoxychlor	0.03	0.01	0.00009	2010
Molinate	0.02	0.002	0.001	2008
Oxamyl	0.05	0.02	0.026	2009
Pentachlorophenol	0.001	0.0002	0.0003	2009
Picloram	0.5	0.001	0.166	2016
Polychlorinated biphenyls (PCBs)	0.0005	0.0005	0.00009	2007
Simazine	0.004	0.001	0.004	2001
Thiobencarb	0.07	0.001	0.042	2016
Toxaphene	0.003	0.001	0.00003	2003
1,2,3-Trichloropropane	0.000005	0.000005	0.0000007	2009
2,3,7,8-TCDD (dioxin)	3x10 ⁻⁸	5x10 ⁻⁹	5x10 ⁻¹¹	2010
2,4,5-TP (Silvex)	0.05	0.001	0.003	2014
Chemicals with MCLs in 22 CCR §64533—Disinfection Byproducts				
Total Trihalomethanes	0.080	--	--	--
Bromodichloromethane	--	0.0010	0.00006	2020

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Bromoform	--	0.0010	0.0005	2020
Chloroform	--	0.0010	0.0004	2020
Dibromochloromethane	--	0.0010	0.0001	2020
Haloacetic Acids (five) (HAA5)	0.060	--	--	--
Monochloroacetic Acid	--	0.0020	--	--
Dichloroacetic Acid	--	0.0010	--	--
Trichloroacetic Acid	--	0.0010	--	--
Monobromoacetic Acid	--	0.0010	--	--
Dibromoacetic Acid	--	0.0010	--	--
Bromate	0.010	0.0050**	0.0001	2009
Chlorite	1.0	0.020	0.05	2009
Chemicals with PHGs established in response to DDW requests. These are not currently regulated drinking water contaminants.				
N-Nitrosodimethylamine (NDMA)	--	--	0.000003	2006
*OEHHA's review of this chemical during the year indicated (rev20XX) resulted in no change in the PHG.				
**The DLR for Bromate is 0.0010 mg/L for analysis performed using EPA Method 317.0 Revision 2.0, 321.8, or 326.0.				

Public Health Goals

Health Risk Information for Public Health Goal Exceedance Reports

February 2022



Pesticide and Environmental Toxicology Branch
Office of Environmental Health Hazard Assessment
California Environmental Protection Agency

Health Risk Information for Public Health Goal Exceedance Reports

Prepared by

Office of Environmental Health Hazard Assessment
California Environmental Protection Agency

February 2022

NEW for the 2022 Report: New in this document are an updated Public Health Goal (PHG) for 1,2-dibromo-3-chloropropane (DBCP) and newly established PHGs for the trihalomethanes bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

Background: Under the Calderon-Sher Safe Drinking Water Act of 1996 (the Act), public water systems with more than 10,000 service connections are required to prepare a report every three years for contaminants that exceed their respective PHGs.¹ This document contains health risk information on regulated drinking water contaminants to assist public water systems in preparing these reports. A PHG is the concentration of a contaminant in drinking water that poses no significant health risk if consumed for a lifetime. PHGs are developed and published by the Office of Environmental Health Hazard Assessment (OEHHA) using current risk assessment principles, practices and methods.²

The water system's report is required to identify the health risk category (e.g., carcinogenicity or neurotoxicity) associated with exposure to each regulated contaminant in drinking water and to include a brief, plainly worded description of these risks. The report is also required to disclose the numerical public health risk, if available, associated with the California Maximum Contaminant Level (MCL) and with the PHG for each contaminant. This health risk information document is prepared by OEHHA every three years to assist the water systems in providing the required information in their reports.

¹ Health and Safety Code Section 116470(b)

² Health and Safety Code Section 116365

Numerical health risks: Table 1 presents health risk categories and cancer risk values for chemical contaminants in drinking water that have PHGs.

The Act requires that OEHHA publish PHGs based on health risk assessments using the most current scientific methods. As defined in statute, PHGs for non-carcinogenic chemicals in drinking water are set at a concentration “at which no known or anticipated adverse health effects will occur, with an adequate margin of safety.” For carcinogens, PHGs are set at a concentration that “does not pose any significant risk to health.” PHGs provide one basis for revising MCLs, along with cost and technological feasibility. OEHHA has been publishing PHGs since 1997 and the entire list published to date is shown in Table 1.

Table 2 presents health risk information for contaminants that do not have PHGs but have state or federal regulatory standards. The Act requires that, for chemical contaminants with California MCLs that do not yet have PHGs, water utilities use the federal Maximum Contaminant Level Goal (MCLG) for the purpose of complying with the requirement of public notification. MCLGs, like PHGs, are strictly health based and include a margin of safety. One difference, however, is that the MCLGs for carcinogens are set at zero because the US Environmental Protection Agency (US EPA) assumes there is no absolutely safe level of exposure to such chemicals. PHGs, on the other hand, are set at a level considered to pose no *significant* risk of cancer; this is usually no more than a one-in-one-million excess cancer risk (1×10^{-6}) level for a lifetime of exposure. In Table 2, the cancer risks shown are based on the US EPA’s evaluations.

For more information on health risks: The adverse health effects for each chemical with a PHG are summarized in a PHG technical support document. These documents are available on the OEHHA website (<https://oehha.ca.gov/water/public-health-goals-phgs>).

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Alachlor	carcinogenicity (causes cancer)	0.004	NA ^{5,6}	0.002	NA
Aluminum	neurotoxicity and immunotoxicity (harms the nervous and immune systems)	0.6	NA	1	NA
Antimony	hepatotoxicity (harms the liver)	0.001	NA	0.006	NA
Arsenic	carcinogenicity (causes cancer)	0.000004 (4×10 ⁻⁶)	1×10 ⁻⁶ (one per million)	0.01	2.5×10 ⁻³ (2.5 per thousand)
Asbestos	carcinogenicity (causes cancer)	7 MFL ⁷ (fibers >10 microns in length)	1×10 ⁻⁶	7 MFL (fibers >10 microns in length)	1×10 ⁻⁶ (one per million)
Atrazine	carcinogenicity (causes cancer)	0.00015	1×10 ⁻⁶	0.001	7×10 ⁻⁶ (seven per million)

¹ Based on the OEHHA PHG technical support document unless otherwise specified. The categories are the hazard traits defined by OEHHA for California's Toxics Information Clearinghouse (online at: <https://oehha.ca.gov/media/downloads/risk-assessment/gcregtext011912.pdf>).

² mg/L = milligrams per liter of water or parts per million (ppm)

³ Cancer Risk = Upper bound estimate of excess cancer risk from lifetime exposure. Actual cancer risk may be lower or zero. 1×10⁻⁶ means one excess cancer case per million people exposed.

⁴ MCL = maximum contaminant level.

⁵ NA = not applicable. Cancer risk cannot be calculated.

⁶ The PHG for alachlor is based on a threshold model of carcinogenesis and is set at a level that is believed to be without any significant cancer risk to individuals exposed to the chemical over a lifetime.

⁷ MFL = million fibers per liter of water.

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Barium	cardiovascular toxicity (causes high blood pressure)	2	NA	1	NA
Bentazon	hepatotoxicity and digestive system toxicity (harms the liver, intestine, and causes body weight effects ⁸)	0.2	NA	0.018	NA
Benzene	carcinogenicity (causes leukemia)	0.00015	1×10^{-6}	0.001	7×10^{-6} (seven per million)
Benzo[a]pyrene	carcinogenicity (causes cancer)	0.000007 (7×10^{-6})	1×10^{-6}	0.0002	3×10^{-5} (three per hundred thousand)
Beryllium	digestive system toxicity (harms the stomach or intestine)	0.001	NA	0.004	NA
Bromate	carcinogenicity (causes cancer)	0.0001	1×10^{-6}	0.01	1×10^{-4} (one per ten thousand)
Cadmium	nephrotoxicity (harms the kidney)	0.00004	NA	0.005	NA
Carbofuran	reproductive toxicity (harms the testis)	0.0007	NA	0.018	NA

⁸ Body weight effects are an indicator of general toxicity in animal studies.

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Carbon tetrachloride	carcinogenicity (causes cancer)	0.0001	1×10 ⁻⁶	0.0005	5×10 ⁻⁶ (five per million)
Chlordane	carcinogenicity (causes cancer)	0.00003	1×10 ⁻⁶	0.0001	3×10 ⁻⁶ (three per million)
Chlorite	hematotoxicity (causes anemia) neurotoxicity (causes neurobehavioral effects)	0.05	NA	1	NA
Chromium, hexavalent	carcinogenicity (causes cancer)	0.00002	1×10 ⁻⁶	none	NA
Copper	digestive system toxicity (causes nausea, vomiting, diarrhea)	0.3	NA	1.3 (AL ⁹)	NA
Cyanide	neurotoxicity (damages nerves) endocrine toxicity (affects the thyroid)	0.15	NA	0.15	NA
Dalapon	nephrotoxicity (harms the kidney)	0.79	NA	0.2	NA
Di(2-ethylhexyl) adipate (DEHA)	developmental toxicity (disrupts development)	0.2	NA	0.4	NA

⁹ AL = action level. The action levels for copper and lead refer to a concentration measured at the tap. Much of the copper and lead in drinking water is derived from household plumbing (The Lead and Copper Rule, Title 22, California Code of Regulations [CCR] section 64672.3).

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Di(2-ethylhexyl) phthalate (DEHP)	carcinogenicity (causes cancer)	0.012	1×10 ⁻⁶	0.004	3×10 ⁻⁷ (three per ten million)
1,2-Dibromo-3-chloropropane (DBCP)	carcinogenicity (causes cancer)	0.000003 (3×10 ⁻⁶)	1×10 ⁻⁶	0.0002	7×10 ⁻⁵ (seven per hundred thousand)
1,2-Dichloro-benzene (o-DCB)	hepatotoxicity (harms the liver)	0.6	NA	0.6	NA
1,4-Dichloro-benzene (p-DCB)	carcinogenicity (causes cancer)	0.006	1×10 ⁻⁶	0.005	8×10 ⁻⁷ (eight per ten million)
1,1-Dichloro-ethane (1,1-DCA)	carcinogenicity (causes cancer)	0.003	1×10 ⁻⁶	0.005	2×10 ⁻⁶ (two per million)
1,2-Dichloro-ethane (1,2-DCA)	carcinogenicity (causes cancer)	0.0004	1×10 ⁻⁶	0.0005	1×10 ⁻⁶ (one per million)
1,1-Dichloro-ethylene (1,1-DCE)	hepatotoxicity (harms the liver)	0.01	NA	0.006	NA
1,2-Dichloro-ethylene, cis	nephrotoxicity (harms the kidney)	0.013	NA	0.006	NA
1,2-Dichloro-ethylene, trans	immunotoxicity (harms the immune system)	0.05	NA	0.01	NA

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Dichloromethane (methylene chloride)	carcinogenicity (causes cancer)	0.004	1×10 ⁻⁶	0.005	1×10 ⁻⁶ (one per million)
2,4-Dichlorophenoxyacetic acid (2,4-D)	hepatotoxicity and nephrotoxicity (harms the liver and kidney)	0.02	NA	0.07	NA
1,2-Dichloropropane (propylene dichloride)	carcinogenicity (causes cancer)	0.0005	1×10 ⁻⁶	0.005	1×10 ⁻⁵ (one per hundred thousand)
1,3-Dichloropropene (Telone II®)	carcinogenicity (causes cancer)	0.0002	1×10 ⁻⁶	0.0005	2×10 ⁻⁶ (two per million)
Dinoseb	reproductive toxicity (harms the uterus and testis)	0.014	NA	0.007	NA
Diquat	ocular toxicity (harms the eye) developmental toxicity (causes malformation)	0.006	NA	0.02	NA
Endothall	digestive system toxicity (harms the stomach or intestine)	0.094	NA	0.1	NA
Endrin	neurotoxicity (causes convulsions) hepatotoxicity (harms the liver)	0.0003	NA	0.002	NA
Ethylbenzene (phenylethane)	hepatotoxicity (harms the liver)	0.3	NA	0.3	NA

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Ethylene dibromide (1,2-Dibromoethane)	carcinogenicity (causes cancer)	0.00001	1×10^{-6}	0.00005	5×10^{-6} (five per million)
Fluoride	musculoskeletal toxicity (causes tooth mottling)	1	NA	2	NA
Glyphosate	nephrotoxicity (harms the kidney)	0.9	NA	0.7	NA
Heptachlor	carcinogenicity (causes cancer)	0.000008 (8×10^{-6})	1×10^{-6}	0.00001	1×10^{-6} (one per million)
Heptachlor epoxide	carcinogenicity (causes cancer)	0.000006 (6×10^{-6})	1×10^{-6}	0.00001	2×10^{-6} (two per million)
Hexachlorobenzene	carcinogenicity (causes cancer)	0.00003	1×10^{-6}	0.001	3×10^{-5} (three per hundred thousand)
Hexachlorocyclopentadiene (HCCPD)	digestive system toxicity (causes stomach lesions)	0.002	NA	0.05	NA
Lead	developmental neurotoxicity (causes neurobehavioral effects in children) cardiovascular toxicity (causes high blood pressure) carcinogenicity (causes cancer)	0.0002	$<1 \times 10^{-6}$ (PHG is not based on this effect)	0.015 (AL ⁹)	2×10^{-6} (two per million)

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Lindane (γ-BHC)	carcinogenicity (causes cancer)	0.000032	1×10 ⁻⁶	0.0002	6×10 ⁻⁶ (six per million)
Mercury (inorganic)	nephrotoxicity (harms the kidney)	0.0012	NA	0.002	NA
Methoxychlor	endocrine toxicity (causes hormone effects)	0.00009	NA	0.03	NA
Methyl tertiary-butyl ether (MTBE)	carcinogenicity (causes cancer)	0.013	1×10 ⁻⁶	0.013	1×10 ⁻⁶ (one per million)
Molinate	carcinogenicity (causes cancer)	0.001	1×10 ⁻⁶	0.02	2×10 ⁻⁵ (two per hundred thousand)
Monochlorobenzene (chlorobenzene)	nephrotoxicity (harms the kidney)	0.07	NA	0.07	NA
Nickel	developmental toxicity (causes increased neonatal deaths)	0.012	NA	0.1	NA
Nitrate	hematotoxicity (causes methemoglobinemia)	45 as nitrate	NA	10 as nitrogen (=45 as nitrate)	NA
Nitrite	hematotoxicity (causes methemoglobinemia)	3 as nitrite	NA	1 as nitrogen (=3 as nitrite)	NA

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Nitrate and Nitrite	hematotoxicity (causes methemoglobinemia)	10 as nitrogen ¹⁰	NA	10 as nitrogen	NA
N-nitroso-dimethyl-amine (NDMA)	carcinogenicity (causes cancer)	0.000003 (3×10 ⁻⁶)	1×10 ⁻⁶	none	NA
Oxamyl	general toxicity (causes body weight effects)	0.026	NA	0.05	NA
Pentachloro-phenol (PCP)	carcinogenicity (causes cancer)	0.0003	1×10 ⁻⁶	0.001	3×10 ⁻⁶ (three per million)
Perchlorate	endocrine toxicity (affects the thyroid) developmental toxicity (causes neurodevelopmental deficits)	0.001	NA	0.006	NA
Picloram	hepatotoxicity (harms the liver)	0.166	NA	0.5	NA
Polychlorinated biphenyls (PCBs)	carcinogenicity (causes cancer)	0.00009	1×10 ⁻⁶	0.0005	6×10 ⁻⁶ (six per million)
Radium-226	carcinogenicity (causes cancer)	0.05 pCi/L	1×10 ⁻⁶	5 pCi/L (combined Ra ²²⁶⁺²²⁸)	1×10 ⁻⁴ (one per ten thousand)

¹⁰ The joint nitrate/nitrite PHG of 10 mg/L (10 ppm, expressed as nitrogen) does not replace the individual values, and the maximum contribution from nitrite should not exceed 1 mg/L nitrite-nitrogen.

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Radium-228	carcinogenicity (causes cancer)	0.019 pCi/L	1×10^{-6}	5 pCi/L (combined Ra ²²⁶⁺²²⁸)	3×10^{-4} (three per ten thousand)
Selenium	integumentary toxicity (causes hair loss and nail damage)	0.03	NA	0.05	NA
Silvex (2,4,5-TP)	hepatotoxicity (harms the liver)	0.003	NA	0.05	NA
Simazine	general toxicity (causes body weight effects)	0.004	NA	0.004	NA
Strontium-90	carcinogenicity (causes cancer)	0.35 pCi/L	1×10^{-6}	8 pCi/L	2×10^{-5} (two per hundred thousand)
Styrene (vinylbenzene)	carcinogenicity (causes cancer)	0.0005	1×10^{-6}	0.1	2×10^{-4} (two per ten thousand)
1,1,2,2-Tetrachloroethane	carcinogenicity (causes cancer)	0.0001	1×10^{-6}	0.001	1×10^{-5} (one per hundred thousand)
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD, or dioxin)	carcinogenicity (causes cancer)	5×10^{-11}	1×10^{-6}	3×10^{-8}	6×10^{-4} (six per ten thousand)

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Tetrachloro-ethylene (perchloro-ethylene, or PCE)	carcinogenicity (causes cancer)	0.00006	1×10 ⁻⁶	0.005	8×10 ⁻⁵ (eight per hundred thousand)
Thallium	integumentary toxicity (causes hair loss)	0.0001	NA	0.002	NA
Thiobencarb	general toxicity (causes body weight effects) hematotoxicity (affects red blood cells)	0.042	NA	0.07	NA
Toluene (methylbenzene)	hepatotoxicity (harms the liver) endocrine toxicity (harms the thymus)	0.15	NA	0.15	NA
Toxaphene	carcinogenicity (causes cancer)	0.00003	1×10 ⁻⁶	0.003	1×10 ⁻⁴ (one per ten thousand)
1,2,4-Trichloro-benzene	endocrine toxicity (harms adrenal glands)	0.005	NA	0.005	NA
1,1,1-Trichloro-ethane	neurotoxicity (harms the nervous system), reproductive toxicity (causes fewer offspring) hepatotoxicity (harms the liver) hematotoxicity (causes blood effects)	1	NA	0.2	NA

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
1,1,2-Trichloroethane	carcinogenicity (causes cancer)	0.0003	1×10 ⁻⁶	0.005	2×10 ⁻⁵ (two per hundred thousand)
Trichloroethylene (TCE)	carcinogenicity (causes cancer)	0.0017	1×10 ⁻⁶	0.005	3×10 ⁻⁶ (three per million)
Trichlorofluoromethane (Freon 11)	accelerated mortality (increase in early death)	1.3	NA	0.15	NA
1,2,3-Trichloropropane (1,2,3-TCP)	carcinogenicity (causes cancer)	0.0000007 (7×10 ⁻⁷)	1×10 ⁻⁶	0.000005 (5×10 ⁻⁶)	7×10 ⁻⁶ (seven per million)
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	hepatotoxicity (harms the liver)	4	NA	1.2	NA
Trihalomethanes: Bromodichloromethane	carcinogenicity (causes cancer)	0.00006	1×10 ⁻⁶	0.080*	1.3×10 ⁻³ (1.3 per thousand) ¹¹
Trihalomethanes: Bromoform	carcinogenicity (causes cancer)	0.0005	1×10 ⁻⁶	0.080*	2×10 ⁻⁴ (two per ten thousand) ¹²

* For total trihalomethanes (the sum of bromodichloromethane, bromoform, chloroform, and dibromochloromethane). There are no MCLs for individual trihalomethanes.

¹¹ Based on 0.080 mg/L bromodichloromethane; the risk will vary with different combinations and ratios of the other trihalomethanes in a particular sample.

¹² Based on 0.080 mg/L bromoform; the risk will vary with different combinations and ratios of the other trihalomethanes in a particular sample.

Table 1: Health Risk Categories and Cancer Risk Values for Chemicals with California Public Health Goals (PHGs)

Chemical	Health Risk Category ¹	California PHG (mg/L) ²	Cancer Risk ³ at the PHG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Trihalomethanes: Chloroform	carcinogenicity (causes cancer)	0.0004	1×10 ⁻⁶	0.080*	2×10 ⁻⁴ (two per ten thousand) ¹³
Trihalomethanes: Dibromochloromethane	carcinogenicity (causes cancer)	0.0001	1×10 ⁻⁶	0.080*	8×10 ⁻⁴ (eight per ten thousand) ¹⁴
Tritium	carcinogenicity (causes cancer)	400 pCi/L	1×10 ⁻⁶	20,000 pCi/L	5×10 ⁻⁵ (five per hundred thousand)
Uranium	carcinogenicity (causes cancer)	0.43 pCi/L	1×10 ⁻⁶	20 pCi/L	5×10 ⁻⁵ (five per hundred thousand)
Vinyl chloride	carcinogenicity (causes cancer)	0.00005	1×10 ⁻⁶	0.0005	1×10 ⁻⁵ (one per hundred thousand)
Xylene	neurotoxicity (affects the senses, mood, and motor control)	1.8 (single isomer or sum of isomers)	NA	1.75 (single isomer or sum of isomers)	NA

* For total trihalomethanes (the sum of bromodichloromethane, bromoform, chloroform, and dibromochloromethane). There are no MCLs for individual trihalomethanes.

¹³ Based on 0.080 mg/L chloroform; the risk will vary with different combinations and ratios of the other trihalomethanes in a particular sample.

¹⁴ Based on 0.080 mg/L dibromochloromethane; the risk will vary with different combinations and ratios of the other trihalomethanes in a particular sample.

Table 2: Health Risk Categories and Cancer Risk Values for Chemicals without California Public Health Goals

Chemical	Health Risk Category ¹	US EPA MCLG ² (mg/L)	Cancer Risk ³ at the MCLG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Disinfection byproducts (DBPs)					
Chloramines	acute toxicity (causes irritation) digestive system toxicity (harms the stomach) hematotoxicity (causes anemia)	4 ^{5,6}	NA ⁷	none	NA
Chlorine	acute toxicity (causes irritation) digestive system toxicity (harms the stomach)	4 ^{5,6}	NA	none	NA
Chlorine dioxide	hematotoxicity (causes anemia) neurotoxicity (harms the nervous system)	0.8 ^{5,6}	NA	none	NA
Disinfection byproducts: haloacetic acids (HAA5)					
Monochloroacetic acid (MCA)	general toxicity (causes body and organ weight changes ⁸)	0.07	NA	none	NA

¹ Health risk category based on the US EPA MCLG document or California MCL document unless otherwise specified.

² MCLG = maximum contaminant level goal established by US EPA.

³ Cancer Risk = Upper estimate of excess cancer risk from lifetime exposure. Actual cancer risk may be lower or zero. 1×10^{-6} means one excess cancer case per million people exposed.

⁴ California MCL = maximum contaminant level established by California.

⁵ Maximum Residual Disinfectant Level Goal, or MRDLG.

⁶ The federal Maximum Residual Disinfectant Level (MRDL), or highest level of disinfectant allowed in drinking water, is the same value for this chemical.

⁷ NA = not available.

⁸ Body weight effects are an indicator of general toxicity in animal studies.

Table 2: Health Risk Categories and Cancer Risk Values for Chemicals without California Public Health Goals

Chemical	Health Risk Category ¹	US EPA MCLG ² (mg/L)	Cancer Risk ³ at the MCLG	California MCL ⁴ (mg/L)	Cancer Risk at the California MCL
Dichloroacetic acid (DCA)	Carcinogenicity (causes cancer)	0	0	none	NA
Trichloroacetic acid (TCA)	hepatotoxicity (harms the liver)	0.02	NA	none	NA
Monobromoacetic acid (MBA)	NA	none	NA	none	NA
Dibromoacetic acid (DBA)	NA	none	NA	none	NA
Total haloacetic acids (sum of MCA, DCA, TCA, MBA, and DBA)	general toxicity, hepatotoxicity and carcinogenicity (causes body and organ weight changes, harms the liver and causes cancer)	none	NA	0.06	NA
Radionuclides					
Gross alpha particles ⁹	carcinogenicity (causes cancer)	0 (²¹⁰ Po included)	0	15 pCi/L ¹⁰ (includes radium but not radon and uranium)	up to 1x10 ⁻³ (for ²¹⁰ Po, the most potent alpha emitter)

⁹ MCLs for gross alpha and beta particles are screening standards for a group of radionuclides. Corresponding PHGs were not developed for gross alpha and beta particles. See the OEHHA memoranda discussing the cancer risks at these MCLs at <http://www.oehha.ca.gov/water/reports/grossab.html>.

¹⁰ pCi/L = picocuries per liter of water.

Table 2: Health Risk Categories and Cancer Risk Values for Chemicals without California Public Health Goals

Chemical	Health Risk Category¹	US EPA MCLG² (mg/L)	Cancer Risk³ at the MCLG	California MCL⁴ (mg/L)	Cancer Risk at the California MCL
Beta particles and photon emitters ⁹	carcinogenicity (causes cancer)	0 (²¹⁰ Pb included)	0	50 pCi/L (judged equiv. to 4 mrem/yr)	up to 2×10^{-3} (for ²¹⁰ Pb, the most potent beta-emitter)

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

CONSENT CALENDAR

BOARD MEETING MINUTES

SUMMARY:

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

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

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

LIST OF EXHIBITS:

Exhibit "A" – July 11, 2022 Minutes

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EXHIBIT "A"

MINUTES OF REGULAR MEETING –JULY 11, 2022

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by Acting President McLaughlin on July 11, 2022 at the District offices, 15600 Sand Canyon Avenue, Irvine.

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

Directors Absent: LaMar

Written and Oral Communications: None.

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

PUBLIC HEARING

SEWER CHARGES IN IRWD'S NEWPORT NORTH AREA

Resolution No. 1987-45 directs the filing of a report containing a description of such parcels and the corresponding charges for each fiscal year. Pursuant to the requirements of the Health and Safety Code of the State of California, a public hearing on the report is required.

Acting President McLaughlin declared this to be the time and place for a hearing on the sewer charge report for the Newport North area and declared the hearing open. She asked the Secretary how the hearing was noticed.

Secretary Bonkowski said that the report was filed with her on June 20, 2022, and notice of the filing of the report and the time and place of this hearing was published in the Daily Pilot on June 26, 2022 and July 3, 2022. A notice was also posted in the District office on June 23, 2022.

On MOTION by Swan, seconded by Withers, and carried (Swan, Withers, Reinhart and McLaughlin voting aye, and LaMar absent, 4-0 vote), **THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY WAS RECEIVED AND FILED.**

Acting President McLaughlin asked Legal Counsel to describe the nature of the proceedings. Legal Counsel Collins said that a public hearing on the sewer charge report is an annual requirement of the Health and Safety Code, Section 5473 in order to collect the sewer charges on the tax roll.

Acting President McLaughlin inquired of the Secretary whether there have been any written communications. She said that there were none.

Acting President McLaughlin asked whether there is anyone present who wished to address the Board regarding the proposed collection of sewer charges on the tax roll. There was no one who wished to be heard.

Acting President McLaughlin asked whether there are any comments or questions from members of the Board of Directors. There were none. She stated that the hearing will be closed.

On MOTION by Swan, seconded by Withers, and carried (Swan, Withers, Reinhart and McLaughlin voting aye, and LaMar absent, 4-0 vote), THE HEARING WAS CLOSED AND THE FOLLOWING RESOLUTION WAS ADOPTED BY TITLE:

RESOLUTION NO. 2022 -10

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT ADOPTING THE
SEWER CHARGE REPORT AND AUTHORIZING
COLLECTION OF SEWER CHARGES ON THE TAX ROLL
FOR IRWD'S NEWPORT NORTH AREA

CONSENT CALENDAR

On MOTION by Withers, seconded by Swan, and carried (Swan, Withers, Reinhart and McLaughlin voting aye, and LaMar absent, 4-0 vote), CONSENT CALENDAR ITEMS 5 THROUGH 11 WERE APPROVED AS FOLLOWS:

5. BOARD MEETING MINUTES

Recommendation: That the minutes of the June 27, 2022, Regular Board meeting be approved as presented.

6. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS IN 2022

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

7. 2022 LEGISLATIVE AND REGULATORY UPDATE

Recommendation: That the Board adopt an "oppose unless amended" position on SB 222 (Dodd), authorize IRWD to move to an "oppose" position should the bill not be amended to address the District's concerns over the Summer Recess, and adopt a "support" position on H.R. 5689 (DeFazio).

8. WATER SUPPLY ASSESSMENTS FOR THE MARKET PLACE AND LOTS 103 AND 106 PROJECTS

Recommendation: That the Board approve the Water Supply Assessment for the Market Place Project and the Water Supply Assessment for the Lots 103 and 106 Project.

CONSENT CALENDAR (CONTINUED)

9. FISCAL YEAR 2022-23 OPERATING BUDGET VENDOR EXPENDITURE COMMITMENTS GREATER THAN \$200,000

Recommendation: That the Board approve the list of vendor commitments greater than \$200,000 based on approved Fiscal Year 2022-23 operating budget expenditures.

10. UTILITY BILL PRINTING, MAILING, AND ELECTRONIC BILL PRESENTMENT SERVICES CONTRACT

Recommendation: That the Board approve a two-year renewal period effective August 16, 2022, through August 15, 2024, with Infosend, Inc. for utility bill printing, mailing, and electronic bill presentment services, totaling approximately \$1,264,000.

11. PROPERTY TAX RESOLUTIONS FOR FISCAL YEAR 2022-23

Recommendation: That the Board adopt the following resolutions by title:

RESOLUTION NO. 2022-11

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
ESTABLISHING AD VALOREM TAX REVENUES FOR
FISCAL YEAR 2022-23

RESOLUTION NO. 2022-12

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
AMENDING ALLOCATION OF *AD VALOREM* PROPERTY
TAXES TO DEBT SERVICE, SUBJECT TO PLEDGE

ACTION CALENDAR

IRWD BUSINESS EXPENSE AND MEETING COMPENSATION AND REPRESENTATION POLICY REVISIONS

General Manager Cook reported that IRWD's current Business Expense Reimbursement, Travel, Meeting Compensation and Representation policy was last updated in August 2014. Mr. Cook said that in 2014, changes to the policy were made to incorporate the provisions of California Assembly Bill 1234, which provided for certain reforms associated with expense reimbursements of Board members. He said that since 2014, staff has noted gaps and required clarifications needed to improve the understanding and compliance with this policy. He further said that the Secretary placed before each Director was a resolution to be adopted this evening approving this policy.

Executive Director of Finance and Administration Clary reported on the following changes made to the policy in addition to other minor edits and clarifications: 1) deleting reference to Committee members as they have the same requirements as Board members; 2) continuing to

have Board member expense reports approved by two other Board members, and clarifying that Board member expense reports must be submitted within 90 days after expenses were paid or incurred; 3) clarifying language that only Executive Directors, Directors, or the General Manager need to preapprove employee projected expense requests for travel or business activities and reimbursements for their departments, and the General Manager will monitor activity through receipt of quarterly reports summarizing out-of-state travel activity; 4) clarifying language that District Representatives who receive a monthly mileage allowance will be reimbursed for mileage only when the meeting location is 60 miles (one way) or more from their regular work location; 5) clarifying language that Board members will not be reimbursed for mileage to Committee meetings within Orange County, including Standing Committee meetings where they represent the District; 6) clarifying language that highway and bridge tolls are allowable expenses when incurred while conducting District business and the law requires receipts/toll road statements supporting the expenditure; 7) clarifying language that Representatives should decline both liability and collision insurance naming IRWD as a named insured; 8) adjusting travel-related maximum meal expenditures permitted for both for the “no receipt” and “receipt” methods as well as total expenses allowed per day to allow for reasonable cost increases since the previous policy update; 9) adjusting to allow for a combination of meal expenditures up to a maximum under the “receipt method”; 10) clarifying language that gratuities must be reasonable and should not exceed 20% of the total bill; 11) clarifying language that lodging for a conference or meeting is permissible if the meeting or conference requiring an overnight stay is more than 50 miles from the Representative’s residence. An exception may be made if the meeting starts prior to 8:00 a.m. or ends after 8:00 p.m.; 12) clarifying language for Representatives when traveling internationally with a District-owned device requiring access to District meetings/emails, to notify the Director of Information Services (IS) of their travel plans. IS will purchase a one-time appropriate plan for the District-owned device based on a discussion of data plan needs. Usage will be monitored by IS and usage over and above the initial data plan purchase must be approved by the General Manager or his designee; 13) clarification that advance Board approval is not required for compensated Board attendance at meetings specified by this policy; and 14) clarification that if a Board member is paid a per diem meeting rate by an outside agency, then the Board member is not eligible to be compensated for attendance at the same meeting by the District.

Director Swan said that this item was reviewed by the Finance and Personnel Committee on July 5, 2022, and that there was a split vote by the Committee on one item being modified, No. 5, clarifying language that Board members will not be reimbursed for mileage to Committee meetings within Orange County, including Standing Committee meetings where they represent the District. He said that he believed other water agencies pay for mileage and favored IRWD continuing with this practice. Following comments from Director Reinhart and Withers, on MOTION by Swan, seconded by Reinhart, and carried (Swan, Withers, Reinhart and McLaughlin voting aye, and LaMar absent, 4-0 vote), **WITH THE EXCEPTION OF ITEM NO. 5, APPROVE THE PROPOSED REVISIONS SUBJECT TO NON-SUBSTANTIVE CHANGES TO THE DISTRICT’S POLICY REGARDING BUSINESS EXPENSE REIMBURSEMENT, TRAVEL, MEETING COMPENSATION, AND REPRESENTATION.** Following further comments by the Board, on MOTION by Withers, seconded by Reinhart and carried (Swan, Withers, Reinhart and McLaughlin voting aye, and LaMar absent, 4-0 vote), **THE BOARD ACCEPTED POLICY ITEM NO. 5 AS PRESENTED, AND THE FOLLOWING RESOLUTION WAS ADOPTED BY TITLE**

RESOLUTION NO. 2022-13

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT, RESCINDING
RESOLUTION NO. 2014-38 ESTABLISHING A REVISED POLICY
ON BUSINESS EXPENSE REIMBURSEMENT, TRAVEL,
MEETING COMPENSATION, AND REPRESENTATION

RESUMPTION OF DISCONTINUATION OF IRWD'S SERVICE POLICY

General Manager Cook reported that after suspending its regular discontinuation of service policy at the start of COVID-19, IRWD is prepared to resume its regular discontinuation of service policy, as of September 1, 2022, in accordance with Section 12.5 of the Board-adopted Rules and Regulations. Mr. Cook said that reinstatement of the regular policy includes returning to the charging of late fees and interest for past due balances following an extensive notification process prior to the discontinuation any water service. In addition to the regular notification process, prior to September 1, all customers with a delinquent balance will be sent notification(s) of their past due amount and will be encouraged to enroll in a payment arrangement, if they are unable to pay their account in full.

Executive Director of Finance and Administration Clary reported that IRWD suspended shutting off customers for non-payment of past due amounts in March 2020 due to the outbreak of COVID-19, and that in 2022, IRWD participated in the California Water and Wastewater Arrearage Payment Program (CWWAPP) which covered delinquent bills relating to water and wastewater services provided for the period March 4, 2020 through June 15, 2021. Ms. Clary said that IRWD received approximately \$1.4 million for water bills and \$0.5 million for wastewater bills from the program which were applied to the delinquent bills of approximately 3,900 customers.

Ms. Clary said that after the application of the CWWAPP funding, as of June 30, 2022, approximately 3,800 customers still have past due balances. The total amount delinquent on past due accounts is approximately \$2.5 million. Each of these accounts owe more than \$150, is over 60 days delinquent and is not enrolled in a payment arrangement. Based on IRWD's discontinuation of service policy, these customers are subject to disconnection for non-payment. In addition, there are approximately 635 customers currently enrolled in payment arrangements. These customers are not subject to disconnection under the District's discontinuation of service policy.

Ms. Clary reviewed a recommended timeline for transitioning back to IRWD's normal discontinuation of service policy, noting that staff recommends the resumption of late fees and interest charges beginning in September and the resumption of shutoffs for delinquent accounts not enrolled in a payment arrangement on October 1, 2022.

Director Withers reported that this item was reviewed by the Water Resources Policy and Communications Committee on July 7, 2022. Following Director Reinhart's comments, he said that he would like a status report to be submitted to this Committee in August. On MOTION by Swan, seconded by Withers and carried (Swan, Withers, Reinhart and McLaughlin voting aye, and LaMar absent, 4-0 vote), THE BOARD APPROVED THE RESUMPTION OF IRWD'S REGULAR DISCONTINUATION OF SERVICE POLICY EFFECTIVE SEPTEMBER 1, 2022.

WATER EFFICIENCY TACTICAL INCENTIVE FUNDING AUTHORIZATION

Water Efficiency Manager McNulty said that tactical incentives are a key element of IRWD's Water Use Efficiency Program. Ms. McNulty said that the financial incentives provided by IRWD are used to supplement existing regional rebate programs that are administered by the Municipal Water District of Orange County (MWDOC). IRWD incentives are provided taking into consideration avoided costs to the District, available regional funding, device cost, and their effectiveness as a tool to drive change. Tactical incentive programs focus on outdoor water use efficiency through the highly visible and influential turf removal rebate program and the installation of various other water conservation devices. She said that in July 2015, the Board approved the multi-year Water Conservation Participation Agreement with MWDOC, and that each fiscal year, addenda to the agreement are executed to allocate funding and to specify device rebate funding levels for the outdoor Residential, Commercial, Water Savings Incentive, Spray to Drip Conversion and Turf Removal programs.

Ms. McNulty said that last week, staff executed an updated addendum with MWDOC to increase the IRWD supplemental Turf Rebate funding, and that the increase will provide IRWD's potable residential, commercial, and industrial customers with a total rebate in the amount of \$5.00 per square foot. Site sizes are capped at 5,000 square feet for residential customers and 50,000 square feet for commercial and industrial customers. IRWD's customers are eligible for \$3.00 per square foot with a cap of 200,000 square feet. Staff is proposing to provide supplemental funding for public agency potable and recycled customers on a case-by-case basis. This approach will build in the opportunity for IRWD to provide enhanced funding for public demonstration gardens that participate in the program.

Director Withers said that this item was reviewed by the Water Resources Policy and Communications Committee on July 7, 2022, and on MOTION by Withers, seconded by Reinhart, and carried (Swan, Withers, Reinhart and McLaughlin voting aye, and LaMar absent, 4-0 vote), **THE BOARD AUTHORIZED THE GENERAL MANAGER TO ALLOCATE \$1,230,000 IN FUNDING TO THE FISCAL YEAR 2022-23 REBATE PROGRAMS ADMINISTERED THROUGH THE WATER CONSERVATION PARTICIPATION AGREEMENT BETWEEN MWDOC AND IRWD, AND TO EXECUTE ADDENDA TO THE AGREEMENT AS MAY BE NECESSARY TO ALLOCATE FUNDS TO SPECIFIC PROGRAMS AND MODIFY DEVICE INCENTIVE LEVELS BASED ON CUSTOMER PARTICIPATION RATES AND REGIONAL PROGRAM FUNDING LEVELS.**

GENERAL MANAGER'S REPORT

General Manager Cook updated the Board on the COVID-19 outbreak situation, noting that masking is currently required at both the Sand Canyon building and the Operations Center.

Mr. Cook further announced that under the urgent necessity policy where the cost of a repair exceeds the General Manager's authority, Paulus Engineering was hired for a recycled water pipe failure in the Irvine Spectrum area at a cost of approximately \$600,000 and that the majority of the cost was for paving. He said that staff has contacted the District's insurance carrier to ask if this type of work may be covered.

COMMUNITY UPDATE

Bruce Newell updated the Board on Southern California Edison activities in the canyon area.

DIRECTORS' COMMENTS

Director Withers noted that he served his last meeting as Chairman of Orange County Sanitation District but will continue to serve on its Steering and Legislative Affairs Committees.

Director Swan reported on his attendance at a Southern California Water Dialogue meeting, MWDOC Board and Planning and Operations Committee meetings, and a WACO meeting along with his regular meetings. He further said that he spoke with the City of Newport Beach's Public Works Director Webb and that the city will be doing road repair work in the Newport Coast area in January 2023 so if any repairs are scheduled, to complete the work prior to the end of this year.

Director Reinhart said he attended the meetings listed along with a strategic conference call with legal counsel.

Director McLaughlin said she was not able to attend the WACO meeting last Friday.

CLOSED SESSION

Legal Counsel Collins said that the following Closed Session would be held:

CLOSED SESSION CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION – Pursuant to Government Code Section 54956.9(d)(1): *IRWD v. OCWD, et al.*, Case No. 30-2016-00858584-CU-WM-CJC.

OPEN SESSION

Following the Closed Session, the meeting was reconvened with Directors Swan, Withers, Reinhart, and McLaughlin present. No action was reported.

ADJOURNMENT

There being no further business, Acting President McLaughlin adjourned the meeting.

APPROVED and SIGNED this 25th day of July 2022.

President, IRVINE RANCH WATER DISTRICT

Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:


Claire Hervey Collins, General Counsel
Hanson Bridgett LLP

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July 25, 2022

Prepared by: O. Mendoza / J. Davis

Submitted by: R. Jacobson / C. Clary

Approved by: Paul A. Cook 

CONSENT CALENDAR

JUNE 2022 TREASURY REPORT

SUMMARY:

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

- A. The June 2022 Investment Summary Report. This Investment Summary Report conforms with the 2022 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A";
- B. The Summary of Fixed and Variable Rate Debt as of June 30, 2022, as outlined in Exhibit "B";
- C. The Monthly Interest Rate Swap Summary as of June 30, 2022, as outlined in Exhibit "C";
- D. The June 30, 2022 Disbursement Summary of warrants 427729 through 428808, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$25,432,594, as outlined in Exhibit "D";
- E. The Summary of Payroll ACH payments in the total amount of \$2,171,526 as outlined in Exhibit "E"; and
- F. The Disclosure Report of Reimbursements to Board members and staff for June 2022, detailing payments or reimbursements for individual charges of \$100 or more per transaction, as outlined in Exhibit "F".

FISCAL IMPACTS:

As of June 30, 2022, the book value of the investment portfolio was \$402,774,013, with a 0.81% rate of return and a market value of \$398,411,506. Based on IRWD's June 30, 2022, quarterly real estate investment rate of return of 13.08%, the weighted average return for the fixed income and real estate investments was 3.22%.

As of June 30, 2022, the outstanding principal amount of fixed and variable rate debt was \$623,195,000. The monthly weighted average all-in variable rate was 0.95%. Including IRWD's weighted average fixed rate bond issues of 3.71% and the negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.08%.

Payroll ACH payments totaled \$2,171,526 and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for June totaled \$25,432,594.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF, APPROVE THE JUNE 2022 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$2,171,526, AND APPROVE THE JUNE 2022 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 427729 THROUGH 428808, WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$25,432,594.

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

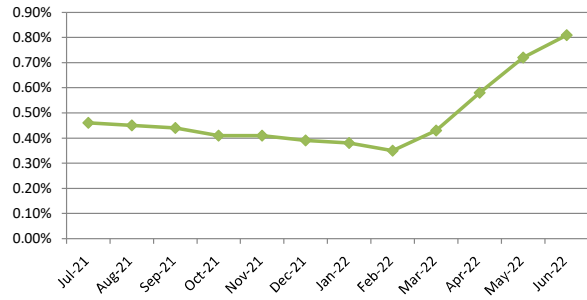
Exhibit "E" – Monthly Payroll ACH Summary

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

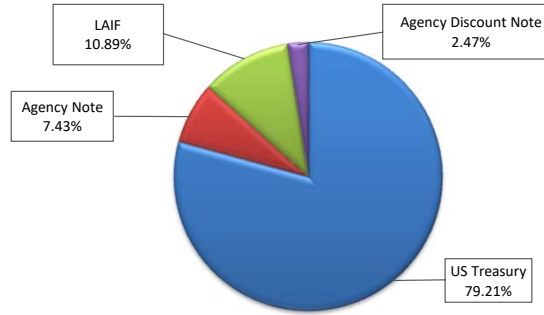
Exhibit "A"

Irvine Ranch Water District Investment Portfolio Summary June 2022

Monthly Fixed Income Yield



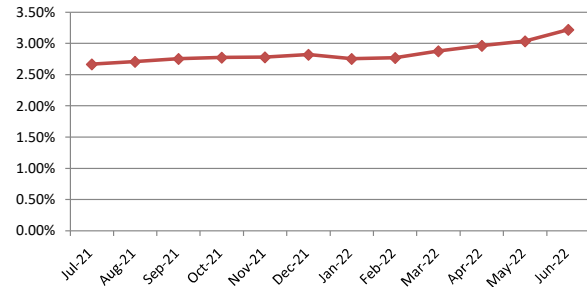
Portfolio Distribution



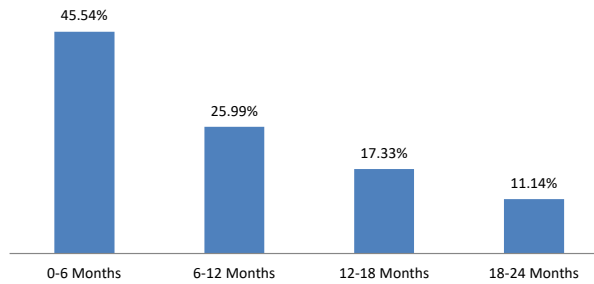
Investment Summary

Type	PAR	Book Value	Market Value
US Treasury	320,000,000	318,751,654	315,244,950
LAIF	44,000,000	44,000,000	43,505,156
Agency Note	30,000,000	30,042,596	29,683,600
Agency Discount Note	10,000,000	9,979,764	9,977,800
Grand Total	404,000,000	402,774,013	398,411,506

Weighted Average Return Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
US Treasury	320,000,000	79.21%
State of California Tsy.	44,000,000	10.89%
Fed Home Loan Bank	25,000,000	6.19%
Fed Farm Credit Bank	15,000,000	3.71%
Grand Total	404,000,000	100.00%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

06/30/22

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 6/30/2022	UNREALIZED ⁽²⁾ GAIN/(LOSS)
06/30/22			07/01/22		LAIF	State of California Tsy.	\$44,000,000		0.990%	\$44,000,000.00	\$44,000,000.00	43,505,155.67	(494,844.33)
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	5,000,011.51	4,999,950.00	(61.51)
12/23/21	NA	NA	07/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.157%	9,998,046.88	9,999,733.67	9,991,700.00	(8,033.67)
06/30/22	NA	NA	08/17/22	NR	FHLB - Discount Note	Fed Home Loan Bank	10,000,000	1.550%	1.575%	9,979,333.33	9,979,763.89	9,977,800.00	(1,963.89)
04/28/21	NA	NA	08/31/22	Aaa/NR/NR	Treasury - Note	US Treasury	5,000,000	0.125%	0.102%	5,001,562.50	5,000,194.52	4,988,050.00	(12,144.52)
12/15/21	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	1.875%	0.188%	5,059,570.31	5,014,030.07	5,002,450.00	(11,580.07)
01/13/22	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.312%	4,994,140.63	4,998,445.99	4,988,050.00	(10,395.99)
02/15/22	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.776%	4,982,617.19	4,994,617.51	4,988,050.00	(6,567.51)
02/15/22	NA	NA	08/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.769%	4,982,812.50	4,994,677.98	4,988,050.00	(6,627.98)
04/28/21	NA	NA	09/09/22	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.000%	0.112%	5,128,632.30	5,018,044.61	5,001,950.00	(16,094.61)
12/03/21	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.210%	4,996,484.38	4,998,937.14	4,979,200.00	(19,737.14)
01/10/22	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.332%	4,992,578.13	4,997,431.98	4,979,200.00	(18,231.98)
02/28/22	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.742%	4,982,031.25	4,992,359.08	4,979,200.00	(13,159.08)
03/23/22	NA	NA	09/30/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.937%	9,957,812.50	9,979,900.20	9,958,400.00	(21,500.20)
06/14/22	NA	NA	10/15/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	1.375%	1.845%	9,983,984.38	9,986,197.92	9,979,700.00	(6,497.92)
04/22/21	NA	NA	10/31/22	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.110%	10,002,343.75	10,003,247.73	9,934,100.00	(69,147.73)
12/23/21	NA	NA	10/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.253%	9,989,062.50	9,995,723.16	9,934,100.00	(61,623.16)
04/11/22	NA	NA	10/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	1.235%	9,939,062.50	9,963,377.46	9,934,100.00	(29,277.46)
05/20/21	NA	NA	11/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.103%	5,001,647.15	5,000,447.88	4,954,500.00	(45,947.88)
12/20/21	NA	NA	11/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.266%	9,986,718.75	9,994,148.55	9,909,000.00	(85,148.55)
01/07/22	NA	NA	11/30/22	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.401%	4,987,695.31	4,994,280.39	4,954,500.00	(39,780.39)
10/15/21	NA	NA	12/15/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	1.625%	0.140%	10,173,046.88	10,067,837.63	9,964,500.00	(103,337.63)
11/30/21	NA	NA	12/31/22	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.216%	9,990,234.38	9,995,487.10	9,882,000.00	(113,487.10)
09/30/21	NA	NA	01/31/23	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.143%	4,998,828.13	4,999,486.11	4,928,900.00	(70,586.11)
12/30/21	NA	NA	01/31/23	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.417%	9,968,359.38	9,982,944.35	9,857,800.00	(125,144.35)
02/28/22	NA	NA	01/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	1.070%	4,956,640.63	4,972,466.16	4,928,900.00	(43,566.16)
11/18/21	NA	NA	02/10/23	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	10,000,000	0.160%	0.285%	9,984,690.00	9,992,362.05	9,860,200.00	(132,162.05)
10/07/21	NA	NA	02/28/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.181%	9,992,187.50	9,996,285.61	9,831,600.00	(164,685.61)
09/09/21	NA	NA	03/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.153%	9,995,703.13	9,997,934.78	9,805,100.00	(192,834.78)
11/02/21	NA	NA	03/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.308%	4,987,109.38	4,993,153.43	4,902,550.00	(90,603.43)
09/30/21	NA	NA	04/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.202%	9,987,890.63	9,993,641.01	9,775,400.00	(218,241.01)
10/19/21	NA	NA	04/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.307%	9,972,265.63	9,984,939.94	9,775,400.00	(209,539.94)
11/16/21	NA	NA	05/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.385%	9,960,156.25	9,976,278.41	9,752,000.00	(224,278.41)
12/29/21	NA	NA	06/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.563%	4,967,187.50	4,978,204.84	4,863,850.00	(114,354.84)
04/21/22	NA	NA	06/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	1.375%	2.107%	9,914,062.50	9,928,089.08	9,849,600.00	(78,489.08)
01/11/22	NA	NA	07/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	0.710%	4,954,882.81	4,968,513.62	4,851,950.00	(116,563.62)
02/28/22	NA	NA	07/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	1.408%	4,909,960.94	4,931,340.87	4,851,950.00	(79,390.87)
01/13/22	NA	NA	08/15/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.125%	0.769%	9,898,437.50	9,928,081.82	9,687,900.00	(240,181.82)
02/15/22	NA	NA	08/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	1.473%	4,898,046.88	4,922,718.81	4,839,050.00	(83,668.81)
11/26/21	NA	NA	09/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	0.250%	0.572%	9,941,015.63	9,960,034.36	9,675,800.00	(284,234.36)
03/31/22	NA	NA	10/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	1.625%	2.155%	4,958,984.38	4,965,501.54	4,916,000.00	(49,501.54)
04/21/22	NA	NA	10/31/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	1.625%	2.380%	4,943,750.00	4,950,907.26	4,916,000.00	(34,907.26)
03/31/22	NA	NA	11/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.500%	2.210%	4,860,742.19	4,881,779.49	4,833,400.00	(48,379.49)
04/21/22	NA	NA	11/30/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.500%	2.462%	4,846,093.75	4,864,677.67	4,833,400.00	(31,277.67)
04/14/22	NA	NA	12/15/23	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.125%	2.213%	4,829,687.50	4,851,465.16	4,801,000.00	(50,465.16)
03/22/22	NA	NA	01/31/24	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	0.875%	2.013%	4,896,484.38	4,911,859.49	4,841,600.00	(70,259.49)
03/22/22	NA	NA	02/29/24	Aaa/AA/AAA	Treasury - Note	US Treasury	5,000,000	1.500%	2.020%	4,950,781.25	4,957,792.67	4,885,750.00	(72,042.67)
03/10/22	NA	NA	03/08/24	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.875%	1.680%	10,038,080.00	10,032,177.34	9,821,500.00	(210,677.34)
04/21/22	NA	NA	04/30/24	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	2.000%	2.600%	9,882,421.88	9,893,703.02	9,833,200.00	(60,503.02)
05/31/22	NA	NA	05/31/24	Aaa/AA/AAA	Treasury - Note	US Treasury	10,000,000	2.500%	2.560%	9,988,281.25	9,988,778.21	9,918,000.00	(70,778.21)

SUB-TOTAL

\$404,000.00

\$402,592,898.50

\$402,774,013.06

\$398,411,505.67

(\$4,362,507.39)

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

06/30/22

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 6/30/2022	UNREALIZED ⁽²⁾ GAIN/(LOSS)
TOTAL INVESTMENTS							<u>\$404,000,000</u>			<u>\$402,592,898.50</u>	<u>\$402,774,013.06</u>	<u>\$398,411,505.67</u>	<u>(\$4,362,507.39)</u>
					Petty Cash					3,400.00			
					Ck Balance	Bank of America		ECR	0.19%	<u>6,937,249.95</u>			
										<u>\$409,533,548.45</u>			

(1) LAIF market value is as of the most recent quarter-end as reported by LAIF. The market value reported is as of 3/31/22.

Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing.

(2) Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers

(3) Real estate rate of return is based on most recent quarter end return.

This Investment Summary Report is in conformity with the 2022 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.

Outstanding Variable Rate Debt	\$237,300,000
Net Outstanding Variable Rate Debt (Less \$60 million fixed-payer swaps)	\$177,300,000
Investment Balance:	\$409,533,548
Investment to Variable Rate Debt Ratio:	231%
Portfolio - Average Number of Days To Maturity	242

	Investment Portfolio	Real Estate ⁽³⁾ Portfolio	Weighted Avg. Return
June	0.81%	13.08%	3.22%
May	0.72%	12.41%	3.04%
Change	0.09%	0.67%	0.18%

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES

06/30/22

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Municipal Bonds	US Treasury
06/22	44,000,000	10.89%	44,000,000				
07/22	15,000,000	3.71%		5,000,000			10,000,000
08/22	35,000,000	8.66%			10,000,000		25,000,000
09/22	30,000,000	7.43%		5,000,000			25,000,000
10/22	40,000,000	9.90%					40,000,000
11/22	20,000,000	4.95%					20,000,000
12/22	20,000,000	4.95%					20,000,000
1/23	20,000,000	4.95%					20,000,000
2/23	20,000,000	4.95%		10,000,000			10,000,000
3/23	15,000,000	3.71%					15,000,000
4/23	20,000,000	4.95%					20,000,000
5/23	10,000,000	2.48%					10,000,000
SUB-TOTAL	\$289,000,000	71.53%	\$44,000,000	\$20,000,000	\$10,000,000		\$215,000,000

13 Months - 3 YEARS							
06/01/2023 - 08/31/2023	\$40,000,000	9.90%					40,000,000
09/01/2023 - 11/30/2023	\$30,000,000	7.43%					30,000,000
12/01/2023 - 02/28/2024	\$15,000,000	3.71%					15,000,000
03/01/2024 - 05/31/2024	\$30,000,000	7.43%		10,000,000			20,000,000
6/01/2024 +							
TOTALS	\$404,000,000	100.00%	\$44,000,000	30,000,000	10,000,000		320,000,000

% OF PORTFOLIO 10.89% 7.43% 2.47% 79.21%

Irvine Ranch Water District
Summary of Real Estate - Income Producing Investments
6/30/2022

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	MARKET VALUE 6/30/2022	ANNUALIZED RATE OF RETURN QUARTER ENDED 6/30/2022
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 174,250,000	21.75%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 34,194,459	8.52%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 12,240,000	11.30%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 11,832,000	8.04%
Sand Canyon Professional Center - Medical Office	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 12,138,000	8.75%
Sand Canyon Professional Center - General Office	Sep-20	Office Building	Fee Simple	\$ 25,985,968	\$ 33,915,000	3.12%
Total - Income Properties				\$ 98,555,794	\$ 278,569,459	13.08%

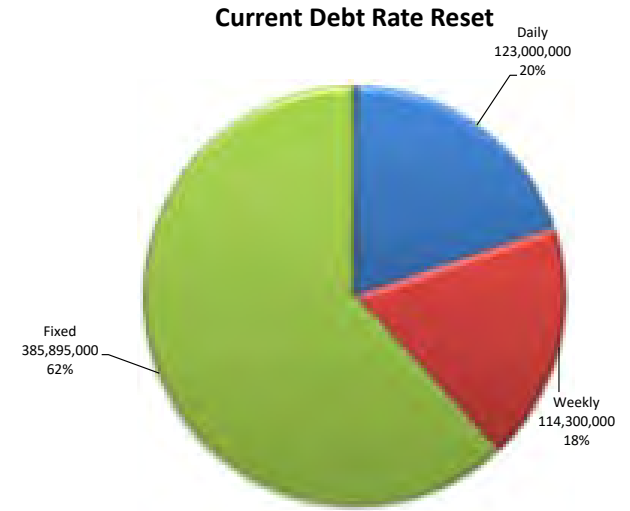
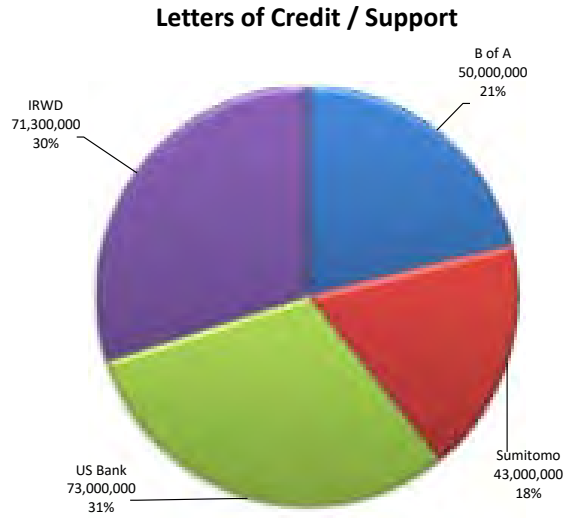
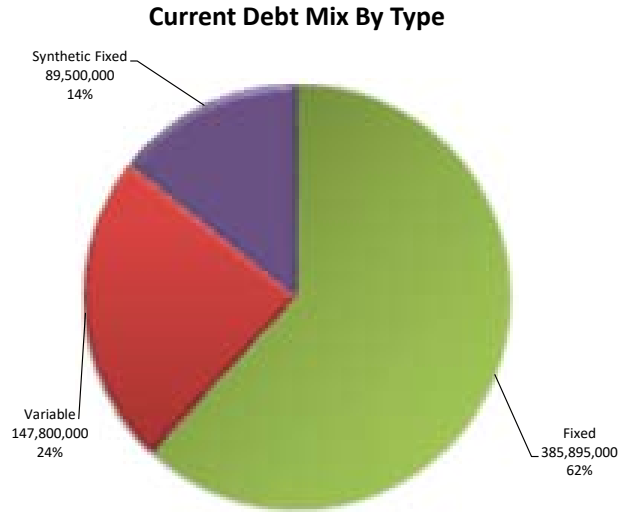
IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT
INVESTMENT ACTIVITY
Jun-22

MATURITIES/SALES/CALLS

PURCHASES

DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
6/30/2022	Treasury - Note	\$10,000,000	0.08%	6/14/2022	10/15/2022	Treasury - Note	\$10,000,000	1.85%
6/30/2022	Treasury - Note	\$5,000,000	0.08%	6/30/2022	8/17/2022	FHLB - Discount Note	\$10,000,000	1.57%
6/30/2022	Treasury - Note	\$5,000,000	0.06%					
6/30/2022	Treasury - Note	\$5,000,000	0.06%					

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



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining Principal	Percent	Letter of Credit/Support	Rmkt Agent	Mode	Reset
Series 1993	05/19/93	04/01/33	\$23,000,000	3.69%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$43,000,000	6.90%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$42,780,000	6.86%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$28,520,000	4.58%	IRWD	Goldman	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$50,000,000	8.02%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$50,000,000	8.02%	B of A	Goldman	Variable	Daily
2016 COPS	09/01/16	03/01/46	\$109,650,000	17.59%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	28.08%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$101,245,000	16.25%	N/A	N/A	Fixed	Fixed
Total			\$623,195,000	100.00%				

IRVINE RANCH WATER DISTRICT
SUMMARY OF FIXED & VARIABLE RATE DEBT

June-22

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION										TRUSTEE INFORMATION									
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee						
SERIES 1993	05/19/93	04/01/33	Apr 1	5th Bus. Day	\$38,300,000	\$23,000,000	US BANK	05/07/15	05/01/25	Aa3/VMIG1	AA-/A-1+	N/R	\$23,310,027	0.3000%	\$69,930	BAML	DAILY	0.10%	\$23,000	BANK OF NY						
SERIES 2008-A Refunding	04/24/08	07/01/35	Jul 1	5th Bus. Day	\$60,215,000	\$43,000,000	SUMITOMO	04/01/11	05/28/25	A1/P-1	A/A-1	A/F1	\$43,636,164	0.3150%	\$137,454	BAML	WED	0.07%	\$30,100	BANK OF NY						
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$60,545,000	\$42,780,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$53,475	BANK OF NY						
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$40,370,000	\$28,520,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$35,650	BANK OF NY						
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$50,000,000	US BANK	04/01/11	05/01/25	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$50,558,904	0.3000%	\$151,677	US Bank	DAILY	0.07%	\$35,000	US BANK						
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$50,000,000	B of A	04/01/11	04/21/25	Aa2/VMIG 1	A/A-1	A1/F1+	\$50,558,904	0.2800%	\$141,565	Goldman	DAILY	0.10%	\$50,000	US BANK						
					\$349,430,000	\$237,300,000	SUB-TOTAL VARIABLE RATE DEBT										\$168,064,000		0.2979%		\$500,626		0.10%		\$227,225	
																	(Wt. Avg)				(Wt. Avg)					
FIXED RATE ISSUES																										
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	May (2025)	May/Nov	\$175,000,000	\$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK						
2016 COPS	09/01/16	03/01/46	Mar 1	Mar/Sept	\$116,745,000	\$109,650,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK						
SERIES 2016	10/12/16	02/01/46	Feb 1	Feb/Aug	\$103,400,000	\$101,245,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY						
					\$395,145,000	\$385,895,000	SUB-TOTAL FIXED RATE DEBT																			
					\$744,575,000	\$623,195,000	TOTAL- FIXED & VARIABLE RATE DEBT																			

Remarketing Agents			GO VS COP's		
Goldman	121,300,000	51%	GO:	513,545,000	82%
BAML	66,000,000	28%	COPS:	109,650,000	18%
US Bank	50,000,000	21%	Total	<u>623,195,000</u>	
	<u>237,300,000</u>				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	43,000,000	Daily Issues	123,000,000 20%
BANK OF AMERICA	50,000,000	Weekly Issues	43,000,000 7%
US BANK	73,000,000	ITN Issues	71,300,000 11%
	<u>166,000,000</u>	Sub-Total	<u>237,300,000</u>
		Fixed Rate Issues	\$385,895,000 62%
		Sub-Total - Fixed	<u>385,895,000</u>
		TOTAL DEBT	
		FIXED & VAR.	<u>623,195,000</u> 100%

SUMMARY OF DEBT RATES
Jun-22

Rmkt Agent Mode	GOLDMAN DAILY	GOLDMAN WEEKLY	GOLDMAN WEEKLY	MERRILL LYNCH		US BANK DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	DAILY	WEEKLY	2009-A
Par Amount	50,000,000	42,780,000	28,520,000	1993	2008-A	50,000,000
LOC Bank	BOFA	(SIFMA + 6)	(SIFMA + 6)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday		Wednesday	
6/1/2022	0.45%	0.85%	0.85%	0.43%	0.72%	0.50%
6/2/2022	0.40%	0.74%	0.74%	0.40%	0.60%	0.45%
6/3/2022	0.39%	0.74%	0.74%	0.35%	0.60%	0.42%
6/4/2022	0.39%	0.74%	0.74%	0.35%	0.60%	0.42%
6/5/2022	0.39%	0.74%	0.74%	0.35%	0.60%	0.42%
6/6/2022	0.33%	0.74%	0.74%	0.33%	0.60%	0.40%
6/7/2022	0.32%	0.74%	0.74%	0.31%	0.60%	0.35%
6/8/2022	0.28%	0.74%	0.74%	0.30%	0.60%	0.33%
6/9/2022	0.28%	0.68%	0.68%	0.30%	0.53%	0.30%
6/10/2022	0.30%	0.68%	0.68%	0.28%	0.53%	0.30%
6/11/2022	0.30%	0.68%	0.68%	0.28%	0.53%	0.30%
6/12/2022	0.30%	0.68%	0.68%	0.28%	0.53%	0.30%
6/13/2022	0.39%	0.68%	0.68%	0.46%	0.53%	0.43%
6/14/2022	0.46%	0.68%	0.68%	0.49%	0.53%	0.58%
6/15/2022	0.45%	0.68%	0.68%	0.69%	0.53%	0.65%
6/16/2022	0.50%	1.03%	1.03%	0.69%	0.87%	0.74%
6/17/2022	0.55%	1.03%	1.03%	0.64%	0.87%	0.65%
6/18/2022	0.55%	1.03%	1.03%	0.64%	0.87%	0.65%
6/19/2022	0.55%	1.03%	1.03%	0.64%	0.87%	0.65%
6/20/2022	0.55%	1.03%	1.03%	0.64%	0.87%	0.65%
6/21/2022	0.61%	1.03%	1.03%	0.57%	0.87%	0.65%
6/22/2022	0.62%	1.03%	1.03%	0.55%	0.87%	0.65%
6/23/2022	0.55%	1.04%	1.04%	0.55%	0.84%	0.63%
6/24/2022	0.53%	1.04%	1.04%	0.53%	0.84%	0.60%
6/25/2022	0.53%	1.04%	1.04%	0.53%	0.84%	0.60%
6/26/2022	0.53%	1.04%	1.04%	0.53%	0.84%	0.60%
6/27/2022	0.52%	1.04%	1.04%	0.53%	0.84%	0.60%
6/28/2022	0.48%	1.04%	1.04%	0.53%	0.84%	0.58%
6/29/2022	0.48%	1.04%	1.04%	0.50%	0.84%	0.58%
6/30/2022	0.47%	0.97%	0.97%	0.48%	0.78%	0.53%
Avg Interest Rates	0.45%	0.88%	0.88%	0.47%	0.71%	0.52%
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.28%			0.30%	0.32%	0.30%
All-In Rate	0.83%	1.00%	1.00%	0.87%	1.10%	0.89%
Par Amount	92,780,000		28,520,000	66,000,000		50,000,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	51.83%	123,000,000	0.86%	0.48%
Weekly	48.17%	114,300,000	1.04%	0.81%
Fixed	100.00%	\$ 237,300,000	0.95%	0.64%
COPS 2016	28.41%	109,650,000	2.90%	
BABS 2010	45.35%	175,000,000	4.44%	(1)
SERIES 2016	26.24%	101,245,000	3.32%	
	100.00%	\$ 385,895,000	3.71%	
All-In Debt Rate Including \$60 Million Notional Amount of Swaps				3.08%

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

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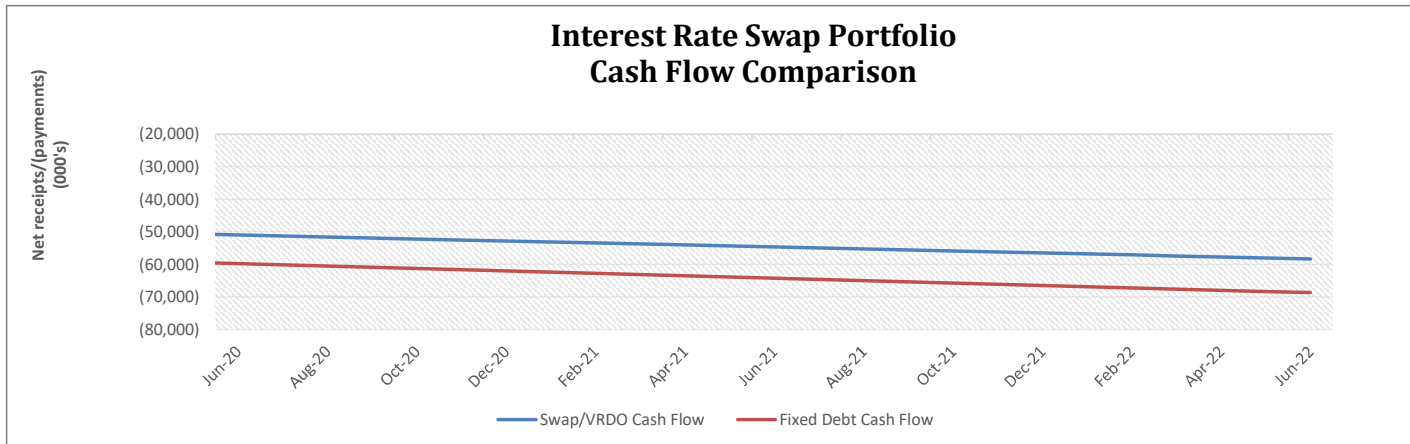
Exhibit "C"
Irvine Ranch Water District
Interest Rate Swap Summary
July 2022

	Prior Mo.	Current Mo.	12-Mo Avg
LIBOR Avg %	0.94%	1.49%	0.35%

Current Fiscal Year Active Swaps								Cash Flow				Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Net Accrual	Current Mark to Market	Notional Difference
Fixed Payer Swaps - By Effective Date													
3/10/2007	3/10/2029	6.7	ML	30,000,000	FXP	LIBOR	5.687%	(132,441)	(110,423)	(1,623,297)	(21,382,564)	24,838,003	(5,161,997)
3/10/2007	3/10/2029	6.7	CG	30,000,000	FXP	LIBOR	5.687%	(132,441)	(110,423)	(1,623,297)	(21,382,564)	24,832,338	(5,167,662)
Totals/Weighted Avgs				\$ 60,000,000			5.687%	\$ (264,882)	\$ (220,846)	\$ (3,246,594)	\$ (42,765,127)	\$ 49,670,341	\$ (10,329,659)
Total Current Year Active Swaps				\$ 60,000,000				\$ (264,882)	\$ (220,846)	\$ (3,246,594)	\$ (42,765,127)	\$ 49,670,341	\$ (10,329,659)

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

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market		
								Prior Month	Current Month	Fiscal YTD	Cumulative Net Accrual	Current Mark to Market	Notional Difference	
Total Current Year Active & Terminated Swaps								\$ 60,000,000	\$ (264,882)	\$ (220,846)	\$ (3,246,594)	\$ (42,765,127)	\$ 49,670,341	\$ (10,329,659)



Cash Flow Comparison Synthetic Fixed vs. Fixed Rate Debt	
Cash Flow to Date	
Synthetic Fixed =	\$58,323,014
Fixed Rate =	\$68,701,144
Assumptions:	
- 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 JUNE 2022

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
427729	1-Jun-22	JCI JONES CHEMICALS INC	698.01	IRWD Check	Reconciled
427730	2-Jun-22	Clary, Cheryl L	8.90	IRWD Check	Negotiable
427731	2-Jun-22	Cortez, Dulce J	79.06	IRWD Check	Reconciled
427732	2-Jun-22	LaMar, Steven E	31.58	IRWD Check	Reconciled
427733	2-Jun-22	McBride, Damien J	2,181.92	IRWD Check	Reconciled
427734	2-Jun-22	Nash, Joel	71.38	IRWD Check	Reconciled
427735	2-Jun-22	Oldewage, Lars D (Lars)	59.15	IRWD Check	Reconciled
427736	2-Jun-22	Parsons, Sheryl	233.78	IRWD Check	Reconciled
427737	2-Jun-22	Shapiro, Matthew	325.00	IRWD Check	Reconciled
427738	2-Jun-22	Swan, Peer	1,761.33	IRWD Check	Reconciled
427739	2-Jun-22	Wise, Maureen (Mo)	162.11	IRWD Check	Negotiable
427740	2-Jun-22	8X8 INC	500.00	IRWD Check	Reconciled
427741	2-Jun-22	ACI	739.09	IRWD Check	Reconciled
427742	2-Jun-22	ACTION WHOLESALE PRODUCTS, INC.	4,678.16	IRWD Check	Reconciled
427743	2-Jun-22	AFLAC	2,087.42	IRWD Check	Reconciled
427744	2-Jun-22	AIRGAS, INC.	1,601.25	IRWD Check	Reconciled
427745	2-Jun-22	ALSO ENERGY, INC.	750.00	IRWD Check	Reconciled
427746	2-Jun-22	AMAYA SOLUTIONS INC.	7,729.88	IRWD Check	Reconciled
427747	2-Jun-22	AMAZON CAPITAL SERVICES, INC.	5,015.00	IRWD Check	Reconciled
427748	2-Jun-22	AMWINS GROUP BENEFITS LLC	3,629.10	IRWD Check	Reconciled
427749	2-Jun-22	AMWINS GROUP BENEFITS LLC	3,629.10	IRWD Check	Reconciled
427750	2-Jun-22	ANTHONY N. LARSEN	550.00	IRWD Check	Reconciled
427751	2-Jun-22	ARAG NORTH AMERICA, INC.	408.75	IRWD Check	Reconciled
427752	2-Jun-22	ARDURRA GROUP, INC.	32,360.00	IRWD Check	Reconciled
427753	2-Jun-22	AT&T	240.25	IRWD Check	Reconciled
427754	2-Jun-22	AT&T	503.41	IRWD Check	Reconciled
427755	2-Jun-22	AUTOZONE PARTS, INC.	172.93	IRWD Check	Reconciled
427756	2-Jun-22	AVIAT U.S., INC	662.00	IRWD Check	Reconciled
427757	2-Jun-22	AVISTA TECHNOLOGIES, INC	10,270.19	IRWD Check	Reconciled
427758	2-Jun-22	BATTERIES PLUS AND BATTERIES PLUS BULBS	259.84	IRWD Check	Reconciled
427759	2-Jun-22	BELL TOWER FLORIST & GIFTS	499.92	IRWD Check	Reconciled
427760	2-Jun-22	BOOT WORLD, INC.	448.44	IRWD Check	Reconciled
427761	2-Jun-22	BRENNTAG PACIFIC INC	71,900.51	IRWD Check	Reconciled
427762	2-Jun-22	C WELLS PIPELINE MATERIALS INC	1,981.53	IRWD Check	Reconciled
427763	2-Jun-22	CALIFORNIA BARRICADE RENTAL, INC.	1,251.50	IRWD Check	Reconciled
427764	2-Jun-22	CALPACS (CALIFORNIA PUBLIC AGENCY COMPENSATION SURVEY)	550.00	IRWD Check	Negotiable
427765	2-Jun-22	CHAIREL CUSTOM HAY, INC.	6,395.92	IRWD Check	Reconciled
427766	2-Jun-22	CHEM TECH INTERNATIONAL INC	22,343.50	IRWD Check	Reconciled
427767	2-Jun-22	CIMARRON ENERGY, INC	2,767.22	IRWD Check	Reconciled
427768	2-Jun-22	CITY CIRCUIT BREAKERS	3,769.13	IRWD Check	Reconciled
427769	2-Jun-22	CITY OF IRVINE	287,924.00	IRWD Check	Reconciled
427770	2-Jun-22	CITY OF TUSTIN	304.94	IRWD Check	Reconciled
427771	2-Jun-22	CLA-VAL COMPANY	10,438.85	IRWD Check	Reconciled
427772	2-Jun-22	COLONIAL LIFE & ACCIDENT INSURANCE CO.	652.98	IRWD Check	Reconciled
427773	2-Jun-22	CONSTELLATION NEWENERGY, INC.	77,877.66	IRWD Check	Reconciled
427774	2-Jun-22	CONTROL LABORATORIES, INC.	225.00	IRWD Check	Reconciled
427775	2-Jun-22	COTTONS POINT DESIGN, INC.	8,109.39	IRWD Check	Reconciled
427776	2-Jun-22	COUNTY OF ORANGE	398.45	IRWD Check	Reconciled
427777	2-Jun-22	COX COMMUNICATIONS, INC.	124.47	IRWD Check	Reconciled
427778	2-Jun-22	CYPRESS VILLAGE MURANO	249.25	IRWD Check	Reconciled
427779	2-Jun-22	DEAN ALLAN VOTAVA	1,450.00	IRWD Check	Reconciled
427780	2-Jun-22	DIVITA BUILDERS, INC.	1,224.58	IRWD Check	Reconciled
427781	2-Jun-22	DORIAN, RICHARD	38.42	IRWD Check	Negotiable
427782	2-Jun-22	DRAKE TRAFFIC CONTROL SERVICES INC	1,260.00	IRWD Check	Reconciled
427783	2-Jun-22	EHS INTERNATIONAL, INC	3,135.00	IRWD Check	Negotiable
427784	2-Jun-22	EXECUTIVE LIGHTING & ELECTRIC	616.29	IRWD Check	Reconciled
427785	2-Jun-22	FEDEX	291.36	IRWD Check	Reconciled
427786	2-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	199.45	IRWD Check	Negotiable
427787	2-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	6,441.61	IRWD Check	Reconciled
427788	2-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	874.19	IRWD Check	Reconciled
427789	2-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	85.52	IRWD Check	Negotiable
427790	2-Jun-22	FISHER SCIENTIFIC COMPANY LLC	1,912.08	IRWD Check	Reconciled
427791	2-Jun-22	FRONTIER CALIFORNIA INC.	290.01	IRWD Check	Reconciled
427792	2-Jun-22	GEIGER BROS	1,530.78	IRWD Check	Reconciled
427793	2-Jun-22	GFS CHEMICALS, INC.	521.02	IRWD Check	Reconciled
427794	2-Jun-22	GI ENDURANT LLC	5,889.50	IRWD Check	Reconciled
427795	2-Jun-22	GRAINGER	1,964.67	IRWD Check	Reconciled
427796	2-Jun-22	GRAYBAR ELECTRIC COMPANY	336.43	IRWD Check	Reconciled

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
427797	2-Jun-22	HACH COMPANY	21,457.79	IRWD Check	Reconciled
427798	2-Jun-22	HAMILTON, KURT	2,121.33	IRWD Check	Reconciled
427799	2-Jun-22	HARRINGTON INDUSTRIAL PLASTICS LLC	1,908.42	IRWD Check	Reconciled
427800	2-Jun-22	HELPMATES STAFFING SERVICES	1,632.00	IRWD Check	Reconciled
427801	2-Jun-22	HELPMATES STAFFING SERVICES LLC	6,891.60	IRWD Check	Reconciled
427802	2-Jun-22	HI-LINE INC	184.35	IRWD Check	Reconciled
427803	2-Jun-22	HILL BROTHERS CHEMICAL COMPANY	3,463.96	IRWD Check	Reconciled
427804	2-Jun-22	HOME DEPOT USA INC	1,259.87	IRWD Check	Reconciled
427805	2-Jun-22	HORIZON ENGINEERING SYSTEMS LLC	11,772.00	IRWD Check	Reconciled
427806	2-Jun-22	IRVINE PACIFIC	1,033.65	IRWD Check	Reconciled
427807	2-Jun-22	IRVINE PIPE & SUPPLY INC	2,739.37	IRWD Check	Reconciled
427808	2-Jun-22	IRVINE STEAK HOUSE L.P. DBA	2,934.88	IRWD Check	Reconciled
427809	2-Jun-22	IRWD-PETTY CASH CUSTODIAN	903.74	IRWD Check	Reconciled
427810	2-Jun-22	JACOB, CHRISTA	27.04	IRWD Check	Negotiable
427811	2-Jun-22	JUNG, HYEJIN	28.80	IRWD Check	Reconciled
427812	2-Jun-22	KAZARIANS & ASSOCIATES, INC.	12,820.00	IRWD Check	Reconciled
427813	2-Jun-22	KENNETH BOURGUINON	314.57	IRWD Check	Reconciled
427814	2-Jun-22	KHOE, WILLIAM	27.67	IRWD Check	Reconciled
427815	2-Jun-22	LANDCARE HOLDINGS, INC.	11,335.46	IRWD Check	Reconciled
427816	2-Jun-22	LARA, JEDD	304.10	IRWD Check	Reconciled
427817	2-Jun-22	LENNAR HOMES OF CALIFORNIA, INC.	296.92	IRWD Check	Reconciled
427818	2-Jun-22	LILLESTRAND LEADERSHIP CONSULTING, INC.	1,885.00	IRWD Check	Reconciled
427819	2-Jun-22	LINDE GAS & EQUIPMENT INC.	2,330.25	IRWD Check	Reconciled
427820	2-Jun-22	LINDSAY POLIC CONSULTING, INC.	7,700.00	IRWD Check	Reconciled
427821	2-Jun-22	LUBRICATION ENGINEERS, INC.	3,367.51	IRWD Check	Reconciled
427822	2-Jun-22	MARK COMPANY	2,600.00	IRWD Check	Reconciled
427823	2-Jun-22	MBC AQUATIC SCIENCES, INC.	1,400.00	IRWD Check	Reconciled
427824	2-Jun-22	MC FADDEN-DALE INDUSTRIAL	459.00	IRWD Check	Reconciled
427825	2-Jun-22	MERRIMAC PETROLEUM, INC.	9,005.58	IRWD Check	Reconciled
427826	2-Jun-22	MR CRANE INC	2,420.00	IRWD Check	Reconciled
427827	2-Jun-22	MULVAD, METTE	94.67	IRWD Check	Reconciled
427828	2-Jun-22	NEW DIMENSION GENERAL CONSTRUCTION	11,715.16	IRWD Check	Reconciled
427829	2-Jun-22	NEWPORT NORTH APTS	102.94	IRWD Check	Reconciled
427830	2-Jun-22	NEWPORT RIDGE APTS	2,334.44	IRWD Check	Reconciled
427831	2-Jun-22	NOV PROCESS & FLOW TECHNOLOGIES US, INC.	50.21	IRWD Check	Reconciled
427832	2-Jun-22	O'REILLY AUTO ENTERPRISES, LLC	29.11	IRWD Check	Reconciled
427833	2-Jun-22	OCEAN BLUE ENVIRONMENTAL SERVICES INC	1,277.89	IRWD Check	Reconciled
427834	2-Jun-22	OLIN CORPORATION	26,501.02	IRWD Check	Reconciled
427835	2-Jun-22	ONESOURCE DISTRIBUTORS LLC	487.68	IRWD Check	Reconciled
427836	2-Jun-22	ORACLE AMERICA, INC.	246,874.01	IRWD Check	Reconciled
427837	2-Jun-22	ORANGE COUNTY AUTO PARTS CO	262.59	IRWD Check	Reconciled
427838	2-Jun-22	PARKHOUSE TIRE INC	5,173.61	IRWD Check	Reconciled
427839	2-Jun-22	PAUL A. RUELAS	500.00	IRWD Check	Reconciled
427840	2-Jun-22	PELLETIER & ASSOCIATES, INC.	1,196.00	IRWD Check	Reconciled
427841	2-Jun-22	PHAM, LINDA	1,927.40	IRWD Check	Negotiable
427842	2-Jun-22	PILLSBURY WINTHROP SHAW PITTMAN LLP	4,038.50	IRWD Check	Reconciled
427843	2-Jun-22	PLUMBERS DEPOT INC.	55.30	IRWD Check	Reconciled
427844	2-Jun-22	PROGRESSIVE WEST INSURANCE COMPANY AS SUBROGEE OF LIM, JIHOON	21,612.94	IRWD Check	Reconciled
427845	2-Jun-22	PSOMAS	4,592.00	IRWD Check	Reconciled
427846	2-Jun-22	RAWLINGS, WILLIAM	1,266.00	IRWD Check	Reconciled
427847	2-Jun-22	REAL WATER CONSULTANTS INC.	4,029.00	IRWD Check	Reconciled
427848	2-Jun-22	RED WING SHOE STORE	200.00	IRWD Check	Reconciled
427849	2-Jun-22	RENTOKIL NORTH AMERICA, INC	20,902.66	IRWD Check	Reconciled
427850	2-Jun-22	RESTEK CORPORATION	127.45	IRWD Check	Reconciled
427851	2-Jun-22	RINCON TRUCK CENTER INC.	1,928.53	IRWD Check	Reconciled
427852	2-Jun-22	RLG ENTERPRISES, INC	527.82	IRWD Check	Reconciled
427853	2-Jun-22	SEAL ANALYTICAL INC	1,074.49	IRWD Check	Reconciled
427854	2-Jun-22	SHAMROCK SUPPLY CO INC	341.54	IRWD Check	Reconciled
427855	2-Jun-22	SHOETERIA	112.55	IRWD Check	Reconciled
427856	2-Jun-22	SMITH SYSTEM DRIVER IMPROVEMENT INSTITUTE, INC.	4,551.50	IRWD Check	Reconciled
427857	2-Jun-22	SNAP-ON INCORPORATED	80.53	IRWD Check	Reconciled
427858	2-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	27,212.95	IRWD Check	Reconciled
427859	2-Jun-22	SOUTHERN CALIFORNIA GAS COMPANY	1,308.24	IRWD Check	Reconciled
427860	2-Jun-22	SPARKLETTS	177.06	IRWD Check	Reconciled
427861	2-Jun-22	STANTEC CONSULTING SERVICES INC.	2,530.00	IRWD Check	Reconciled
427862	2-Jun-22	STEVEN WELCH	410.00	IRWD Check	Reconciled
427863	2-Jun-22	TALLEY INC	1,750.07	IRWD Check	Reconciled
427864	2-Jun-22	TAYLOR MORRISON OF CALIFORNIA, LLC	354.78	IRWD Check	Negotiable

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
427865	2-Jun-22	TETRA TECH, INC	1,290.00	IRWD Check	Reconciled
427866	2-Jun-22	THE MODAL SHOP, INC.	18,782.11	IRWD Check	Reconciled
427867	2-Jun-22	THOMPSON & PHIPPS INC	1,428.88	IRWD Check	Reconciled
427868	2-Jun-22	TIC-IPG-COMMON	1,168.68	IRWD Check	Reconciled
427869	2-Jun-22	TIC-RETAIL PROPERTIES	1,279.81	IRWD Check	Reconciled
427870	2-Jun-22	TK ELEVATOR CORPORATION	218.38	IRWD Check	Reconciled
427871	2-Jun-22	TRAFFIC MANAGEMENT, INC	1,932.00	IRWD Check	Reconciled
427872	2-Jun-22	TREE OF LIFE NURSERY	743.48	IRWD Check	Reconciled
427873	2-Jun-22	UNITED PARCEL SERVICE INC	70.58	IRWD Check	Reconciled
427874	2-Jun-22	URBAN CONSIGNMENT	100.00	IRWD Check	Reconciled
427875	2-Jun-22	US BANK NAT'L ASSOCIATION NORTH DAKOTA	69,882.60	IRWD Check	Reconciled
427876	2-Jun-22	VALBUENA, STEPHEN	2,141.29	IRWD Check	Negotiable
427877	2-Jun-22	VERIZON WIRELESS SERVICES LLC	17,835.54	IRWD Check	Reconciled
427878	2-Jun-22	VWR INTERNATIONAL, LLC	1,317.95	IRWD Check	Reconciled
427879	2-Jun-22	WASTE MANAGEMENT COLLECTIONS AND RECYCLING, INC.	2,933.21	IRWD Check	Reconciled
427880	2-Jun-22	WATER TREATMENT CHEMICALS INC	20,007.00	IRWD Check	Reconciled
427881	2-Jun-22	WATERLINE TECHNOLOGIES INC	8,834.88	IRWD Check	Reconciled
427882	2-Jun-22	WAXIE'S ENTERPRISES, INC	1,808.24	IRWD Check	Reconciled
427883	2-Jun-22	WEST COAST SAND & GRAVEL INC.	5,788.57	IRWD Check	Reconciled
427884	2-Jun-22	WEST YOST & ASSOCIATES, INC.	22,989.00	IRWD Check	Reconciled
427885	2-Jun-22	WIRELESS WATCHDOGS, LLC	2,340.00	IRWD Check	Reconciled
427886	2-Jun-22	XU, TIANFU	32.39	IRWD Check	Reconciled
427887	2-Jun-22	YORKE ENGINEERING, LLC	1,019.00	IRWD Check	Reconciled
427888	2-Jun-22	ZEBRON CONTRACTING INC	102,460.00	IRWD Check	Reconciled
427889	2-Jun-22	FRANCHISE TAX BOARD	1,989.43	IRWD Check	Reconciled
427890	2-Jun-22	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	3,455.65	IRWD Check	Reconciled
427891	2-Jun-22	PERS LONG TERM CARE	612.63	IRWD Check	Reconciled
427892	9-Jun-22	Breiter, Michelle	20.00	IRWD Check	Reconciled
427893	9-Jun-22	Drzymkowski, Michele A (Michele)	288.00	IRWD Check	Reconciled
427894	9-Jun-22	Perez, Rodolfo (Rudy)	96.00	IRWD Check	Reconciled
427895	9-Jun-22	Vasquez, Jonathan	175.00	IRWD Check	Reconciled
427896	9-Jun-22	3SE	2,397.50	IRWD Check	Reconciled
427897	9-Jun-22	ABSOLUTE STANDARDS, INC.	1,438.75	IRWD Check	Reconciled
427898	9-Jun-22	ACE INDUSTRIES, INC.	3,710.00	IRWD Check	Reconciled
427899	9-Jun-22	ADS CORP.	2,325.00	IRWD Check	Reconciled
427900	9-Jun-22	AECOM TECHNICAL SERVICES, INC.	100,185.37	IRWD Check	Reconciled
427901	9-Jun-22	AGILENT TECHNOLOGIES, INC.	328.21	IRWD Check	Reconciled
427902	9-Jun-22	AMAZON CAPITAL SERVICES, INC.	218.40	IRWD Check	Reconciled
427903	9-Jun-22	ANDRITZ SEPARATION, INC.	1,145.41	IRWD Check	Reconciled
427904	9-Jun-22	AT&T	5,014.86	IRWD Check	Reconciled
427905	9-Jun-22	AUTOZONE PARTS, INC.	276.85	IRWD Check	Reconciled
427906	9-Jun-22	BAIK, CHANGHO	159.23	IRWD Check	Reconciled
427907	9-Jun-22	BELLEWICK COMMUNITY ASSOCIATION	84.00	IRWD Check	Reconciled
427908	9-Jun-22	BERK, SUSAN	20,000.00	IRWD Check	Reconciled
427909	9-Jun-22	BERMINGHAM CONTROLS, INC.	3,750.00	IRWD Check	Reconciled
427910	9-Jun-22	BRIAN HOMSY	1,846.65	IRWD Check	Reconciled
427911	9-Jun-22	BROWN AND CALDWELL	12,493.31	IRWD Check	Reconciled
427912	9-Jun-22	C WELLS PIPELINE MATERIALS INC	17,890.81	IRWD Check	Reconciled
427913	9-Jun-22	CALIFORNIA BARRICADE RENTAL, INC.	26,903.70	IRWD Check	Reconciled
427914	9-Jun-22	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	2,010.00	IRWD Check	Reconciled
427915	9-Jun-22	CANON SOLUTIONS AMERICA, INC.	6,569.96	IRWD Check	Reconciled
427916	9-Jun-22	CANON SOLUTIONS AMERICA, INC.	41.73	IRWD Check	Reconciled
427917	9-Jun-22	CDW GOVERNMENT LLC	1,398.01	IRWD Check	Reconciled
427918	9-Jun-22	CENTURY PAVING, INC.	84,244.00	IRWD Check	Negotiable
427919	9-Jun-22	CHAIREL CUSTOM HAY, INC.	10,445.22	IRWD Check	Reconciled
427920	9-Jun-22	CHO DESIGN ASSOCIATES, INC	800.00	IRWD Check	Reconciled
427921	9-Jun-22	CHO, HAE K	59.39	IRWD Check	Reconciled
427922	9-Jun-22	CHUNG DAHM AMERICA, INC	70.96	IRWD Check	Negotiable
427923	9-Jun-22	CITY OF TUSTIN	633.47	IRWD Check	Reconciled
427924	9-Jun-22	CONSTELLATION NEWENERGY, INC.	137,898.73	IRWD Check	Reconciled
427925	9-Jun-22	CORELOGIC INC	117.52	IRWD Check	Reconciled
427926	9-Jun-22	COX COMMUNICATIONS, INC.	278.62	IRWD Check	Reconciled
427927	9-Jun-22	CYPRESS VILLAGE VENETO	1,199.24	IRWD Check	Reconciled
427928	9-Jun-22	D & H WATER SYSTEMS INC.	1,293.76	IRWD Check	Reconciled
427929	9-Jun-22	DEMARIA ELECTRIC MOTOR SERVICES, INC.	26,680.14	IRWD Check	Reconciled
427930	9-Jun-22	DMC ENGINEERING INC	1,320.00	IRWD Check	Reconciled
427931	9-Jun-22	DUGAN, MARLENE	64.57	IRWD Check	Negotiable
427932	9-Jun-22	E.J. MEYER COMPANY, INC.	379,413.62	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT
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CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
427933	9-Jun-22	EAST ORANGE COUNTY WATER DISTRICT	3,447.77	IRWD Check	Reconciled
427934	9-Jun-22	EHS INTERNATIONAL,INC	940.50	IRWD Check	Reconciled
427935	9-Jun-22	ELITE AUTOMOTIVE SERVICE, LLC	250.87	IRWD Check	Reconciled
427936	9-Jun-22	ENVIRONMENTAL RESOURCE ASSOCIATES	508.29	IRWD Check	Reconciled
427937	9-Jun-22	ENVIRONMENTAL SCIENCE ASSOCIATES	1,901.47	IRWD Check	Reconciled
427938	9-Jun-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	3,601.50	IRWD Check	Reconciled
427939	9-Jun-22	FAITHCO INC.	3,750.00	IRWD Check	Reconciled
427940	9-Jun-22	FANG, RUI	33.26	IRWD Check	Negotiable
427941	9-Jun-22	FASTBLUE COMMUNICATIONS INC.	1,917.00	IRWD Check	Reconciled
427942	9-Jun-22	FERGUSON ENTERPRISES, LLC	17,817.13	IRWD Check	Reconciled
427943	9-Jun-22	FERREIRA CONSTRUCTION COMPANY, INC.	110,020.45	IRWD Check	Reconciled
427945	9-Jun-22	FISHER SCIENTIFIC COMPANY LLC	1,058.47	IRWD Check	Reconciled
427946	9-Jun-22	FLEET SOLUTIONS LLC	5,600.62	IRWD Check	Reconciled
427947	9-Jun-22	FLUKE ELECTRONICS CORPORATION	819.90	IRWD Check	Reconciled
427948	9-Jun-22	FOUGHT, CYNTHIA J.	2,636.46	IRWD Check	Reconciled
427949	9-Jun-22	GCI CONSTRUCTION, INC.	34,000.00	IRWD Check	Reconciled
427950	9-Jun-22	GOFORTH & MARTI	683.51	IRWD Check	Reconciled
427951	9-Jun-22	GRAINGER	4,797.95	IRWD Check	Reconciled
427952	9-Jun-22	GRAND PROPERTY SERVICES, INC	185.89	IRWD Check	Negotiable
427953	9-Jun-22	HAAKER EQUIPMENT COMPANY	1,305.27	IRWD Check	Reconciled
427954	9-Jun-22	HACH COMPANY	8,970.47	IRWD Check	Reconciled
427955	9-Jun-22	HARRINGTON INDUSTRIAL PLASTICS LLC	4,211.74	IRWD Check	Reconciled
427956	9-Jun-22	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	50.88	IRWD Check	Reconciled
427957	9-Jun-22	HDR ENGINEERING INC	50,823.49	IRWD Check	Reconciled
427958	9-Jun-22	HELPMATES STAFFING SERVICES	1,264.80	IRWD Check	Reconciled
427959	9-Jun-22	HELPMATES STAFFING SERVICES LLC	4,982.74	IRWD Check	Reconciled
427960	9-Jun-22	HICKS, MARK	177.54	IRWD Check	Reconciled
427961	9-Jun-22	HILL BROTHERS CHEMICAL COMPANY	1,576.06	IRWD Check	Reconciled
427962	9-Jun-22	HOME DEPOT USA INC	981.89	IRWD Check	Reconciled
427963	9-Jun-22	ILAND INTERNET SOLUTION CORPORATION	7,482.00	IRWD Check	Reconciled
427964	9-Jun-22	IMPERIAL SPRINKLER SUPPLY, INC.	417.82	IRWD Check	Reconciled
427965	9-Jun-22	INDUSTRIAL METAL SUPPLY CO	56.96	IRWD Check	Reconciled
427966	9-Jun-22	INTEGRITY MUNICIPAL SERVICES LLC	20,344.00	IRWD Check	Reconciled
427967	9-Jun-22	IRON MOUNTAIN INFORMATION MANAGEMENT INC	676.61	IRWD Check	Reconciled
427968	9-Jun-22	IRVINE PACIFIC	286.01	IRWD Check	Reconciled
427969	9-Jun-22	IRVINE PIPE & SUPPLY INC	1,847.61	IRWD Check	Reconciled
427970	9-Jun-22	IRWD-PETTY CASH CUSTODIAN	668.24	IRWD Check	Reconciled
427971	9-Jun-22	JOHNSON-FRANK & ASSOCIATES, INC.	12,150.00	IRWD Check	Reconciled
427972	9-Jun-22	JOSEPH JUNG AND ASSOCIATES, INC.	15,000.00	IRWD Check	Reconciled
427973	9-Jun-22	JPR SYSTEMS INC	7,320.00	IRWD Check	Reconciled
427974	9-Jun-22	KAESER COMPRESSORS, INC.	1,745.68	IRWD Check	Reconciled
427975	9-Jun-22	KB HOMES	645.42	IRWD Check	Reconciled
427976	9-Jun-22	KILL-N-BUGS TERMITE AND PEST CONTROL SERVICES	4,225.00	IRWD Check	Reconciled
427977	9-Jun-22	KRONICK MOSKOVITZ TIEDEMANN & GIRARD	24,140.70	IRWD Check	Reconciled
427978	9-Jun-22	LA HABRA FENCE COMPANY INC	5,621.00	IRWD Check	Reconciled
427979	9-Jun-22	LANDCARE HOLDINGS, INC.	104,693.83	IRWD Check	Reconciled
427980	9-Jun-22	LEE & RO, INC.	114,796.18	IRWD Check	Reconciled
427981	9-Jun-22	LI, SHA	1,620.99	IRWD Check	Negotiable
427982	9-Jun-22	LINDE GAS & EQUIPMENT INC.	850.76	IRWD Check	Reconciled
427983	9-Jun-22	LUBRICATION ENGINEERS, INC.	694.55	IRWD Check	Reconciled
427984	9-Jun-22	MAJD, MOHAMMED	26.92	IRWD Check	Negotiable
427985	9-Jun-22	MAP COMMUNICATIONS, INC.	882.85	IRWD Check	Reconciled
427986	9-Jun-22	MC MASTER CARR SUPPLY CO	71.56	IRWD Check	Reconciled
427987	9-Jun-22	MCKINNON, JAMES	84.72	IRWD Check	Reconciled
427988	9-Jun-22	MICROSOFT CORPORATION	559.68	IRWD Check	Reconciled
427989	9-Jun-22	MIRACK CONSTRUCTION	1,481.61	IRWD Check	Reconciled
427990	9-Jun-22	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	1,115.79	IRWD Check	Reconciled
427991	9-Jun-22	NATIONAL READY MIXED CONCRETE SALES, LLC	434.24	IRWD Check	Reconciled
427992	9-Jun-22	NATURES IMAGE INC	6,200.00	IRWD Check	Reconciled
427993	9-Jun-22	NEW DIMENSION GENERAL CONSTRUCTION	34,863.24	IRWD Check	Reconciled
427994	9-Jun-22	NORTHERN TOOL & EQUIPMENT CATALOG COMPANY, INC	643.35	IRWD Check	Reconciled
427995	9-Jun-22	O.C. SUPERIOR CUSTOM CLEANING	1,000.00	IRWD Check	Reconciled
427996	9-Jun-22	OCTA	6,007.00	IRWD Check	Reconciled
427997	9-Jun-22	OLIN CORPORATION	17,594.06	IRWD Check	Reconciled
427998	9-Jun-22	ONESOURCE DISTRIBUTORS LLC	9,897.59	IRWD Check	Reconciled
427999	9-Jun-22	ORACLE AMERICA, INC.	367.04	IRWD Check	Reconciled
428000	9-Jun-22	ORANGE COUNTY AUTO PARTS CO	1,266.98	IRWD Check	Reconciled
428001	9-Jun-22	PACIFIC HYDROTECH CORPORATION	148,325.34	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT
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CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428002	9-Jun-22	PACIFIC HYDROTECH CORPORATION	7,806.59	IRWD Check	Reconciled
428003	9-Jun-22	PACIFIC PARTS & CONTROLS INC	5,666.27	IRWD Check	Reconciled
428004	9-Jun-22	PAPER DEPOT DOCUMENT DESTRUCTION LLC	452.00	IRWD Check	Reconciled
428005	9-Jun-22	PARKHOUSE TIRE INC	2,069.97	IRWD Check	Negotiable
428006	9-Jun-22	PENN ARCHIVE SERVICES	80.27	IRWD Check	Reconciled
428007	9-Jun-22	POLLARDWATER.COM	325.66	IRWD Check	Reconciled
428008	9-Jun-22	PRUDENTIAL OVERALL SUPPLY	9,243.89	IRWD Check	Reconciled
428009	9-Jun-22	PSOMAS	14,221.44	IRWD Check	Negotiable
428010	9-Jun-22	PULTE GROUP	391.77	IRWD Check	Negotiable
428011	9-Jun-22	PURE EFFECT INC	10,228.90	IRWD Check	Reconciled
428012	9-Jun-22	QUICKEL PAVING INC	28,995.00	IRWD Check	Reconciled
428013	9-Jun-22	R&B AUTOMATION, INC.	14,491.43	IRWD Check	Reconciled
428014	9-Jun-22	RED WING SHOE STORE	200.00	IRWD Check	Reconciled
428015	9-Jun-22	RENTOKIL NORTH AMERICA, INC	1,134.00	IRWD Check	Reconciled
428016	9-Jun-22	RIGGI, BETTY	30.86	IRWD Check	Negotiable
428017	9-Jun-22	RLG ENTERPRISES, INC	414.24	IRWD Check	Reconciled
428018	9-Jun-22	ROCKFIELD SHELL	529.11	IRWD Check	Negotiable
428019	9-Jun-22	RODNEY E BROWN	1,196.39	IRWD Check	Reconciled
428020	9-Jun-22	RODNEY HARMSWORTH ASSOCIATES, INC.	17,389.00	IRWD Check	Reconciled
428021	9-Jun-22	ROUX ASSOCIATES, INC.	1,590.73	IRWD Check	Reconciled
428022	9-Jun-22	SALEHI FATHABADI, ARDALAN	112.69	IRWD Check	Reconciled
428023	9-Jun-22	SANTA ANA BLUE PRINT	4,286.93	IRWD Check	Reconciled
428024	9-Jun-22	SANTA MARGARITA FORD	827.90	IRWD Check	Reconciled
428025	9-Jun-22	SCHINDLER ELEVATOR CORPORATION	236.62	IRWD Check	Reconciled
428026	9-Jun-22	SHAMROCK SUPPLY CO INC	1,047.10	IRWD Check	Reconciled
428027	9-Jun-22	SMITH SYSTEM DRIVER IMPROVEMENT INSTITUTE, INC.	3,109.95	IRWD Check	Reconciled
428028	9-Jun-22	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	263.88	IRWD Check	Reconciled
428029	9-Jun-22	SOUTH COAST WATER CO.	95.00	IRWD Check	Reconciled
428030	9-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	694.96	IRWD Check	Reconciled
428031	9-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	307,976.21	IRWD Check	Reconciled
428032	9-Jun-22	STANTEC CONSULTING SERVICES INC.	6,750.00	IRWD Check	Reconciled
428033	9-Jun-22	STRUSINSKA, JOLANTA	629.79	IRWD Check	Negotiable
428034	9-Jun-22	T.E. ROBERTS, INC.	302,639.37	IRWD Check	Reconciled
428035	9-Jun-22	TANKVISIONS, INC	30.00	IRWD Check	Reconciled
428036	9-Jun-22	TASSIN SCIENTIFIC SERVICES, LLC.	1,259.25	IRWD Check	Reconciled
428037	9-Jun-22	TESCO CONTROLS, INC.	15,087.50	IRWD Check	Reconciled
428038	9-Jun-22	TETRA TECH, INC	62,975.15	IRWD Check	Reconciled
428039	9-Jun-22	THE IRVINE COMPANY LLC	4,679.63	IRWD Check	Negotiable
428040	9-Jun-22	THOMPSON & PHIPPS INC	3,547.11	IRWD Check	Reconciled
428041	9-Jun-22	TIC-OFFICE PROPERTIES	1,976.37	IRWD Check	Reconciled
428042	9-Jun-22	TIC-RETAIL PROPERTIES	2,850.93	IRWD Check	Reconciled
428043	9-Jun-22	TIMOTHY W. HOGAN	1,943.27	IRWD Check	Reconciled
428044	9-Jun-22	TRAFFIC CONTROL ENGINEERING, INC	11,000.00	IRWD Check	Negotiable
428045	9-Jun-22	TRAFFIC MANAGEMENT, INC	3,025.50	IRWD Check	Reconciled
428046	9-Jun-22	U.S. VENTURE, INC	193.77	IRWD Check	Reconciled
428047	9-Jun-22	UNITED PARCEL SERVICE INC	78.26	IRWD Check	Reconciled
428048	9-Jun-22	VAUGHAN'S INDUSTRIAL REPAIR CO INC	9,175.99	IRWD Check	Reconciled
428049	9-Jun-22	VERIZON WIRELESS SERVICES LLC	7,264.05	IRWD Check	Reconciled
428050	9-Jun-22	VERTECH INDUSTRIAL SYSTEMS, LLC	8,517.89	IRWD Check	Reconciled
428051	9-Jun-22	VWR INTERNATIONAL, LLC	1,203.38	IRWD Check	Reconciled
428052	9-Jun-22	WANG, YUE	49.38	IRWD Check	Reconciled
428053	9-Jun-22	WASTE MANAGEMENT COLLECTIONS AND RECYCLING, INC.	349.32	IRWD Check	Reconciled
428054	9-Jun-22	WATERLINE TECHNOLOGIES INC	5,635.00	IRWD Check	Reconciled
428055	9-Jun-22	WATERSMART SOFTWARE INC	15,174.99	IRWD Check	Reconciled
428056	9-Jun-22	WECK LABORATORIES INC	1,276.50	IRWD Check	Reconciled
428057	9-Jun-22	WEST COAST SAND & GRAVEL INC.	1,077.90	IRWD Check	Reconciled
428058	9-Jun-22	WEST YOST & ASSOCIATES, INC.	10,683.00	IRWD Check	Reconciled
428059	9-Jun-22	WOODBURY COURT APTS	4,217.73	IRWD Check	Reconciled
428060	9-Jun-22	WORKFORCE SAFETY LLC	1,500.00	IRWD Check	Reconciled
428061	9-Jun-22	YORK RISK SERVICES GROUP, INC.	17,168.50	IRWD Check	Reconciled
428062	9-Jun-22	YSI, INC	1,001.30	IRWD Check	Reconciled
428063	9-Jun-22	REACH EMPLOYEE ASSISTANCE INC	1,066.80	IRWD Check	Reconciled
428064	14-Jun-22	JCI JONES CHEMICALS INC	4,414.55	IRWD Check	Reconciled
428065	15-Jun-22	TULSA RIB COMPANY, INC.	11,183.67	IRWD Check	Reconciled
428066	15-Jun-22	KELLY CARTTER	3,180.00	IRWD Check	Negotiable
428067	16-Jun-22	Berry, Wyatt	116.00	IRWD Check	Reconciled
428068	16-Jun-22	Compton, Christine A	192.60	IRWD Check	Reconciled
428069	16-Jun-22	Cronin, Gregory	750.00	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT
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CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428070	16-Jun-22	Legault, Dan (Dan)	750.00	IRWD Check	Reconciled
428071	16-Jun-22	Nguyen, Claire	594.00	IRWD Check	Reconciled
428072	16-Jun-22	Perry, Guy M (Matthew)	750.00	IRWD Check	Reconciled
428073	16-Jun-22	Seesangrit, Melody M	758.81	IRWD Check	Reconciled
428074	16-Jun-22	Wilson, Brett	750.00	IRWD Check	Reconciled
428075	16-Jun-22	JCI JONES CHEMICALS INC	4,148.49	IRWD Check	Reconciled
428076	16-Jun-22	8X8 INC	10,506.83	IRWD Check	Reconciled
428077	16-Jun-22	ABM INDUSTRY GROUPS, LLC	24,516.09	IRWD Check	Reconciled
428078	16-Jun-22	AGILENT TECHNOLOGIES, INC.	336.99	IRWD Check	Reconciled
428079	16-Jun-22	ALCOR SOLUTIONS, INC	5,771.25	IRWD Check	Reconciled
428080	16-Jun-22	ALEXANDER'S CONTRACT SERVICES, INC.	102,398.85	IRWD Check	Reconciled
428081	16-Jun-22	ALLIANT INSURANCE SERVICES, INC	11,225.00	IRWD Check	Reconciled
428082	16-Jun-22	ALLIED ELECTRONICS INC	222.02	IRWD Check	Reconciled
428083	16-Jun-22	ALSTON & BIRD LLP	28,586.38	IRWD Check	Reconciled
428084	16-Jun-22	AMAZON CAPITAL SERVICES, INC.	16,050.95	IRWD Check	Reconciled
428085	16-Jun-22	AQUA BEN CORPORATION	3,733.37	IRWD Check	Reconciled
428086	16-Jun-22	AQUA-METRIC SALES COMPANY	3,674.44	IRWD Check	Reconciled
428087	16-Jun-22	ASHFORD, WALT	483.60	IRWD Check	Reconciled
428088	16-Jun-22	AT&T	116.97	IRWD Check	Reconciled
428089	16-Jun-22	AT&T	5,008.07	IRWD Check	Reconciled
428090	16-Jun-22	AT&T	1,690.90	IRWD Check	Reconciled
428091	16-Jun-22	ATHENS SERVICES	1,950.60	IRWD Check	Reconciled
428092	16-Jun-22	AUTOZONE PARTS, INC.	242.18	IRWD Check	Reconciled
428093	16-Jun-22	AVELLA APARTMENTS	573.39	IRWD Check	Reconciled
428095	16-Jun-22	BIOTAGE LLC	433.80	IRWD Check	Reconciled
428096	16-Jun-22	BORCHARD SURVEYING & MAPPING, INC.	7,145.00	IRWD Check	Negotiable
428097	16-Jun-22	BURNHAM BENEFITS INSURANCE SERVICES, LLC	11,666.66	IRWD Check	Reconciled
428098	16-Jun-22	C WELLS PIPELINE MATERIALS INC	1,795.66	IRWD Check	Negotiable
428099	16-Jun-22	CALTROL, INC.	212.78	IRWD Check	Reconciled
428100	16-Jun-22	CANON FINANCIAL SERVICES, INC	1,275.77	IRWD Check	Reconciled
428101	16-Jun-22	CANON SOLUTIONS AMERICA, INC.	158.94	IRWD Check	Reconciled
428102	16-Jun-22	CAPTIVE AUDIENCE MARKETING INC.	158.00	IRWD Check	Negotiable
428103	16-Jun-22	CAROLLO ENGINEERS, INC	2,852.00	IRWD Check	Reconciled
428104	16-Jun-22	CART MART INC.	232.24	IRWD Check	Reconciled
428105	16-Jun-22	CDW GOVERNMENT LLC	17,892.27	IRWD Check	Reconciled
428106	16-Jun-22	CENTROID SYSTEMS, INC.	8,085.50	IRWD Check	Reconciled
428107	16-Jun-22	CHEM TECH INTERNATIONAL INC	12,338.82	IRWD Check	Reconciled
428108	16-Jun-22	CLA-VAL COMPANY	8,492.54	IRWD Check	Reconciled
428109	16-Jun-22	CLIFFORD MORIYAMA	8,000.00	IRWD Check	Reconciled
428110	16-Jun-22	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	9,965.00	IRWD Check	Reconciled
428111	16-Jun-22	CONSERV CONSTRUCTION INC.	4,195.00	IRWD Check	Reconciled
428112	16-Jun-22	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	560.30	IRWD Check	Reconciled
428113	16-Jun-22	CONSTELLATION NEWENERGY, INC.	41,590.37	IRWD Check	Reconciled
428114	16-Jun-22	CR & R INCORPORATED	427.30	IRWD Check	Reconciled
428115	16-Jun-22	D & H WATER SYSTEMS INC.	3,626.37	IRWD Check	Reconciled
428116	16-Jun-22	DAVIS FARR LLP	8,570.00	IRWD Check	Reconciled
428117	16-Jun-22	DELL MARKETING LP	1,515.70	IRWD Check	Reconciled
428118	16-Jun-22	DEMARIA ELECTRIC MOTOR SERVICES, INC.	19,393.34	IRWD Check	Reconciled
428119	16-Jun-22	DEX MEDIA, INC.	41.00	IRWD Check	Reconciled
428120	16-Jun-22	DILYTICS INC	5,220.00	IRWD Check	Reconciled
428121	16-Jun-22	DOFORMS, INC	1,999.00	IRWD Check	Reconciled
428122	16-Jun-22	DOKER, JASMIN	359.48	IRWD Check	Reconciled
428123	16-Jun-22	EMD MILLIPORE CORP.	17,328.22	IRWD Check	Reconciled
428124	16-Jun-22	ENTERPRISE HOLDINGS, INC.	22,412.54	IRWD Check	Reconciled
428125	16-Jun-22	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.	20,952.50	IRWD Check	Reconciled
428126	16-Jun-22	ENVIRONMENTAL EXPRESS INC	4,141.73	IRWD Check	Reconciled
428127	16-Jun-22	ENVIRONMENTAL RESOURCE ASSOCIATES	1,830.62	IRWD Check	Reconciled
428128	16-Jun-22	ETTEFAGH, SHOREH	31.62	IRWD Check	Negotiable
428129	16-Jun-22	EVANTEC CORPORATION	4,640.36	IRWD Check	Reconciled
428130	16-Jun-22	EXECUTIVE LIGHTING & ELECTRIC	3,121.04	IRWD Check	Reconciled
428131	16-Jun-22	FARRELL & ASSOCIATES	151.77	IRWD Check	Reconciled
428132	16-Jun-22	FEDEX	598.96	IRWD Check	Reconciled
428133	16-Jun-22	FERGUSON ENTERPRISES, LLC	18,014.09	IRWD Check	Reconciled
428134	16-Jun-22	FIONA HUTTON & ASSOCIATES, INC.	7,125.00	IRWD Check	Negotiable
428135	16-Jun-22	FISHER SCIENTIFIC COMPANY LLC	1,461.91	IRWD Check	Reconciled
428136	16-Jun-22	FLEXIBLE LIFELINE SYSTEMS INC.	3,845.00	IRWD Check	Reconciled
428137	16-Jun-22	FLUID SOUND, INC.	1,870.25	IRWD Check	Reconciled
428138	16-Jun-22	FRANCHISE TAX BOARD	1,232.64	IRWD Check	Negotiable

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428139	16-Jun-22	FRONTIER CALIFORNIA INC.	58.47	IRWD Check	Reconciled
428140	16-Jun-22	GANAHL LUMBER CO.	1,660.80	IRWD Check	Reconciled
428141	16-Jun-22	GANNETT FLEMING, INC.	2,110.06	IRWD Check	Reconciled
428142	16-Jun-22	GARY BALE REDI-MIX CONCRETE, INC.	498.23	IRWD Check	Reconciled
428143	16-Jun-22	GEI CONSULTANTS INC	15,939.00	IRWD Check	Reconciled
428144	16-Jun-22	GEIGER BROS	3,106.79	IRWD Check	Reconciled
428145	16-Jun-22	GRAINGER	3,928.19	IRWD Check	Reconciled
428146	16-Jun-22	GRANICUS, LLC	1,909.63	IRWD Check	Reconciled
428147	16-Jun-22	GREATER IRVINE CHAMBER OF COMMERCE	3,500.00	IRWD Check	Reconciled
428148	16-Jun-22	GSRP ST SOLAR I LLC	14,638.01	IRWD Check	Reconciled
428149	16-Jun-22	HACH COMPANY	23,039.04	IRWD Check	Reconciled
428150	16-Jun-22	HANSON BRIDGETT LLP	201,230.31	IRWD Check	Reconciled
428151	16-Jun-22	HARRINGTON INDUSTRIAL PLASTICS LLC	232.95	IRWD Check	Reconciled
428152	16-Jun-22	HAZEN AND SAWYER	7,598.88	IRWD Check	Reconciled
428153	16-Jun-22	HELPMATES STAFFING SERVICES	1,264.80	IRWD Check	Reconciled
428154	16-Jun-22	HELPMATES STAFFING SERVICES LLC	9,754.91	IRWD Check	Reconciled
428155	16-Jun-22	HILL BROTHERS CHEMICAL COMPANY	15,052.42	IRWD Check	Reconciled
428156	16-Jun-22	HOME DEPOT USA INC	1,508.92	IRWD Check	Reconciled
428157	16-Jun-22	INDUSTRIAL NETWORKING SOLUTIONS	3,237.83	IRWD Check	Reconciled
428158	16-Jun-22	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	3,455.65	IRWD Check	Reconciled
428159	16-Jun-22	IRELAND INC.	8,335.78	IRWD Check	Reconciled
428160	16-Jun-22	IRVINE PIPE & SUPPLY INC	1,392.84	IRWD Check	Reconciled
428161	16-Jun-22	KAN VENTURES, INC	6,500.00	IRWD Check	Reconciled
428162	16-Jun-22	KIM, SOOJUNG	124.88	IRWD Check	Reconciled
428163	16-Jun-22	LABWORKS, LLC	2,750.00	IRWD Check	Negotiable
428164	16-Jun-22	LANDCARE HOLDINGS, INC.	147,726.05	IRWD Check	Reconciled
428165	16-Jun-22	LCS TECHNOLOGIES, INC.	7,425.00	IRWD Check	Negotiable
428166	16-Jun-22	LINDE GAS & EQUIPMENT INC.	289.81	IRWD Check	Reconciled
428167	16-Jun-22	LOPEZ, RENEE	20.34	IRWD Check	Negotiable
428168	16-Jun-22	LU, XU	237.13	IRWD Check	Negotiable
428169	16-Jun-22	M.CUBED	4,961.25	IRWD Check	Reconciled
428170	16-Jun-22	MARK KADESH	10,200.00	IRWD Check	Reconciled
428171	16-Jun-22	MC MASTER CARR SUPPLY CO	1,855.75	IRWD Check	Reconciled
428172	16-Jun-22	MERRIMAC PETROLEUM, INC.	35,251.12	IRWD Check	Reconciled
428173	16-Jun-22	METTLER-TOLEDO RAININ, LLC	3,731.17	IRWD Check	Reconciled
428174	16-Jun-22	MICROSOFT CORPORATION	535.15	IRWD Check	Reconciled
428175	16-Jun-22	MOODY'S INVESTORS SERVICE INC	19,000.00	IRWD Check	Reconciled
428176	16-Jun-22	MUNICIPAL UNDERGROUND SERVICES INC	2,625.00	IRWD Check	Reconciled
428177	16-Jun-22	MUTUAL PROPANE	197.71	IRWD Check	Reconciled
428178	16-Jun-22	NATIONAL READY MIXED CONCRETE SALES, LLC	637.46	IRWD Check	Reconciled
428179	16-Jun-22	NATIONAL WATER RESEARCH INSTITUTE	50,000.00	IRWD Check	Reconciled
428180	16-Jun-22	NCH CORPORATION	2,165.72	IRWD Check	Reconciled
428181	16-Jun-22	NCL OF WISCONSIN INC	703.63	IRWD Check	Reconciled
428182	16-Jun-22	NMG GEOTECHNICAL INC	6,412.60	IRWD Check	Reconciled
428183	16-Jun-22	NORTH AMERICAN SALES COMPANY, INC.	2,171.81	IRWD Check	Reconciled
428184	16-Jun-22	NORTHWOOD PLACE APTS	427.12	IRWD Check	Negotiable
428185	16-Jun-22	NVS, INC.	26,100.00	IRWD Check	Reconciled
428186	16-Jun-22	O'REILLY AUTO ENTERPRISES, LLC	480.39	IRWD Check	Reconciled
428187	16-Jun-22	O.C. SUPERIOR CUSTOM CLEANING	3,600.00	IRWD Check	Reconciled
428188	16-Jun-22	OLIN CORPORATION	29,848.45	IRWD Check	Reconciled
428189	16-Jun-22	ONESOURCE DISTRIBUTORS LLC	2,720.52	IRWD Check	Reconciled
428190	16-Jun-22	ORANGE COUNTY AUTO PARTS CO	568.12	IRWD Check	Reconciled
428191	16-Jun-22	ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT	195.53	IRWD Check	Reconciled
428192	16-Jun-22	ORIGIN CONSULTING LLC	39,669.50	IRWD Check	Reconciled
428193	16-Jun-22	PACIFIC PARTS & CONTROLS INC	4,403.34	IRWD Check	Reconciled
428194	16-Jun-22	PARKHOUSE TIRE INC	2,193.46	IRWD Check	Negotiable
428195	16-Jun-22	PAYMENTUS GROUP INC.	62,787.66	IRWD Check	Reconciled
428196	16-Jun-22	PERS LONG TERM CARE	612.63	IRWD Check	Reconciled
428197	16-Jun-22	PILAR ONATE	15,450.00	IRWD Check	Negotiable
428198	16-Jun-22	PLUMBERS DEPOT INC.	834.07	IRWD Check	Reconciled
428199	16-Jun-22	POLLARDWATER.COM	481.28	IRWD Check	Reconciled
428200	16-Jun-22	PROJECT PARTNERS LLC	22,800.00	IRWD Check	Reconciled
428201	16-Jun-22	PRUDENTIAL OVERALL SUPPLY	383.00	IRWD Check	Reconciled
428202	16-Jun-22	PYRO-COMM SYSTEMS INC	715.00	IRWD Check	Reconciled
428203	16-Jun-22	QUADIENT LEASING USA, INC.	3,265.46	IRWD Check	Reconciled
428204	16-Jun-22	QUICKEL PAVING INC	4,690.40	IRWD Check	Reconciled
428205	16-Jun-22	QUINCY COMPRESSOR LLC	570.86	IRWD Check	Reconciled
428206	16-Jun-22	QUINTANA, WATTS & HARTMANN, LLC	10,300.00	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT
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CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428207	16-Jun-22	R&B AUTOMATION, INC.	1,114.79	IRWD Check	Reconciled
428208	16-Jun-22	RAM AIR ENGINEERING INC	674.64	IRWD Check	Reconciled
428209	16-Jun-22	REID, DELIA	50.87	IRWD Check	Reconciled
428210	16-Jun-22	RESTEK CORPORATION	160.44	IRWD Check	Reconciled
428211	16-Jun-22	RINCON TRUCK CENTER INC.	1,507.09	IRWD Check	Reconciled
428212	16-Jun-22	RIND, ANKE	71.06	IRWD Check	Negotiable
428213	16-Jun-22	ROGER LEE & SHIRLEY LEE	312.28	IRWD Check	Reconciled
428214	16-Jun-22	RS HUGHES COMPANY, INC.	2,459.06	IRWD Check	Reconciled
428215	16-Jun-22	RYAN, KEN	41.08	IRWD Check	Negotiable
428216	16-Jun-22	S & J SUPPLY CO INC	14,138.32	IRWD Check	Reconciled
428217	16-Jun-22	SAF-T-FLO WATER SERVICES, INC.	437.76	IRWD Check	Reconciled
428218	16-Jun-22	SAN CARLO APARTMENTS	144.06	IRWD Check	Reconciled
428219	16-Jun-22	SAN MARINO APTS	99.90	IRWD Check	Reconciled
428220	16-Jun-22	SAN REMO APTS	144.77	IRWD Check	Reconciled
428221	16-Jun-22	SANTA ANA BLUE PRINT	63.88	IRWD Check	Reconciled
428222	16-Jun-22	SANTA MARGARITA FORD	296.31	IRWD Check	Reconciled
428223	16-Jun-22	SARES REGIS GROUP	43.08	IRWD Check	Negotiable
428224	16-Jun-22	SECURITAS SECURITY SERVICES USA, INC.	79,661.73	IRWD Check	Reconciled
428225	16-Jun-22	SERVERSUPPLY.COM INC	2,952.35	IRWD Check	Reconciled
428226	16-Jun-22	SHAMROCK SUPPLY CO INC	1,190.61	IRWD Check	Reconciled
428227	16-Jun-22	SIEMENS INDUSTRY INC	33,811.56	IRWD Check	Reconciled
428228	16-Jun-22	SOUTH COAST WATER DISTRICT	937.17	IRWD Check	Reconciled
428229	16-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	92,543.72	IRWD Check	Reconciled
428230	16-Jun-22	SOUTHERN CALIFORNIA GAS COMPANY	8,878.10	IRWD Check	Reconciled
428231	16-Jun-22	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	306.01	IRWD Check	Negotiable
428232	16-Jun-22	SPENCER, LUCAS	24.36	IRWD Check	Reconciled
428233	16-Jun-22	STANDARD & POOR'S FINANCIAL SERVICES LLC	9,500.00	IRWD Check	Reconciled
428234	16-Jun-22	SUEZ TREATMENT SOLUTIONS INC.	3,921.25	IRWD Check	Reconciled
428235	16-Jun-22	SUKLE ADVERTISING INC.	67,864.25	IRWD Check	Reconciled
428236	16-Jun-22	SUSAN A. SIROTA	4,850.00	IRWD Check	Negotiable
428237	16-Jun-22	SYNAGRO-WWT, INC.	152,065.52	IRWD Check	Reconciled
428238	16-Jun-22	T.E. ROBERTS, INC.	16,985.70	IRWD Check	Reconciled
428239	16-Jun-22	TAIT ENVIRONMENTAL SERVICES, INC.	1,095.00	IRWD Check	Reconciled
428240	16-Jun-22	TALLEY INC	468.17	IRWD Check	Reconciled
428241	16-Jun-22	THE ESCAL INSTITUTE OF ADVANCED TECHNOLOGIES, INC.	12,123.00	IRWD Check	Reconciled
428242	16-Jun-22	THE PAPE' GROUP INC.	185.69	IRWD Check	Reconciled
428243	16-Jun-22	TIC-OFFICE PROPERTIES	84.63	IRWD Check	Reconciled
428244	16-Jun-22	TIC-RETAIL PROPERTIES	738.78	IRWD Check	Reconciled
428245	16-Jun-22	TIC-SPECTRUM OFFICE	208.39	IRWD Check	Negotiable
428246	16-Jun-22	TIERRA VERDE INDUSTRIES	211.74	IRWD Check	Reconciled
428247	16-Jun-22	TIMOTHY W. HOGAN	8,664.57	IRWD Check	Reconciled
428248	16-Jun-22	TOWHIDIAN, HAMID	7.85	IRWD Check	Negotiable
428249	16-Jun-22	TRAFFIC MANAGEMENT, INC	1,114.00	IRWD Check	Reconciled
428250	16-Jun-22	TRI COUNTY PUMP COMPANY	18,607.50	IRWD Check	Reconciled
428251	16-Jun-22	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA	1,645.86	IRWD Check	Reconciled
428252	16-Jun-22	UNITED PARCEL SERVICE INC	36.00	IRWD Check	Reconciled
428253	16-Jun-22	UNITED SITE SERVICES OF CALIFORNIA INC	273.82	IRWD Check	Reconciled
428254	16-Jun-22	URBAN WATER INSTITUTE INC	1,000.00	IRWD Check	Negotiable
428255	16-Jun-22	USA WASTE OF CALIFORNIA, INC.	581.25	IRWD Check	Reconciled
428256	16-Jun-22	VAUGHAN'S INDUSTRIAL REPAIR CO INC	2,254.00	IRWD Check	Reconciled
428257	16-Jun-22	VWR INTERNATIONAL, LLC	372.00	IRWD Check	Reconciled
428258	16-Jun-22	W.A. RASIC CONSTRUCTION, INC.	2,600.00	IRWD Check	Negotiable
428259	16-Jun-22	WASTE MANAGEMENT COLLECTIONS AND RECYCLING, INC.	3,789.06	IRWD Check	Reconciled
428260	16-Jun-22	WAXIE'S ENTERPRISES, INC	1,486.38	IRWD Check	Reconciled
428261	16-Jun-22	WECK LABORATORIES INC	120.00	IRWD Check	Reconciled
428262	16-Jun-22	WEST COAST SAND & GRAVEL INC.	2,786.94	IRWD Check	Reconciled
428263	16-Jun-22	WINDWOOD KNOLL APTS	407.05	IRWD Check	Reconciled
428264	16-Jun-22	YSI, INC	675.90	IRWD Check	Reconciled
428265	16-Jun-22	ZHENG, KE	16.70	IRWD Check	Negotiable
428266	23-Jun-22	Breiter, Michelle	15.21	IRWD Check	Reconciled
428267	23-Jun-22	Donnelly, Stephen P (Stephen)	125.00	IRWD Check	Negotiable
428268	23-Jun-22	Marcacci, Mark	6.42	IRWD Check	Negotiable
428269	23-Jun-22	Rock, Douglas T (Douglas)	491.30	IRWD Check	Reconciled
428270	23-Jun-22	Sanchez, Hector A (Hector)	750.00	IRWD Check	Negotiable
428271	23-Jun-22	Srader, Lisa	105.95	IRWD Check	Reconciled
428272	23-Jun-22	Whittaker, Jerry A	450.00	IRWD Check	Negotiable
428273	23-Jun-22	A&Y ASPHALT CONTRACTORS, INC.	5,562.00	IRWD Check	Reconciled
428274	23-Jun-22	AECOM TECHNICAL SERVICES, INC.	7,636.25	IRWD Check	Reconciled

**IRVINE RANCH WATER DISTRICT
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CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428275	23-Jun-22	AIRGAS, INC.	2,489.51	IRWD Check	Reconciled
428276	23-Jun-22	AIRKINETICS, INC	6,715.00	IRWD Check	Negotiable
428277	23-Jun-22	ALLEN, STEPHANIE	90.76	IRWD Check	Negotiable
428278	23-Jun-22	ALLIANT INSURANCE SERVICES, INC	154,711.87	IRWD Check	Reconciled
428279	23-Jun-22	AMAZON CAPITAL SERVICES, INC.	1,396.80	IRWD Check	Reconciled
428280	23-Jun-22	AMERICAN GEOTECHNICAL, INC.	7,580.00	IRWD Check	Reconciled
428281	23-Jun-22	ANTHONY N. LARSEN	550.00	IRWD Check	Reconciled
428282	23-Jun-22	APPLIED ENGINEERING CONCEPTS	17,430.00	IRWD Check	Reconciled
428283	23-Jun-22	ARDURRA GROUP, INC.	27,680.00	IRWD Check	Reconciled
428284	23-Jun-22	AT&T	178.46	IRWD Check	Reconciled
428285	23-Jun-22	AT&T	7,109.49	IRWD Check	Reconciled
428286	23-Jun-22	AUTOZONE PARTS, INC.	367.60	IRWD Check	Reconciled
428287	23-Jun-22	AZTEC TECHNOLOGY CORPORATION	16,216.39	IRWD Check	Reconciled
428288	23-Jun-22	BEE EMERGENCY RESPONSE TEAM	175.00	IRWD Check	Negotiable
428289	23-Jun-22	BIOMAGIC INC	7,269.79	IRWD Check	Reconciled
428290	23-Jun-22	BLAIRS TOWING INC	241.00	IRWD Check	Reconciled
428291	23-Jun-22	BOOT WORLD, INC.	150.00	IRWD Check	Reconciled
428292	23-Jun-22	CALIFORNIA BARRICADE RENTAL, INC.	1,309.90	IRWD Check	Reconciled
428293	23-Jun-22	CANNON CORPORATION	14,480.47	IRWD Check	Reconciled
428294	23-Jun-22	CANON FINANCIAL SERVICES, INC	7,056.98	IRWD Check	Reconciled
428295	23-Jun-22	CAPDEVIELLE INC	6,817.74	IRWD Check	Reconciled
428296	23-Jun-22	CDW GOVERNMENT LLC	14,623.76	IRWD Check	Negotiable
428297	23-Jun-22	CHEM TECH INTERNATIONAL INC	8,155.62	IRWD Check	Negotiable
428298	23-Jun-22	CIMARRON ENERGY, INC	1,400.00	IRWD Check	Reconciled
428299	23-Jun-22	CITY OF NEWPORT BEACH	398.71	IRWD Check	Reconciled
428300	23-Jun-22	CLEAN ENERGY	7,834.26	IRWD Check	Reconciled
428301	23-Jun-22	COASTAL OCCUPATIONAL MEDICAL GROUP, INC.	170.00	IRWD Check	Negotiable
428302	23-Jun-22	CONSTELLATION NEWENERGY, INC.	795.98	IRWD Check	Negotiable
428303	23-Jun-22	COTTONS POINT DESIGN, INC.	1,650.00	IRWD Check	Reconciled
428304	23-Jun-22	COUNTY OF ORANGE	1,645.91	IRWD Check	Reconciled
428305	23-Jun-22	D & G SIGNS	5,739.07	IRWD Check	Reconciled
428306	23-Jun-22	DALE SUGGETT	673.34	IRWD Check	Negotiable
428307	23-Jun-22	DG INVESTMENT INTERMEDIATE HOLDINGS 2, INC.	1,431.00	IRWD Check	Reconciled
428308	23-Jun-22	DIRECTV INC	146.99	IRWD Check	Reconciled
428309	23-Jun-22	DOLAN, DONNA	21.56	IRWD Check	Negotiable
428310	23-Jun-22	DRAKE TRAFFIC CONTROL SERVICES INC	3,215.00	IRWD Check	Reconciled
428311	23-Jun-22	EHS INTERNATIONAL, INC	1,188.00	IRWD Check	Reconciled
428312	23-Jun-22	ELECTRIFY EXPO LLC	1,093.00	IRWD Check	Negotiable
428313	23-Jun-22	ENDEMIC ENVIRONMENTAL SERVICES, INC.	1,260.00	IRWD Check	Reconciled
428314	23-Jun-22	ENTERPRISE HOLDINGS, INC.	9,175.22	IRWD Check	Reconciled
428315	23-Jun-22	ENVIRONMENTAL RESOURCE ASSOCIATES	2,075.29	IRWD Check	Negotiable
428316	23-Jun-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	2,005.50	IRWD Check	Reconciled
428317	23-Jun-22	EXECUTIVE LIGHTING & ELECTRIC	4,105.50	IRWD Check	Reconciled
428318	23-Jun-22	FARRELL & ASSOCIATES	96.81	IRWD Check	Reconciled
428319	23-Jun-22	FEHR & PEERS	2,075.00	IRWD Check	Reconciled
428320	23-Jun-22	FERGUSON ENTERPRISES, LLC	10,748.06	IRWD Check	Reconciled
428321	23-Jun-22	FERREIRA CONSTRUCTION COMPANY, INC.	6,753.74	IRWD Check	Negotiable
428322	23-Jun-22	FIRE EXTINGUISHING SAFETY & SERVICE	528.77	IRWD Check	Reconciled
428323	23-Jun-22	FISHER SCIENTIFIC COMPANY LLC	307.76	IRWD Check	Reconciled
428324	23-Jun-22	FOOTHILL/EASTERN TRANSPORTATION	4,650.00	IRWD Check	Negotiable
428325	23-Jun-22	FRONTIER CALIFORNIA INC.	511.17	IRWD Check	Negotiable
428326	23-Jun-22	GARZA INDUSTRIES, INC	2,157.80	IRWD Check	Reconciled
428327	23-Jun-22	GEA MECHANICAL EQUIPMENT US, INC.	2,408.43	IRWD Check	Reconciled
428328	23-Jun-22	GM SAGER CONSTRUCTION CO, INC.	101,825.00	IRWD Check	Reconciled
428329	23-Jun-22	GOLDEN BELL PRODUCTS	69,997.50	IRWD Check	Reconciled
428330	23-Jun-22	GRACE BJORNSTAD	113.14	IRWD Check	Reconciled
428331	23-Jun-22	GRAINGER	1,444.21	IRWD Check	Reconciled
428332	23-Jun-22	GRAYBAR ELECTRIC COMPANY	1,731.71	IRWD Check	Reconciled
428333	23-Jun-22	HACH COMPANY	28,125.07	IRWD Check	Reconciled
428334	23-Jun-22	HATHAWAY DINWIDDIE CONSTRUCTION CO	1,469.08	IRWD Check	Negotiable
428335	23-Jun-22	HI-LINE INC	2,247.89	IRWD Check	Reconciled
428336	23-Jun-22	HILL BROTHERS CHEMICAL COMPANY	8,979.98	IRWD Check	Negotiable
428337	23-Jun-22	HOME DEPOT USA INC	250.32	IRWD Check	Negotiable
428338	23-Jun-22	HOYA OPTICAL LABS OF AMERICA, INC.	226.00	IRWD Check	Reconciled
428339	23-Jun-22	HUMANA INSURANCE COMPANY	75.30	IRWD Check	Reconciled
428340	23-Jun-22	ICHIMARU, MICHAEL R	164.63	IRWD Check	Negotiable
428341	23-Jun-22	IDEA HALL	11,813.00	IRWD Check	Negotiable
428342	23-Jun-22	IMPERIAL SPRINKLER SUPPLY, INC.	292.85	IRWD Check	Reconciled

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428343	23-Jun-22	INDUSTRIAL METAL SUPPLY CO	229.51	IRWD Check	Reconciled
428344	23-Jun-22	INFOSEND, INC.	78,298.41	IRWD Check	Reconciled
428345	23-Jun-22	IRVINE PACIFIC	100.30	IRWD Check	Negotiable
428346	23-Jun-22	IRVINE PIPE & SUPPLY INC	5,508.09	IRWD Check	Reconciled
428347	23-Jun-22	IRVINE STEAK HOUSE L.P. DBA	394.40	IRWD Check	Negotiable
428348	23-Jun-22	IRWD-PETTY CASH CUSTODIAN	1,498.25	IRWD Check	Reconciled
428349	23-Jun-22	JENIFER L. KIENLE	3,951.00	IRWD Check	Reconciled
428350	23-Jun-22	JOHN MICHAEL COVAS	216.90	IRWD Check	Negotiable
428351	23-Jun-22	JOHNSON, PHYLLIS	80.93	IRWD Check	Negotiable
428352	23-Jun-22	JUST ENERGY SOLUTIONS INC.	251.21	IRWD Check	Reconciled
428353	23-Jun-22	KB HOMES	111.06	IRWD Check	Negotiable
428354	23-Jun-22	KILL-N-BUGS TERMITE AND PEST CONTROL SERVICES	2,250.00	IRWD Check	Reconciled
428355	23-Jun-22	KIMBALL MIDWEST	63.02	IRWD Check	Reconciled
428356	23-Jun-22	KNAJIAN, JIBID	68.75	IRWD Check	Reconciled
428357	23-Jun-22	KRONICK MOSKOVITZ TIEDEMANN & GIRARD	27,955.02	IRWD Check	Reconciled
428358	23-Jun-22	LAKE FOREST KEYS	25,379.92	IRWD Check	Negotiable
428359	23-Jun-22	LANDCARE HOLDINGS, INC.	135,487.37	IRWD Check	Reconciled
428360	23-Jun-22	LENNAR HOMES OF CALIFORNIA, INC.	332.12	IRWD Check	Reconciled
428361	23-Jun-22	LILLESTRAND LEADERSHIP CONSULTING, INC.	7,466.25	IRWD Check	Reconciled
428362	23-Jun-22	LINDE GAS & EQUIPMENT INC.	1,824.38	IRWD Check	Reconciled
428363	23-Jun-22	LIU, YING	119.26	IRWD Check	Negotiable
428364	23-Jun-22	LU'S LIGHTHOUSE, INC.	312.55	IRWD Check	Reconciled
428365	23-Jun-22	LU, YAO-AN	636.68	IRWD Check	Negotiable
428366	23-Jun-22	MC FADDEN-DALE INDUSTRIAL	23.71	IRWD Check	Reconciled
428367	23-Jun-22	MC MASTER CARR SUPPLY CO	2,292.52	IRWD Check	Reconciled
428368	23-Jun-22	MILES CHEMICAL COMPANY, INC.	18,498.42	IRWD Check	Reconciled
428369	23-Jun-22	MORAN, BRIAN	882.35	IRWD Check	Reconciled
428370	23-Jun-22	MORGAN COMPANY	456.95	IRWD Check	Negotiable
428371	23-Jun-22	MULTIQUIP INC	12,814.38	IRWD Check	Reconciled
428372	23-Jun-22	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	3,735.00	IRWD Check	Reconciled
428373	23-Jun-22	NCH CORPORATION	945.56	IRWD Check	Reconciled
428374	23-Jun-22	NEW DIMENSION GENERAL CONSTRUCTION	32,908.51	IRWD Check	Reconciled
428375	23-Jun-22	NEW RESOURCES GROUP INC	755.24	IRWD Check	Reconciled
428376	23-Jun-22	NEWAGE INDUSTRIES INC	376.34	IRWD Check	Negotiable
428377	23-Jun-22	NOV PROCESS & FLOW TECHNOLOGIES US, INC.	6,662.74	IRWD Check	Reconciled
428378	23-Jun-22	NV5, INC.	5,581.25	IRWD Check	Reconciled
428379	23-Jun-22	O'REILLY AUTO ENTERPRISES, LLC	1,734.98	IRWD Check	Reconciled
428380	23-Jun-22	OLIN CORPORATION	18,476.64	IRWD Check	Reconciled
428381	23-Jun-22	ORACLE AMERICA, INC.	3,236.22	IRWD Check	Reconciled
428382	23-Jun-22	ORANGE COUNTY AUTO PARTS CO	899.91	IRWD Check	Reconciled
428383	23-Jun-22	ORANGE COUNTY FIRE AUTHORITY	860.00	IRWD Check	Reconciled
428384	23-Jun-22	ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT	3,834.15	IRWD Check	Reconciled
428385	23-Jun-22	ORANGE COUNTY SANITATION DISTRICT	194,500.14	IRWD Check	Reconciled
428386	23-Jun-22	ORANGE LINE OIL COMPANY	3,261.48	IRWD Check	Reconciled
428387	23-Jun-22	ORCHARD, ERNEST	66.30	IRWD Check	Negotiable
428388	23-Jun-22	PACIFIC COAST BOLT CORP	13,848.37	IRWD Check	Reconciled
428389	23-Jun-22	PACIFIC HYDROTECH CORPORATION	14,252.60	IRWD Check	Reconciled
428390	23-Jun-22	PACIFIC HYDROTECH CORPORATION	10,563.55	IRWD Check	Reconciled
428391	23-Jun-22	PACIFIC HYDROTECH CORPORATION	9,215.31	IRWD Check	Reconciled
428392	23-Jun-22	PACIFIC HYDROTECH CORPORATION	12,506.70	IRWD Check	Reconciled
428393	23-Jun-22	PACIFIC HYDROTECH CORPORATION	884,225.05	IRWD Check	Negotiable
428394	23-Jun-22	PACIFIC PARTS & CONTROLS INC	438.87	IRWD Check	Reconciled
428395	23-Jun-22	PAYMENTUS GROUP INC.	63,640.51	IRWD Check	Negotiable
428396	23-Jun-22	PELLETIER & ASSOCIATES, INC.	2,154.25	IRWD Check	Reconciled
428397	23-Jun-22	PINNACLE TOWERS LLC	842.76	IRWD Check	Reconciled
428398	23-Jun-22	POLYDYNE INC	3,361.80	IRWD Check	Reconciled
428399	23-Jun-22	PROBOLSKY RESEARCH LLC	13,125.00	IRWD Check	Reconciled
428400	23-Jun-22	PURE EFFECT INC	15,987.24	IRWD Check	Negotiable
428401	23-Jun-22	QUADIENT FINANCE USA, INC.	57.35	IRWD Check	Reconciled
428402	23-Jun-22	QUINCY COMPRESSOR LLC	585.90	IRWD Check	Reconciled
428403	23-Jun-22	RED WING SHOE STORE	320.00	IRWD Check	Reconciled
428404	23-Jun-22	RENTOKIL NORTH AMERICA, INC	647.83	IRWD Check	Reconciled
428405	23-Jun-22	ROBERT HUANG	597.20	IRWD Check	Negotiable
428406	23-Jun-22	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT	79,383.95	IRWD Check	Reconciled
428407	23-Jun-22	SAFETY-KLEEN SYSTEMS, INC	372.50	IRWD Check	Reconciled
428408	23-Jun-22	SANTA ANA BLUE PRINT	653.90	IRWD Check	Negotiable
428409	23-Jun-22	SANTA MARGARITA FORD	1,289.92	IRWD Check	Reconciled
428410	23-Jun-22	SHAMROCK SUPPLY CO INC	160.59	IRWD Check	Reconciled

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428411	23-Jun-22	SHOETERIA	103.96	IRWD Check	Negotiable
428412	23-Jun-22	SITMATIC	661.52	IRWD Check	Reconciled
428413	23-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	36.25	IRWD Check	Reconciled
428414	23-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	39,527.00	IRWD Check	Reconciled
428415	23-Jun-22	SOUTHERN CALIFORNIA GAS COMPANY	12,744.24	IRWD Check	Negotiable
428416	23-Jun-22	SOUTHLAND WATER TECHNOLOGIES LLC	3,970.38	IRWD Check	Negotiable
428417	23-Jun-22	STEVEN WELCH	410.00	IRWD Check	Reconciled
428418	23-Jun-22	TAIT ENVIRONMENTAL SERVICES, INC.	10,830.00	IRWD Check	Reconciled
428419	23-Jun-22	TALLEY INC	780.37	IRWD Check	Reconciled
428420	23-Jun-22	TAYLOR MORRISON OF CALIFORNIA, LLC	56.28	IRWD Check	Negotiable
428421	23-Jun-22	TECHNOLOGY INTEGRATION GROUP	9,000.00	IRWD Check	Reconciled
428422	23-Jun-22	THOMPSON & PHIPPS INC	2,598.14	IRWD Check	Negotiable
428423	23-Jun-22	TIMOTHY W. HOGAN	1,500.00	IRWD Check	Reconciled
428424	23-Jun-22	TOTAL RESOURCE MANAGEMENT, INC	1,105.00	IRWD Check	Negotiable
428425	23-Jun-22	TRAFFIC MANAGEMENT, INC	1,642.00	IRWD Check	Reconciled
428426	23-Jun-22	TREE OF LIFE NURSERY	450.41	IRWD Check	Negotiable
428427	23-Jun-22	TRIPAC MARKETING INC	513.56	IRWD Check	Reconciled
428428	23-Jun-22	UNITED HEALTHCARE INSURANCE COMPANY	324.22	IRWD Check	Reconciled
428429	23-Jun-22	UNITED PARCEL SERVICE INC	54.07	IRWD Check	Reconciled
428430	23-Jun-22	UNITED SITE SERVICES OF CALIFORNIA INC	739.95	IRWD Check	Reconciled
428431	23-Jun-22	UNITED WATER WORKS, INC.	288,540.79	IRWD Check	Reconciled
428432	23-Jun-22	USA PORTOLA EAST LLC	3,741.00	IRWD Check	Negotiable
428433	23-Jun-22	USF FABRICATION INC	771.21	IRWD Check	Reconciled
428434	23-Jun-22	VALLEYCREST LANDSCAPE DEVELOPMENT, INC.	1,407.63	IRWD Check	Reconciled
428435	23-Jun-22	VAUGHAN'S INDUSTRIAL REPAIR CO INC	59,600.00	IRWD Check	Reconciled
428436	23-Jun-22	WANG, YING	40.15	IRWD Check	Reconciled
428437	23-Jun-22	WAXIE'S ENTERPRISES, INC	560.42	IRWD Check	Reconciled
428438	23-Jun-22	WECK LABORATORIES INC	5,375.00	IRWD Check	Reconciled
428439	23-Jun-22	WIRELESS WATCHDOGS, LLC	2,484.00	IRWD Check	Reconciled
428440	23-Jun-22	WORKFORCE SAFETY LLC	3,000.00	IRWD Check	Negotiable
428441	23-Jun-22	Garcia, Alejandro (Alex)	200.00	IRWD Check	Reconciled
428442	23-Jun-22	Davis, Jennifer R (Jennifer)	120.00	IRWD Check	Reconciled
428444	29-Jun-22	Lu, Michael	26.91	IRWD Check	Negotiable
428445	29-Jun-22	Nash, Joel	63.80	IRWD Check	Negotiable
428446	29-Jun-22	Sinclair, Todd C (Todd)	100.00	IRWD Check	Negotiable
428447	29-Jun-22	GOVERNMENTJOBS.COM, INC.	1,680.00	IRWD Check	Negotiable
428448	29-Jun-22	ACE INDUSTRIES, INC.	24,586.65	IRWD Check	Negotiable
428449	29-Jun-22	ADAMS, JOHN	32.18	IRWD Check	Negotiable
428450	29-Jun-22	AECOM TECHNICAL SERVICES, INC.	388,867.50	IRWD Check	Negotiable
428451	29-Jun-22	AFLAC	2,087.42	IRWD Check	Negotiable
428452	29-Jun-22	AGILENT TECHNOLOGIES, INC.	786.20	IRWD Check	Negotiable
428453	29-Jun-22	AIRGAS, INC.	2,426.44	IRWD Check	Negotiable
428454	29-Jun-22	AMAZON CAPITAL SERVICES, INC.	701.05	IRWD Check	Negotiable
428455	29-Jun-22	AMETEK BROOKFIELD	228.00	IRWD Check	Negotiable
428456	29-Jun-22	AMWINS GROUP BENEFITS LLC	3,629.10	IRWD Check	Negotiable
428457	29-Jun-22	ANDRITZ SEPARATION, INC.	1,181.36	IRWD Check	Negotiable
428458	29-Jun-22	ANTHEM BLUE CROSS	306.93	IRWD Check	Negotiable
428459	29-Jun-22	APPLIED ENGINEERING CONCEPTS	9,770.00	IRWD Check	Negotiable
428460	29-Jun-22	AQUA-METRIC SALES COMPANY	47,236.31	IRWD Check	Negotiable
428461	29-Jun-22	ARAG NORTH AMERICA, INC.	385.50	IRWD Check	Negotiable
428462	29-Jun-22	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA	38,158.84	IRWD Check	Negotiable
428463	29-Jun-22	AT&T	201.71	IRWD Check	Negotiable
428464	29-Jun-22	AT&T	211.88	IRWD Check	Negotiable
428465	29-Jun-22	AURORA SYSTEMS CONSULTING, INC	45,919.12	IRWD Check	Negotiable
428466	29-Jun-22	AUTOZONE PARTS, INC.	358.50	IRWD Check	Negotiable
428467	29-Jun-22	BATTERIES PLUS AND BATTERIES PLUS BULBS	122.64	IRWD Check	Negotiable
428468	29-Jun-22	BEEMAN, BETH M	12.54	IRWD Check	Negotiable
428469	29-Jun-22	BIGWIG MONSTER, LLC	16,000.00	IRWD Check	Negotiable
428470	29-Jun-22	BIOTAGE LLC	1,619.40	IRWD Check	Negotiable
428471	29-Jun-22	BRENNTAG PACIFIC INC	6,055.55	IRWD Check	Negotiable
428472	29-Jun-22	BRUCE HADLEY NEWELL	2,500.00	IRWD Check	Negotiable
428473	29-Jun-22	BSI AMERICA PROFESSIONAL SERVICES INC.	30,337.50	IRWD Check	Negotiable
428474	29-Jun-22	C WELLS PIPELINE MATERIALS INC	11,434.53	IRWD Check	Negotiable
428475	29-Jun-22	CALIFORNIA BANK & TRUST	20,447.92	IRWD Check	Negotiable
428476	29-Jun-22	CALIFORNIA BARRICADE RENTAL, INC.	37,979.15	IRWD Check	Negotiable
428477	29-Jun-22	CALIFORNIA PACIFIC HOMES	1,360.19	IRWD Check	Negotiable
428478	29-Jun-22	CAMERA, FRANK	48.73	IRWD Check	Negotiable
428479	29-Jun-22	CANNON CORPORATION	1,005.54	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT
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CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428480	29-Jun-22	CANON SOLUTIONS AMERICA, INC.	3.21	IRWD Check	Negotiable
428481	29-Jun-22	CAPDEVIELLE INC	443.86	IRWD Check	Negotiable
428482	29-Jun-22	CDW GOVERNMENT LLC	32,672.96	IRWD Check	Negotiable
428483	29-Jun-22	CENTURY PAVING	1,597.44	IRWD Check	Negotiable
428484	29-Jun-22	CHARLES P CROWLEY COMPANY INC	457.13	IRWD Check	Negotiable
428485	29-Jun-22	CHEM TECH INTERNATIONAL INC	8,260.56	IRWD Check	Negotiable
428486	29-Jun-22	CITY OF IRVINE	3,538.70	IRWD Check	Negotiable
428487	29-Jun-22	CITY OF NEWPORT BEACH	1,809.04	IRWD Check	Negotiable
428488	29-Jun-22	CLA-VAL COMPANY	8,059.70	IRWD Check	Negotiable
428489	29-Jun-22	CLAREY, CHRISTY	149.60	IRWD Check	Negotiable
428490	29-Jun-22	CLARK, JENNIFER	286.46	IRWD Check	Negotiable
428491	29-Jun-22	CNC ENGINEERING	14,360.00	IRWD Check	Negotiable
428492	29-Jun-22	COAST PLUMBING HEATING AND AIR, INC	69.40	IRWD Check	Negotiable
428493	29-Jun-22	COASTLINE EQUIPMENT COMPANY	9,454.74	IRWD Check	Negotiable
428494	29-Jun-22	COLE-PARMER INSTRUMENT CO	689.47	IRWD Check	Negotiable
428495	29-Jun-22	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	425.65	IRWD Check	Negotiable
428496	29-Jun-22	CONSTELLATION NEWENERGY, INC.	14,556.06	IRWD Check	Negotiable
428497	29-Jun-22	COX COMMUNICATIONS, INC.	3,588.04	IRWD Check	Negotiable
428498	29-Jun-22	D & G SIGNS	581.85	IRWD Check	Negotiable
428499	29-Jun-22	D & H WATER SYSTEMS INC.	5,646.84	IRWD Check	Negotiable
428500	29-Jun-22	DATA CLEAN CORPORATION	289.00	IRWD Check	Negotiable
428501	29-Jun-22	DDB ENGINEERING, INC.	5,646.00	IRWD Check	Negotiable
428502	29-Jun-22	DELL MARKETING LP	2,016.25	IRWD Check	Negotiable
428503	29-Jun-22	DIRECTV INC	146.99	IRWD Check	Negotiable
428504	29-Jun-22	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY	15,035.84	IRWD Check	Negotiable
428505	29-Jun-22	DMC ENGINEERING INC	4,070.00	IRWD Check	Negotiable
428506	29-Jun-22	DRAKE TRAFFIC CONTROL SERVICES INC	1,890.00	IRWD Check	Negotiable
428507	29-Jun-22	E.J. MEYER COMPANY, INC.	427,221.42	IRWD Check	Negotiable
428508	29-Jun-22	EAST ORANGE COUNTY WATER DISTRICT	3,425.58	IRWD Check	Negotiable
428509	29-Jun-22	EHS INTERNATIONAL,INC	3,070.00	IRWD Check	Negotiable
428510	29-Jun-22	ELEMENT PARENT, INC.	23,029.00	IRWD Check	Negotiable
428511	29-Jun-22	ELITE EQUIPMENT, INC.	1,608.09	IRWD Check	Negotiable
428512	29-Jun-22	EMD MILLIPORE CORP.	2,598.71	IRWD Check	Negotiable
428513	29-Jun-22	EMEDCO	1,258.30	IRWD Check	Negotiable
428514	29-Jun-22	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.	19,288.75	IRWD Check	Negotiable
428515	29-Jun-22	ENVIRONMENTAL EQUIPMENT SUPPLY	1,314.64	IRWD Check	Negotiable
428516	29-Jun-22	ENVIRONMENTAL SCIENCE ASSOCIATES	6,974.35	IRWD Check	Negotiable
428517	29-Jun-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	8,547.00	IRWD Check	Negotiable
428518	29-Jun-22	FARRELL & ASSOCIATES	210.86	IRWD Check	Negotiable
428519	29-Jun-22	FEDEX	642.13	IRWD Check	Negotiable
428520	29-Jun-22	FEDEX NATIONAL LTL, INC	469.46	IRWD Check	Negotiable
428521	29-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	85.52	IRWD Check	Negotiable
428522	29-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	117.22	IRWD Check	Negotiable
428523	29-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	6,440.75	IRWD Check	Negotiable
428524	29-Jun-22	FIDELITY SECURITY LIFE INSURANCE COMPANY	874.19	IRWD Check	Negotiable
428525	29-Jun-22	FIERRO, SERGIO D	3,960.00	IRWD Check	Negotiable
428526	29-Jun-22	FIRST CHOICE SERVICES	2,115.35	IRWD Check	Negotiable
428527	29-Jun-22	FISHER SCIENTIFIC COMPANY LLC	8,906.10	IRWD Check	Negotiable
428528	29-Jun-22	FRANCHISE TAX BOARD	1,066.98	IRWD Check	Negotiable
428529	29-Jun-22	FRONTIER CALIFORNIA INC.	106.98	IRWD Check	Negotiable
428530	29-Jun-22	FUSCOE ENGINEERING, INC.	1,143.00	IRWD Check	Negotiable
428531	29-Jun-22	GALATEANU, VIORICA	2.45	IRWD Check	Negotiable
428532	29-Jun-22	GANAHL LUMBER CO.	4,762.63	IRWD Check	Negotiable
428533	29-Jun-22	GARDENSOFT CORP	3,000.00	IRWD Check	Negotiable
428534	29-Jun-22	GARY BALE REDI-MIX CONCRETE, INC.	1,492.76	IRWD Check	Negotiable
428535	29-Jun-22	GCI CONSTRUCTION, INC.	5,087.00	IRWD Check	Negotiable
428536	29-Jun-22	GEOSYNTEC CONSULTANTS, INC.	2,926.59	IRWD Check	Negotiable
428537	29-Jun-22	GLOBAL TEST SUPPLY, LLC	122.75	IRWD Check	Negotiable
428538	29-Jun-22	GONZALEZ, JOSE M	106.21	IRWD Check	Negotiable
428539	29-Jun-22	GOVERLAN, LLC	21,360.00	IRWD Check	Negotiable
428540	29-Jun-22	GRAD, ROGER	97.59	IRWD Check	Negotiable
428541	29-Jun-22	GRAINGER	3,579.31	IRWD Check	Negotiable
428542	29-Jun-22	GRAYBAR ELECTRIC COMPANY	276.19	IRWD Check	Negotiable
428543	29-Jun-22	HACH COMPANY	6,218.14	IRWD Check	Negotiable
428544	29-Jun-22	HARRINGTON INDUSTRIAL PLASTICS LLC	3,951.97	IRWD Check	Negotiable
428545	29-Jun-22	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	50.88	IRWD Check	Negotiable
428546	29-Jun-22	HDR ENGINEERING INC	101,195.80	IRWD Check	Negotiable
428547	29-Jun-22	HELPMATES STAFFING SERVICES LLC	1,417.32	IRWD Check	Negotiable

**IRVINE RANCH WATER DISTRICT
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CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428548	29-Jun-22	HI-LINE INC	403.24	IRWD Check	Negotiable
428549	29-Jun-22	HILL BROTHERS CHEMICAL COMPANY	10,744.51	IRWD Check	Negotiable
428550	29-Jun-22	HOME DEPOT USA INC	112.41	IRWD Check	Negotiable
428551	29-Jun-22	HSIUNG, GRACE	15.49	IRWD Check	Negotiable
428552	29-Jun-22	IMPRENTA COMMUNICATIONS GROUP, INC.	1,500.00	IRWD Check	Negotiable
428553	29-Jun-22	INDUSTRIAL METAL SUPPLY CO	77.88	IRWD Check	Negotiable
428554	29-Jun-22	INFOSEND, INC.	21,009.96	IRWD Check	Negotiable
428555	29-Jun-22	INLAND POTABLE SERVICES, INC.	53,421.00	IRWD Check	Negotiable
428556	29-Jun-22	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	3,521.73	IRWD Check	Negotiable
428557	29-Jun-22	IRVINE PACIFIC	306.89	IRWD Check	Negotiable
428558	29-Jun-22	IRVINE PIPE & SUPPLY INC	976.61	IRWD Check	Negotiable
428559	29-Jun-22	IRWD-PETTY CASH CUSTODIAN	741.08	IRWD Check	Negotiable
428560	29-Jun-22	JIG CONSULTANTS	1,120.00	IRWD Check	Negotiable
428561	29-Jun-22	JOHNSON-FRANK & ASSOCIATES, INC.	21,500.00	IRWD Check	Negotiable
428562	29-Jun-22	JOHNSTONE SUPPLY SANTA ANA	1,548.23	IRWD Check	Negotiable
428563	29-Jun-22	JONSET LLC	1,672.00	IRWD Check	Negotiable
428564	29-Jun-22	KAESER COMPRESSORS, INC.	4,015.85	IRWD Check	Negotiable
428565	29-Jun-22	KLIR INC.	90,000.00	IRWD Check	Negotiable
428566	29-Jun-22	LA HABRA FENCE COMPANY INC	6,372.00	IRWD Check	Negotiable
428567	29-Jun-22	LAGUNA BEACH COUNTY WATER DISTRICT	1,174.30	IRWD Check	Negotiable
428568	29-Jun-22	LEE & RO, INC.	18,397.56	IRWD Check	Negotiable
428569	29-Jun-22	LEI, LIAYANG	315.25	IRWD Check	Negotiable
428570	29-Jun-22	LENNAR HOMES OF CALIFORNIA, INC.	218.51	IRWD Check	Negotiable
428571	29-Jun-22	LIEBERT CASSIDY WHITMORE	2,073.00	IRWD Check	Negotiable
428572	29-Jun-22	LINDE GAS & EQUIPMENT INC.	2,069.80	IRWD Check	Negotiable
428573	29-Jun-22	LSPACE AMERICA LLC	44.29	IRWD Check	Negotiable
428574	29-Jun-22	LU, CHUNYAN	1,062.44	IRWD Check	Negotiable
428575	29-Jun-22	LUBRICATION ENGINEERS, INC.	2,760.49	IRWD Check	Negotiable
428576	29-Jun-22	MATTAR, TAREK	11.18	IRWD Check	Negotiable
428577	29-Jun-22	MC FADDEN-DALE INDUSTRIAL	340.29	IRWD Check	Negotiable
428578	29-Jun-22	MC MASTER CARR SUPPLY CO	1,980.95	IRWD Check	Negotiable
428579	29-Jun-22	MERRIMAC PETROLEUM, INC.	45,789.99	IRWD Check	Negotiable
428580	29-Jun-22	MILES CHEMICAL COMPANY, INC.	5,714.94	IRWD Check	Negotiable
428581	29-Jun-22	MISCOWATER	4,616.28	IRWD Check	Negotiable
428582	29-Jun-22	MONROY, JONNATHAN	71.05	IRWD Check	Negotiable
428583	29-Jun-22	MORRISROE, EDWARD	433.14	IRWD Check	Negotiable
428584	29-Jun-22	NATIONAL READY MIXED CONCRETE SALES, LLC	434.24	IRWD Check	Negotiable
428585	29-Jun-22	NV5, INC.	27,720.00	IRWD Check	Negotiable
428586	29-Jun-22	O'REILLY AUTO ENTERPRISES, LLC	14.52	IRWD Check	Negotiable
428587	29-Jun-22	OCTA	610.00	IRWD Check	Negotiable
428588	29-Jun-22	OLIN CORPORATION	70,684.56	IRWD Check	Negotiable
428589	29-Jun-22	ORACLE AMERICA, INC.	3,400.89	IRWD Check	Negotiable
428590	29-Jun-22	ORANGE COUNTY AUTO PARTS CO	1,993.06	IRWD Check	Negotiable
428591	29-Jun-22	ORANGE COUNTY SANITATION DISTRICT	53,396.89	IRWD Check	Negotiable
428592	29-Jun-22	PACIFIC COAST BOLT CORP	320.25	IRWD Check	Negotiable
428593	29-Jun-22	PACIFIC HYDROTECH CORPORATION	23,971.12	IRWD Check	Negotiable
428594	29-Jun-22	PACIFIC HYDROTECH CORPORATION	11,487.00	IRWD Check	Negotiable
428596	29-Jun-22	PACIFIC HYDROTECH CORPORATION	23,623.56	IRWD Check	Negotiable
428598	29-Jun-22	PACIFIC HYDROTECH CORPORATION	27,450.69	IRWD Check	Negotiable
428599	29-Jun-22	PACIFIC PARTS & CONTROLS INC	994.31	IRWD Check	Negotiable
428600	29-Jun-22	PACUN, PAUL	196.55	IRWD Check	Negotiable
428601	29-Jun-22	PARKHOUSE TIRE INC	2,634.63	IRWD Check	Negotiable
428602	29-Jun-22	PAYNE & FEARS LLP	8,509.00	IRWD Check	Negotiable
428603	29-Jun-22	PELLETIER & ASSOCIATES, INC.	390.00	IRWD Check	Negotiable
428604	29-Jun-22	PEREZ, LINDA	42.08	IRWD Check	Negotiable
428605	29-Jun-22	PERS LONG TERM CARE	612.63	IRWD Check	Negotiable
428606	29-Jun-22	PILLSBURY WINTHROP SHAW PITTMAN LLP	7,488.00	IRWD Check	Negotiable
428607	29-Jun-22	PMOSC INC	54.93	IRWD Check	Negotiable
428608	29-Jun-22	POLLARDWATER.COM	516.39	IRWD Check	Negotiable
428609	29-Jun-22	PROJECT PARTNERS LLC	25,100.00	IRWD Check	Negotiable
428610	29-Jun-22	PSOMAS	35,800.49	IRWD Check	Negotiable
428611	29-Jun-22	QUALITY ENVIRONMENTAL CONTAINERS	5,345.11	IRWD Check	Negotiable
428612	29-Jun-22	QUINN COMPANY	5,032.07	IRWD Check	Negotiable
428613	29-Jun-22	R.F. MACDONALD CO.	2,000.00	IRWD Check	Negotiable
428614	29-Jun-22	RALPH ANDERSEN & ASSOCIATES	5,000.00	IRWD Check	Negotiable
428615	29-Jun-22	RAM AIR ENGINEERING INC	16,173.32	IRWD Check	Negotiable
428616	29-Jun-22	REAL WATER CONSULTANTS INC.	14,220.00	IRWD Check	Negotiable
428617	29-Jun-22	REFRIGERATION SUPPLIES DISTRIBUTOR	378.22	IRWD Check	Negotiable

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428618	29-Jun-22	RELIANCE STANDARD LIFE INSURANCE COMPANY	36,577.62	IRWD Check	Negotiable
428619	29-Jun-22	RENTOKIL NORTH AMERICA, INC	10,997.33	IRWD Check	Negotiable
428620	29-Jun-22	RICHARD C. SLADE & ASSOCIATES LLC	12,729.48	IRWD Check	Negotiable
428621	29-Jun-22	RLG ENTERPRISES, INC	124.51	IRWD Check	Negotiable
428622	29-Jun-22	S&S SEEDS INC	3,816.50	IRWD Check	Negotiable
428623	29-Jun-22	SAGE & ALENE HUMPHRIES	627.15	IRWD Check	Negotiable
428624	29-Jun-22	SANTA ANA BLUE PRINT	1,584.72	IRWD Check	Negotiable
428625	29-Jun-22	SANTA MARGARITA FORD	285.79	IRWD Check	Negotiable
428626	29-Jun-22	SCIENTIFIC REFRIGERATION	819.72	IRWD Check	Negotiable
428627	29-Jun-22	SCOTT FOSTER ENGINEERING, INC.	4,680.00	IRWD Check	Negotiable
428628	29-Jun-22	SENTO, ROBERT	85.65	IRWD Check	Negotiable
428629	29-Jun-22	SMT AUTOMOTIVE LLC	168.04	IRWD Check	Negotiable
428630	29-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	1,552,465.33	IRWD Check	Negotiable
428631	29-Jun-22	SOUTHERN CALIFORNIA EDISON COMPANY	1,459.42	IRWD Check	Negotiable
428632	29-Jun-22	SOUTHERN CALIFORNIA GAS COMPANY	16.26	IRWD Check	Negotiable
428633	29-Jun-22	SPARKLETTS	294.00	IRWD Check	Negotiable
428634	29-Jun-22	SPATIAL WAVE, INC.	4,500.00	IRWD Check	Negotiable
428635	29-Jun-22	STANTEC CONSULTING SERVICES INC.	1,612.50	IRWD Check	Negotiable
428636	29-Jun-22	STETSON ENGINEERS INC.	7,685.75	IRWD Check	Negotiable
428637	29-Jun-22	STEVEN WELCH	1,040.00	IRWD Check	Negotiable
428638	29-Jun-22	SUEZ TREATMENT SOLUTIONS INC.	181,192.10	IRWD Check	Negotiable
428639	29-Jun-22	SUN-STAR ELECTRIC, INC.	23,910.08	IRWD Check	Negotiable
428640	29-Jun-22	T.E. ROBERTS, INC.	1,087.14	IRWD Check	Negotiable
428641	29-Jun-22	T.E. ROBERTS, INC.	7,318.36	IRWD Check	Negotiable
428642	29-Jun-22	TAIT ENVIRONMENTAL SERVICES, INC.	1,095.00	IRWD Check	Negotiable
428643	29-Jun-22	TEKDRAULICS	2,370.71	IRWD Check	Negotiable
428644	29-Jun-22	TENDER GREENS UCI	95.20	IRWD Check	Negotiable
428645	29-Jun-22	TETRA TECH, INC	10,433.75	IRWD Check	Negotiable
428646	29-Jun-22	THE SHERWIN WILLIAMS COMPANY	852.90	IRWD Check	Negotiable
428647	29-Jun-22	THOMPSON & PHIPPS INC	5,222.45	IRWD Check	Negotiable
428648	29-Jun-22	TNHC REALTY AND CONSTRUCTION INC	800.09	IRWD Check	Negotiable
428649	29-Jun-22	TRAFFIC MANAGEMENT, INC	2,800.00	IRWD Check	Negotiable
428650	29-Jun-22	TUSTIN TOYOTA	117.06	IRWD Check	Negotiable
428651	29-Jun-22	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA	4,430.35	IRWD Check	Negotiable
428652	29-Jun-22	UNISON SOLUTIONS, INC	8,695.00	IRWD Check	Negotiable
428653	29-Jun-22	UNITED PARCEL SERVICE INC	36.00	IRWD Check	Negotiable
428654	29-Jun-22	UNIVAR SOLUTIONS USA INC.	22,155.80	IRWD Check	Negotiable
428655	29-Jun-22	US BANK NAT'L ASSOCIATION NORTH DAKOTA	69,413.47	IRWD Check	Negotiable
428656	29-Jun-22	USA BLUEBOOK	1,700.38	IRWD Check	Negotiable
428657	29-Jun-22	VAUGHAN'S INDUSTRIAL REPAIR CO INC	4,768.83	IRWD Check	Negotiable
428658	29-Jun-22	VEOLIA NORTH AMERICA, INC.	7,587.78	IRWD Check	Negotiable
428659	29-Jun-22	VERIZON WIRELESS SERVICES LLC	17,572.81	IRWD Check	Negotiable
428660	29-Jun-22	VULCAN MATERIALS COMPANY	2,155.85	IRWD Check	Negotiable
428661	29-Jun-22	WARD, WILLIAM P JR.	693.14	IRWD Check	Negotiable
428662	29-Jun-22	WASTE MANAGEMENT COLLECTIONS AND RECYCLING, INC.	5,097.21	IRWD Check	Negotiable
428663	29-Jun-22	WATERLINE TECHNOLOGIES INC	6,420.96	IRWD Check	Negotiable
428664	29-Jun-22	WAXIE'S ENTERPRISES, INC	566.66	IRWD Check	Negotiable
428665	29-Jun-22	WECK LABORATORIES INC	120.00	IRWD Check	Negotiable
428666	29-Jun-22	WEST COAST SAND & GRAVEL INC.	1,668.85	IRWD Check	Negotiable
428667	29-Jun-22	WEST YOST & ASSOCIATES, INC.	100,174.74	IRWD Check	Negotiable
428668	29-Jun-22	WORKFORCE SAFETY LLC	4,500.00	IRWD Check	Negotiable
428669	29-Jun-22	YEN, MICHELLE	373.30	IRWD Check	Negotiable
428670	29-Jun-22	YI, JOON	78.78	IRWD Check	Negotiable
428671	29-Jun-22	YORKE ENGINEERING, LLC	191.50	IRWD Check	Negotiable
428672	29-Jun-22	ZEBRON CONTRACTING INC	7,360.00	IRWD Check	Negotiable
428673	29-Jun-22	ZUNIGA, EMILYN BUENAFE	52.06	IRWD Check	Negotiable
428674	30-Jun-22	Haney, Lisa	194.93	IRWD Check	Negotiable
428675	30-Jun-22	Soto, Franklin E (Frank)	124.50	IRWD Check	Negotiable
428676	30-Jun-22	Zamora, Victor A	31.91	IRWD Check	Negotiable
428677	30-Jun-22	Aguilar, Alex L (Alex)	-	IRWD Check	Negotiable
428678	30-Jun-22	Armstrong, Ashley	-	IRWD Check	Negotiable
428679	30-Jun-22	Beltran, Scott A (Scott)	-	IRWD Check	Negotiable
428680	30-Jun-22	Bendzick-Sin, Julie M (Julie)	-	IRWD Check	Negotiable
428681	30-Jun-22	Bonkowski, Leslie A (Leslie)	-	IRWD Check	Negotiable
428682	30-Jun-22	Bowers, Marie	-	IRWD Check	Negotiable
428683	30-Jun-22	Brown, Richard E (Richard)	-	IRWD Check	Negotiable
428684	30-Jun-22	Burton, Kevin L (Kevin)	-	IRWD Check	Negotiable
428685	30-Jun-22	Cervantes, Isela J	-	IRWD Check	Negotiable

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428686	30-Jun-22	Chambers, Wendy	-	IRWD Check	Negotiable
428687	30-Jun-22	Clary, Cheryl L	-	IRWD Check	Negotiable
428688	30-Jun-22	Colston, James	-	IRWD Check	Negotiable
428689	30-Jun-22	Compton, Christine A	-	IRWD Check	Negotiable
428690	30-Jun-22	Cook, Paul A (Paul)	-	IRWD Check	Negotiable
428691	30-Jun-22	Crowe, David M (David)	-	IRWD Check	Negotiable
428692	30-Jun-22	Denhaan, Robert E	-	IRWD Check	Negotiable
428693	30-Jun-22	Duarte, Elizabeth (Elizabeth)	-	IRWD Check	Negotiable
428694	30-Jun-22	Escobar, Omar (Omar)	-	IRWD Check	Negotiable
428695	30-Jun-22	Fabris, John	-	IRWD Check	Negotiable
428696	30-Jun-22	Faulds, Jonathan	-	IRWD Check	Negotiable
428697	30-Jun-22	Flotho, Eric (Eric)	-	IRWD Check	Negotiable
428698	30-Jun-22	Garcia, Dorys Elizabeth	-	IRWD Check	Negotiable
428699	30-Jun-22	Haney, Lisa	-	IRWD Check	Negotiable
428700	30-Jun-22	Henton-Hall, Andrea T	-	IRWD Check	Negotiable
428701	30-Jun-22	Ho, Connie	-	IRWD Check	Negotiable
428702	30-Jun-22	Jacobson, Robert C (Rob)	-	IRWD Check	Negotiable
428703	30-Jun-22	Jordan, Dawn M (Dawn)	-	IRWD Check	Negotiable
428704	30-Jun-22	Martin, Colton S (Colton)	-	IRWD Check	Negotiable
428705	30-Jun-22	McElroy, Dorien	-	IRWD Check	Negotiable
428706	30-Jun-22	McNulty, Amy K (Amy)	-	IRWD Check	Negotiable
428707	30-Jun-22	Mendoza, Evelyn	-	IRWD Check	Negotiable
428708	30-Jun-22	Mitcham, Tiffany A	-	IRWD Check	Negotiable
428709	30-Jun-22	Montejano, Graciela (Grace)	-	IRWD Check	Negotiable
428710	30-Jun-22	Mourant, Barbara J (Barbara)	-	IRWD Check	Negotiable
428711	30-Jun-22	Muncy, Jessie A	-	IRWD Check	Negotiable
428712	30-Jun-22	Munoz, Alex R (Alex)	-	IRWD Check	Negotiable
428713	30-Jun-22	Mykitta, Richard	-	IRWD Check	Negotiable
428714	30-Jun-22	Nguyen, Chau	-	IRWD Check	Negotiable
428715	30-Jun-22	Norman, Tammy	-	IRWD Check	Negotiable
428716	30-Jun-22	O'Neill, Owen H	-	IRWD Check	Negotiable
428717	30-Jun-22	Perez, David M (David)	-	IRWD Check	Negotiable
428718	30-Jun-22	Pfister, Ken D (Ken)	-	IRWD Check	Negotiable
428719	30-Jun-22	Pio, Christine R (Chris)	-	IRWD Check	Negotiable
428720	30-Jun-22	Prewoznik, Frank	-	IRWD Check	Negotiable
428721	30-Jun-22	Pulles, Margaret M (Margaret)	-	IRWD Check	Negotiable
428722	30-Jun-22	Rivenburg, Deniene H	-	IRWD Check	Negotiable
428723	30-Jun-22	Ruiz, Ricky (Ricky)	-	IRWD Check	Negotiable
428724	30-Jun-22	Sanchez, Fiona M (Fiona)	-	IRWD Check	Negotiable
428725	30-Jun-22	Sciabica, Joseph	-	IRWD Check	Negotiable
428726	30-Jun-22	Shinbashi, Allen	-	IRWD Check	Negotiable
428727	30-Jun-22	Squyres, Diane M (Diane)	-	IRWD Check	Negotiable
428728	30-Jun-22	Srader, Lisa	-	IRWD Check	Negotiable
428729	30-Jun-22	Steere, Kim	-	IRWD Check	Negotiable
428730	30-Jun-22	Swan, Kristine	-	IRWD Check	Negotiable
428731	30-Jun-22	Swift, Ian P (Ian)	-	IRWD Check	Negotiable
428732	30-Jun-22	Tedesuccci, Frank	-	IRWD Check	Negotiable
428733	30-Jun-22	Tettemer, John M (Mark)	-	IRWD Check	Negotiable
428734	30-Jun-22	Vanderploeg, Gina V	-	IRWD Check	Negotiable
428735	30-Jun-22	Vizcarra, Michelle	-	IRWD Check	Negotiable
428736	30-Jun-22	Weghorst, Paul A (Paul)	-	IRWD Check	Negotiable
428737	30-Jun-22	Zepeda, Jose	-	IRWD Check	Negotiable
428738	30-Jun-22	Zuniga, Emilyn Buenafe	-	IRWD Check	Negotiable
428739	30-Jun-22	PACIFIC HYDROTECH CORPORATION	1,195,267.33	IRWD Check	Negotiable
428740	30-Jun-22	AECOM TECHNICAL SERVICES, INC.	30,432.50	IRWD Check	Negotiable
428741	30-Jun-22	ALLIANCE RESOURCE CONSULTING LLC	13,250.00	IRWD Check	Negotiable
428742	30-Jun-22	ALSTON & BIRD LLP	54,863.60	IRWD Check	Negotiable
428743	30-Jun-22	AMAZON CAPITAL SERVICES, INC.	3,114.04	IRWD Check	Negotiable
428744	30-Jun-22	AQUA BEN CORPORATION	55,156.50	IRWD Check	Negotiable
428745	30-Jun-22	AT&T	61.23	IRWD Check	Negotiable
428746	30-Jun-22	AT&T	3,888.96	IRWD Check	Negotiable
428747	30-Jun-22	AUTOZONE PARTS, INC.	687.70	IRWD Check	Negotiable
428748	30-Jun-22	C WELLS PIPELINE MATERIALS INC	9,661.94	IRWD Check	Negotiable
428749	30-Jun-22	CALIFORNIA BARRICADE RENTAL, INC.	11,009.70	IRWD Check	Negotiable
428750	30-Jun-22	CAPTIVE AUDIENCE MARKETING INC.	79.00	IRWD Check	Negotiable
428751	30-Jun-22	CDW GOVERNMENT LLC	5,318.23	IRWD Check	Negotiable
428752	30-Jun-22	COASTAL OCCUPATIONAL MEDICAL GROUP, INC.	215.00	IRWD Check	Negotiable
428753	30-Jun-22	CONSTELLATION NEWENERGY, INC.	25,812.08	IRWD Check	Negotiable

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
428754	30-Jun-22	DELL MARKETING LP	184.12	IRWD Check	Negotiable
428755	30-Jun-22	DRAKE TRAFFIC CONTROL SERVICES INC	840.00	IRWD Check	Negotiable
428756	30-Jun-22	EMD MILLIPORE CORP.	11,766.75	IRWD Check	Negotiable
428757	30-Jun-22	EUROFINS ENVIRONMENT TESTING AMERICA HOLDINGS, INC.	157.50	IRWD Check	Negotiable
428758	30-Jun-22	FERGUSON ENTERPRISES, LLC	4,800.26	IRWD Check	Negotiable
428759	30-Jun-22	FISHER & PHILLIPS LLP	17,494.00	IRWD Check	Negotiable
428760	30-Jun-22	GIG KYRIACOU	7,500.00	IRWD Check	Negotiable
428761	30-Jun-22	GRAINGER	977.94	IRWD Check	Negotiable
428762	30-Jun-22	HAAKER EQUIPMENT COMPANY	1,227.49	IRWD Check	Negotiable
428763	30-Jun-22	HACH COMPANY	4,534.81	IRWD Check	Negotiable
428764	30-Jun-22	HARRINGTON INDUSTRIAL PLASTICS LLC	2,330.53	IRWD Check	Negotiable
428765	30-Jun-22	HARRINGTON INDUSTRIAL PLASTICS LLC	1,454.63	IRWD Check	Negotiable
428766	30-Jun-22	HAZEN AND SAWYER	5,840.21	IRWD Check	Negotiable
428767	30-Jun-22	HI-LINE INC	42.44	IRWD Check	Negotiable
428768	30-Jun-22	HOME DEPOT USA INC	206.70	IRWD Check	Negotiable
428769	30-Jun-22	IRVINE PIPE & SUPPLY INC	489.94	IRWD Check	Negotiable
428770	30-Jun-22	JAMBOREE SMOG	58.00	IRWD Check	Negotiable
428771	30-Jun-22	KAN VENTURES, INC	6,500.00	IRWD Check	Negotiable
428772	30-Jun-22	KRONICK MOSKOVITZ TIEDEMANN & GIRARD	26,876.06	IRWD Check	Negotiable
428773	30-Jun-22	LA HABRA FENCE COMPANY INC	3,974.00	IRWD Check	Negotiable
428774	30-Jun-22	LABELLE-MARVIN INC	6,231.00	IRWD Check	Negotiable
428775	30-Jun-22	LANDCARE HOLDINGS, INC.	44,292.20	IRWD Check	Negotiable
428776	30-Jun-22	LINDE GAS & EQUIPMENT INC.	1,028.91	IRWD Check	Negotiable
428777	30-Jun-22	LINDSAY POLIC CONSULTING, INC.	7,100.00	IRWD Check	Negotiable
428778	30-Jun-22	MARK KADESH	10,200.00	IRWD Check	Negotiable
428779	30-Jun-22	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	4,270.63	IRWD Check	Negotiable
428780	30-Jun-22	O'REILLY AUTO ENTERPRISES, LLC	474.26	IRWD Check	Negotiable
428781	30-Jun-22	OLIN CORPORATION	8,814.29	IRWD Check	Negotiable
428782	30-Jun-22	OLSON REMCHO LLP	448.00	IRWD Check	Negotiable
428783	30-Jun-22	ONESOURCE DISTRIBUTORS LLC	41,252.85	IRWD Check	Negotiable
428784	30-Jun-22	ORANGE COUNTY AUTO PARTS CO	59.79	IRWD Check	Negotiable
428785	30-Jun-22	ORIGIN CONSULTING LLC	30,082.25	IRWD Check	Negotiable
428786	30-Jun-22	PACIFIC HYDROTECH CORPORATION	6,103.96	IRWD Check	Negotiable
428787	30-Jun-22	PACIFIC PARTS & CONTROLS INC	2,207.68	IRWD Check	Negotiable
428788	30-Jun-22	PARKHOUSE TIRE INC	1,434.42	IRWD Check	Negotiable
428789	30-Jun-22	PARKWAY LAWNMOWER SHOP	64.02	IRWD Check	Negotiable
428790	30-Jun-22	PLUMBERS DEPOT INC.	1,131.38	IRWD Check	Negotiable
428791	30-Jun-22	PSOMAS	18,439.61	IRWD Check	Negotiable
428792	30-Jun-22	RAM AIR ENGINEERING INC	17,007.57	IRWD Check	Negotiable
428793	30-Jun-22	RINCON TRUCK CENTER INC.	1,274.52	IRWD Check	Negotiable
428794	30-Jun-22	RLG ENTERPRISES, INC	618.43	IRWD Check	Negotiable
428795	30-Jun-22	SANTA ANA BLUE PRINT	915.88	IRWD Check	Negotiable
428796	30-Jun-22	SANTA MARGARITA FORD	964.36	IRWD Check	Negotiable
428797	30-Jun-22	SEAL ANALYTICAL INC	1,021.68	IRWD Check	Negotiable
428798	30-Jun-22	SERRANO WATER DISTRICT	8,137.34	IRWD Check	Negotiable
428799	30-Jun-22	SHOETERIA	178.58	IRWD Check	Negotiable
428800	30-Jun-22	SITEONE LANDSCAPE SUPPLY, LLC	1,590.04	IRWD Check	Negotiable
428801	30-Jun-22	STEVEN WELCH	235.00	IRWD Check	Negotiable
428802	30-Jun-22	TETRA TECH, INC	372.60	IRWD Check	Negotiable
428803	30-Jun-22	THOMPSON & PHIPPS INC	1,638.55	IRWD Check	Negotiable
428804	30-Jun-22	VERIZON WIRELESS SERVICES LLC	26,485.29	IRWD Check	Negotiable
428805	30-Jun-22	WATERLINE TECHNOLOGIES INC	3,774.96	IRWD Check	Negotiable
428806	30-Jun-22	WATERSMART SOFTWARE INC	15,175.02	IRWD Check	Negotiable
428807	30-Jun-22	WAXIE'S ENTERPRISES, INC	1,081.10	IRWD Check	Negotiable
428808	30-Jun-22	WECK LABORATORIES INC	280.00	IRWD Check	Negotiable
SUB-TOTAL CHECK DISBURSEMENTS			14,904,191.73		
14946	2-Jun-22	INTERNAL REVENUE SERVICE	230,209.15	IRWD Wire	Negotiable
14947	2-Jun-22	FRANCHISE TAX BOARD	72,270.45	IRWD Wire	Negotiable
14948	2-Jun-22	EMPLOYMENT DEVELOPMENT DEPARTMENT	17,776.03	IRWD Wire	Negotiable
14949	2-Jun-22	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	3,049.00	IRWD Wire	Negotiable
14950	2-Jun-22	EMPOWER RETIREMENT, LLC	175,775.85	IRWD Wire	Negotiable
14951	2-Jun-22	CALPERS	249,322.03	IRWD Wire	Negotiable
14952	8-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	1,478.80	IRWD Wire	Negotiable
14953	14-Jun-22	WELLS FARGO BANK, N.A.	5,889.33	IRWD Wire	Negotiable
14954	15-Jun-22	YORK RISK SERVICES GROUP, INC.	193.76	IRWD Wire	Negotiable
14955	17-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	2,044.95	IRWD Wire	Negotiable
14956	17-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	13,828.48	IRWD Wire	Negotiable
14957	20-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	1,871.82	IRWD Wire	Negotiable

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

CHECK OR ELECTRONIC #	PAYMENT DATE	SUPPLIERS	PAYMENT AMOUNT	PAYMENT METHOD	STATUS
14958	20-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	3,669.73	IRWD Wire	Negotiable
14959	20-Jun-22	CALPERS	579,135.03	IRWD Wire	Negotiable
14960	20-Jun-22	CALPERS	3,537.54	IRWD Wire	Negotiable
14961	20-Jun-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	45,163.17	IRWD Wire	Negotiable
14962	20-Jun-22	U.S. BANK NATIONAL ASSOCIATION	24,000.04	IRWD Wire	Negotiable
14963	20-Jun-22	BANK OF AMERICA	22,630.16	IRWD Wire	Negotiable
14964	20-Jun-22	U.S. BANK NATIONAL ASSOCIATION	10,498.07	IRWD Wire	Negotiable
14965	21-Jun-22	SUMITOMO MITSUI BANKING CORPORATION	23,879.73	IRWD Wire	Negotiable
14966	21-Jun-22	YORK RISK SERVICES GROUP, INC.	4,805.88	IRWD Wire	Negotiable
14967	21-Jun-22	YORK RISK SERVICES GROUP, INC.	6,993.50	IRWD Wire	Negotiable
14968	21-Jun-22	CALPERS	1,332.94	IRWD Wire	Negotiable
14969	21-Jun-22	CALPERS	247,883.12	IRWD Wire	Negotiable
14970	21-Jun-22	INTERNAL REVENUE SERVICE	236,932.69	IRWD Wire	Negotiable
14971	21-Jun-22	EMPLOYMENT DEVELOPMENT DEPARTMENT	17,781.89	IRWD Wire	Negotiable
14972	21-Jun-22	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	3,049.00	IRWD Wire	Negotiable
14973	21-Jun-22	FRANCHISE TAX BOARD	74,339.47	IRWD Wire	Negotiable
14974	21-Jun-22	EMPOWER RETIREMENT, LLC	181,610.87	IRWD Wire	Negotiable
14975	22-Jun-22	BANK OF NEW YORK MELLON TRUST COMPANY NA	22,540.98	IRWD Wire	Negotiable
14976	22-Jun-22	ORANGE COUNTY SANITATION DISTRICT	2,723,773.91	IRWD Wire	Negotiable
14977	22-Jun-22	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	2,810,029.17	IRWD Wire	Negotiable
14978	22-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	2,519.34	IRWD Wire	Negotiable
14979	22-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	3,219.31	IRWD Wire	Negotiable
14980	23-Jun-22	YORK RISK SERVICES GROUP, INC.	2,312.50	IRWD Wire	Negotiable
14981	28-Jun-22	INTERNAL REVENUE SERVICE	19,142.79	IRWD Wire	Negotiable
14982	28-Jun-22	EMPLOYMENT DEVELOPMENT DEPARTMENT	1,892.00	IRWD Wire	Negotiable
14983	28-Jun-22	FRANCHISE TAX BOARD	3,015.40	IRWD Wire	Negotiable
14984	28-Jun-22	KARZAI, SHUGHLA	20.23	IRWD Wire	Negotiable
14985	28-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	1,812.98	IRWD Wire	Negotiable
14986	28-Jun-22	CHARD SNYDER & ASSOCIATES, INC.	4,220.22	IRWD Wire	Negotiable
14987	28-Jun-22	BANK OF AMERICA MERRILL LYNCH	92,666.73	IRWD Wire	Negotiable
14988	29-Jun-22	YORK RISK SERVICES GROUP, INC.	4,135.12	IRWD Wire	Negotiable
14989	30-Jun-22	EMPOWER RETIREMENT, LLC	179,364.64	IRWD Wire	Negotiable
14990	30-Jun-22	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	3,049.00	IRWD Wire	Negotiable
14991	30-Jun-22	INTERNAL REVENUE SERVICE	228,243.57	IRWD Wire	Negotiable
14992	30-Jun-22	FRANCHISE TAX BOARD	72,217.67	IRWD Wire	Negotiable
14993	30-Jun-22	EMPLOYMENT DEVELOPMENT DEPARTMENT	17,632.74	IRWD Wire	Negotiable
14994	30-Jun-22	CALPERS	248,942.45	IRWD Wire	Negotiable
14995	30-Jun-22	CALPERS	2.36	IRWD Wire	Negotiable
SUB-TOTAL ELECTRONIC DISBURSEMENTS			8,701,705.59		
SUB-TOTAL AP CHECK AND ELECTRONIC DISBURSEMENTS			23,605,897.32		
427944	9-Jun-22	FIRST CHOICE SERVICES	2,875.64	IRWD Check	Voided
428094	16-Jun-22	BEAUCHAMP, DAVID	126.66	IRWD Check	Voided
428443	28-Jun-22	LAYTON CONSTRUCTION COMPANY	439.06	IRWD Check	Voided
428595	29-Jun-22	PACIFIC HYDROTECH CORPORATION	8,957.00	IRWD Check	Voided
428597	29-Jun-22	PACIFIC HYDROTECH CORPORATION	1,814,298.08	IRWD Check	Voided
SUB-TOTAL CHECK AND ELECTRONIC DISBURSEMENTS ISSUED AND VOIDED IN JUN 2022			1,826,696.44		
TOTAL AP DISBURSEMENTS AND VOIDS FOR JUN 2022			25,432,593.76		

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Exhibit "E"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

**June
2022**

	AMOUNT	VENDOR	PURPOSE
6/3/2022	1,077,798.30	BANK OF AMERICA	ACH Payments for Payroll
6/17/2022	1,093,727.39	BANK OF AMERICA	ACH Payments for Payroll
	<u><u>\$2,171,525.69</u></u>		

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Exhibit "F"

IRWD Gov Code 53065.5 Disclosure Report

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

01-JUN-22 to 30-JUN-22


NAME	CHECK NO.	CHECK DATE	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Berry, Wyatt	428067	16-Jun-22	116.00	Certification Renewal	CWEA Maintenance Mechanic Grade II
Cronin, Gregory	428069	16-Jun-22	750.00	Other(Misc)	Tool Reimbursement
Davis, Jennifer	428442	23-Jun-22	110.00	Other(Misc)	CMTA Specialized Training
Donnelly, Stephen	428267	23-Jun-22	125.00	Other(Misc)	Safety Shoe Allowance
Drzymkowski, Michele	427893	9-Jun-22	192.00	Membership Renewal	CWEA membership
Garcia, Alejandro (Alex)	428441	23-Jun-22	200.00	Other(Misc)	Safety Shoe Allowance
Legault, Dan	428070	16-Jun-22	750.00	Other(Misc)	Tool Reimbursement
Nguyen, Claire	428071	16-Jun-22	192.00	Membership Renewal	CWEA initial membership fee
Nguyen, Claire	428071	16-Jun-22	210.00	Certification Renewal	CWEA Lab Analyst Grade III Testing/Certification Fee
Nguyen, Claire	428071	16-Jun-22	192.00	Membership Renewal	CWEA membership
Perry, Guy (Matthew)	428072	16-Jun-22	750.00	Other(Misc)	Tool Reimbursement
Rock, Douglas	428269	23-Jun-22	491.30	Certification Renewal	Cross Connection/Backflow
Sanchez, Hector	428270	23-Jun-22	750.00	Other(Misc)	Tool Reimbursement
Seesangrit, Melody	428073	16-Jun-22	329.41	Lodging	CalWEP Peer to Peer Conf., Sacramento, CA - May 31, 2022
Seesangrit, Melody	428073	16-Jun-22	329.42	Lodging	CalWEP Peer to Peer Conf., Sacramento, CA - June 1, 2022
Shapiro, Matthew	427737	2-Jun-22	105.00	Certification Renewal	SWRCB Water Distribution Operator Grade D4
Shapiro, Matthew	427737	2-Jun-22	130.00	Membership Renewal	SWRCB Water Distribution Operator Grade D4
Sinclair, Todd	428446	29-Jun-22	100.00	Certification Renewal	Cross Connection specialist
Srader, Lisa	428271	23-Jun-22	105.95	Other(Misc)	Retiree gift card
Swan, Peer	427738	2-Jun-22	940.97	Airfare	CASA Annual Washington, DC Conf., Feb. 27-Mar. 1, 2022
Swan, Peer	427738	2-Jun-22	401.18	Lodging	CASA Annual Washington, DC Conf., Feb. 28, 2022
Swan, Peer	427738	2-Jun-22	401.18	Lodging	CASA Annual Washington, DC Conf., Mar. 1, 2022
Vasquez, Jonathan	427895	9-Jun-22	175.00	Certification Renewal	SWRCB Water Distribution Operator Grade IV
Whittaker, Jerry A	428272	23-Jun-22	450.00	Certification Renewal	WaterWise Pro Distribution Exam - Water Maintenance Technician III
Wilson, Brett	428074	16-Jun-22	750.00	Other(Misc)	Tool Reimbursement
Total Amount:			\$9,046.41		

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July 25, 2022

Prepared by: D. Pardee / C. Smithson

Submitted by: C. Clary

Approved by: Paul A. Cook 

CONSENT CALENDAR

FISCAL YEAR 2021-22 IRWD GUIDING PRINCIPLES SCORECARD

SUMMARY:

Provided as Exhibit “A” is the IRWD Guiding Principles Scorecard through the fourth quarter of Fiscal Year (FY) 2021-22. This report reflects the critical performance measures that gauge the District’s key business objectives and is based on the Board-adopted Guiding Principles.

BACKGROUND:

Staff presented the IRWD Guiding Principles Scorecard to the Board on June 13, 2022 and has incorporated the Board’s comments.

IRWD’s Guiding Principles Scorecard is based on four Board-adopted Guiding Principles used to achieve its vision. These principles relate to; 1) Customer Service, 2) Resource Management, 3) Employee Development, and 4) Community Leadership. Within these four categories, staff has populated numbers reflecting operating performance, financial, customer and other key measures that provide an overview of the ongoing operations of IRWD. Staff has also included additional detailed information on certain selected key indicators.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

RECEIVE AND FILE.

LIST OF EXHIBITS:

Exhibit “A” – IRWD Guiding Principles Scorecard

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Exhibit "A"
IRVINE RANCH WATER DISTRICT
Guiding Principles Scorecard
 FYTD as of June 2022

Customer Service		
We are dedicated to delivering superior service to our customers.		
Measure	Last Year	This Year
Customer Satisfaction	95%	98%
Electronic Payments Received	85%	89%
Customer Contacts	74,411	64,621
Delinquent Customers on Payment Arrangements	83	181
Residential Customers within Water Budget	83%	79%
All Customers within Water Budget	77%	81%
Occupancy Certificates	2,348	2,830
Verified Odor Complaints	4	1
Verified Water Quality Complaints	7	9

Employee Development		
We are committed to recruiting and retaining top quality employees and to providing a workplace environment, training, and a recognition and reward system that enhances employee performance and satisfaction.		
Measure	Last Year	This Year
Participation in 457 Retirement Plan	89%	90%
Employee Retention	95%	91%
OSHA Days Away, Restricted, or Transferred per 100 employees	2.1	3.3
Cross Training Opportunities Utilized	0	4
Interns Employed	5	10
Recognition Awards Given	422	382

Community Leadership		
We will share our resources with the community through education, policy leadership and employee involvement.		
Measure	Last Year	This Year
Water Efficiency Website Hits (thousands)	75	57
Billing Website hits (thousands)	782	667
Social Media Impressions (thousands)	1,079	283
Outreach Events	20	50
Student Participation in Water Education Programs	6,835	2,567
Industry Awards and Honors	8	10
State Legislative & Regulatory Hours Spent	1,713	1,573

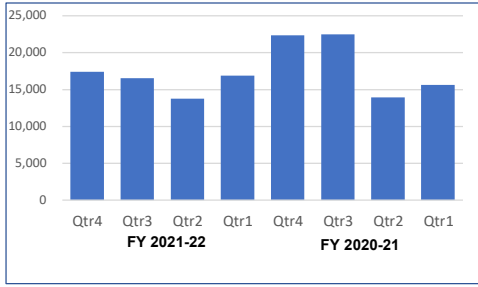


Resource Management		
We are dedicated to providing, conserving, and maximizing the efficient use and reuse of water and renewable resources to the benefit of our customers and to enhance the environment.		
Measure	Last Year	This Year
Planned Maintenance Work Completed	73%	71%
Potable Water Supply (AF)	57,979	59,765
Non-Potable Water Supply (AF)	37,244	35,263
Irvine Lake Storage (AF)	2,346	4,286
Recycled Water Storage (AF)	2,474	3,267
Sewage Treatment Cost per MG	\$3,865	\$3,771
Capital Spending vs Budget	85%	78%
AQMD Reported Incidents	13	26
Plant Incidents (NPDES)	2	2
Sewer Spills (Non-private)	6	4

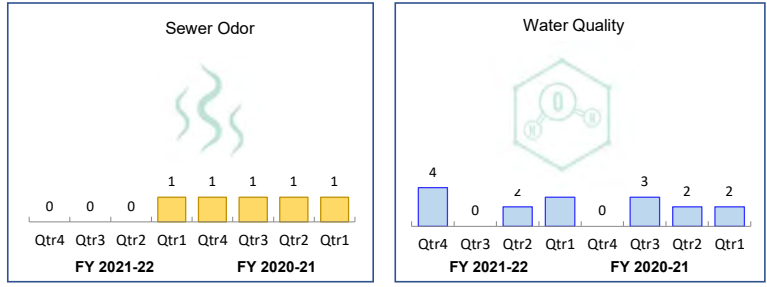
IRVINE RANCH WATER DISTRICT
Guiding Principles Closer Perspective
 FYTD as of June 2022

Customer Service

Customer Contacts



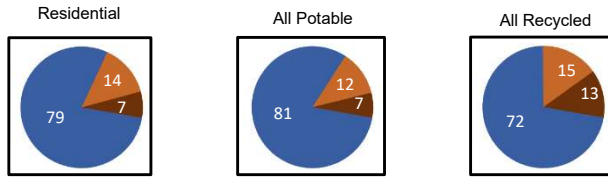
Verified Complaints



Certificates of Occupancy

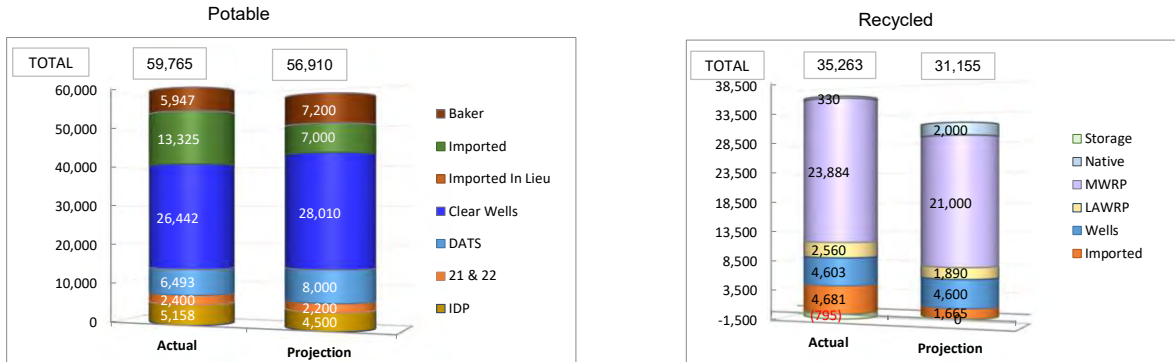


Percentage of Customers within Water Budget

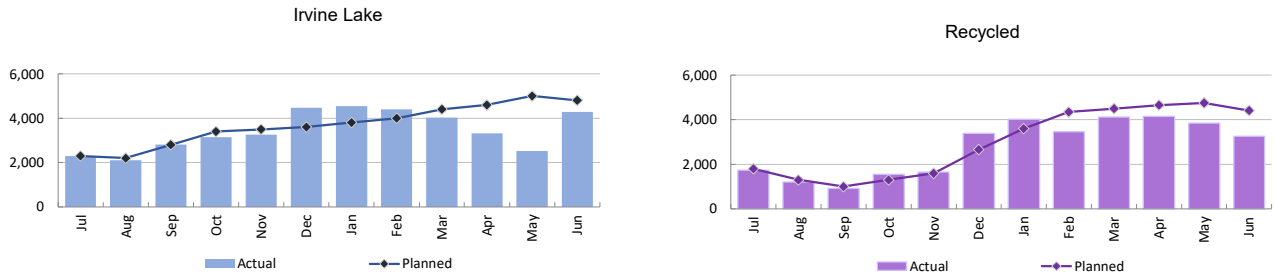


Resource Management

Water Supply (in Acre Feet)



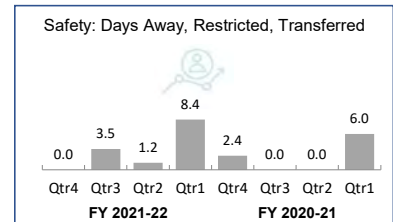
Reservoir Storage (in Acre Feet)



Regulatory Compliance

Category	Qtr4	Qtr3	Qtr2	Qtr1	Qtr4	Qtr3	Qtr2	Qtr1
AQMD	6	7	4	9	3	1	3	6
Plants	2	0	0	0	1	0	0	1
Sewer Spills	2	2	0	0	1	3	1	1


Employee Development



July 25, 2022

Prepared by: H. Cho / J. Moeder

Submitted by: K. Burton

Approved by: Paul A. Cook 

ACTION CALENDAR

FLEMING ZONE 8 RESERVOIR AND ZONE 8 TO 9 PUMP STATION BUDGET INCREASE, CONSULTANT SELECTION, AND CONSTRUCTION AWARD

SUMMARY:

The Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station project includes removal of the existing steel tank and pump station and replacement with a new prestressed concrete tank, pump station, reservoir management system, and related facilities. Staff recommends that the Board:

- Authorize the General Manager to execute a construction contract with Pacific Hydrotech Corporation in the amount of \$13,765,100 for the Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station project;
- Authorize the General Manager to execute a Professional Services Agreement in the amount of \$330,000 with Tetra Tech for engineering support services during construction; and
- Authorize a budget increase in the amount of \$7,739,000, from \$9,001,000 to \$16,740,000.

BACKGROUND:

IRWD provides potable water supply service to approximately 2,500 customers in the Santiago area located in an unincorporated region of Orange County. This area is east of the Eastern Transportation Corridor (SR-241), north of Lomas Ridge, and west of Portola Hills and includes four distinct sub-areas including Santiago Canyon, Silverado Canyon, Williams Canyon, and Modjeska Canyon. Each canyon area contains a system of domestic water tanks and pump stations that relies on the existing 150,000-gallon steel Fleming Zone 8 tank and the existing Zone 8 to 9 booster pump station as the main source of supply. The facilities are located near the intersection of Santiago Canyon Road and Black Star Canyon Road as shown in Exhibit "A".

In 2017, IRWD completed the Santiago Area Distribution System Analysis, which included the recommendation for additional storage in the Santiago Area. The study recommended increasing the storage capacity to 1.3 million gallons (MG) to meet the storage requirements for the area.

In December 2019, Tetra Tech was retained to design a new 1.3 MG storage tank, a reservoir management system building with sodium hypochlorite and ammonia storage and feed systems, replacement of the emergency generator, replacement of the existing pump station, and related facilities. The project also includes a new office space that can be used as an emergency operations center for emergencies in the canyon area, a new storage building for equipment and supplies specific to the canyon area, and various site electrical, telemetry, and control improvements. Tetra Tech completed the design in May 2022, and the project went out to construction bid.

Consultant Selection:

Tetra Tech performed all elements of the preliminary and final design for the project including geotechnical, civil, mechanical, structural, architectural, electrical, and instrumentation and control. Staff requested Tetra Tech to submit a proposal for construction phase engineering services, and Tetra Tech submitted a proposal in the amount of \$330,000. The proposal, which is provided as Exhibit “B”, includes scope for submittal reviews, responses to contractor requests for information, site visits, record drawing preparation, development of energy control procedures, and construction coordination and engineering support commensurate with the requirements of the project.

Staff reviewed the proposal and recommends the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$330,000 with Tetra Tech for the construction phase engineering services for the Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station project.

Construction Award:

The project was advertised for construction bidding to a select list of five reservoir contractors. The bid opening was held July 13, 2022 with bids received from Pacific Hydrotech Corporation, Gateway Pacific Contractors, Inc., and Kiewit Infrastructure West Co. Pacific Hydrotech Corporation is the apparent low bidder with a bid amount of \$13,765,100. Pacific Hydrotech Corporation’s bid information is attached as Exhibit “C”, and a summary of the three bids received is provided below:

Bidder	Bid Amount
Pacific Hydrotech Corporation	\$13,765,100
Gateway Pacific Contractors, Inc.	\$14,406,182
Kiewit Infrastructure West Co.	\$20,545,000
<i>Engineer’s Estimate</i>	<i>\$13,000,000</i>

Staff reviewed Pacific Hydrotech Corporation’s bid and has determined that it is responsive. Staff recommends the Board authorize the General Manager to award a construction contract to Pacific Hydrotech Corporation in the amount of \$13,765,100.

Material Sole Source:

Certain materials are routinely sole sourced on IRWD projects in order to match other products in use on a particular public improvement or in order to obtain a necessary item that is only available from one source. While most sole sourced items are individually under \$35,000 and only require a single bid per the District’s procurement policy, there are occasionally items that are of higher value. On this project, the following higher value items were sole-sourced:

- Motor Control Center, including Variable Frequency Drives, sourced to Allen Bradley and supplied by OneSource with an estimated value of \$230,000, and

- Aqueous Ammonia System sourced to Superior Water Technologies with an estimated value of \$46,000.

FISCAL IMPACTS:

The Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station, Project 10101, is included in the FY 2022-23 Capital Budget and is funded through 89.5% existing customers (Improvement District 1110) and 10.5% replacement funds (Improvement District 1100). A budget increase is required to fund the construction and engineering support services during construction for the project as shown in the table below.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10101	\$9,001,000	\$7,739,000	\$16,740,000

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration was filed with the County of Orange on June 14, 2021. Pursuant to State Guideline § 15073, the IS/MND was made available for public review for a period of 30 days from June 14, 2021, through July 13, 2021. The IS/MND was adopted by IRWD’s Board of Directors on September 13, 2021. A Notice of Determination was filed with the Orange County Clerk/Recorder and the CA State Clearinghouse on September 14, 2021.

COMMITTEE STATUS:

The consultant selection recommendation was reviewed by the Engineering and Operations Committee on June 21, 2022. Construction awards are not routinely taken to Committee prior to submittal to the Board.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE A BUDGET INCREASE IN THE AMOUNT OF \$7,739,000, FROM \$9,001,000 TO \$16,740,000; AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH TETRA TECH IN THE AMOUNT OF \$330,000 FOR ENGINEERING SUPPORT SERVICES DURING CONSTRUCTION; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH PACIFIC HYDROTECH CORPORATION IN THE AMOUNT OF \$13,765,100 FOR THE FLEMING ZONE 8 RESERVOIR AND ZONE 8 TO 9 PUMP STATION, PROJECT 10101.

Action Calendar: Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station Budget Increase,
Consultant Selection, and Construction Award

July 25, 2022

Page 4

LIST OF EXHIBITS:

Exhibit “A” – Location Map

Exhibit “B” – Tetra Tech Proposal for Engineering Support Services During Construction

Exhibit “C” – Bid Results

EXHIBIT "A"



LOCATION MAP - FLEMING RESERVOIR AND PUMP STATION

1 inch = 100 feet

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May 26, 2022

Transmitted via E-mail: *cho@irwd.com*

Mr. Harry Cho, P.E., Senior Engineer Dams & Storage
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

**Reference: Proposal to Provide Construction Support Services for the
1.3 MG Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station, Project No. 10101**

Dear Mr. Cho:

Tetra Tech has been working with the District on the 1.3 MG Fleming Zone 8 Reservoir and the Zone 8 to 9 Pump Station since December 2019. Tetra Tech has submitted the final signed plans and specifications. The District has requested Tetra Tech to provide construction support services for the project. By this correspondence, Tetra Tech is requesting approval of this proposal to provide construction support services for the 1.3 MG Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station project.

CONSTRUCTION SUPPORT SERVICES

The construction support services depend greatly on the Contractor's construction schedule, the adequacy of his submittals, and the amount of issues/conflicts that arise during the construction of the project. Tetra Tech does not control the amount of the submittals, RFIs or the issues that arise during the construction process. In addition, Tetra Tech does not control the adequacy of the submittals prepared by the Contractor or the level of additional information required by the Contractor. Based on the Contract Documents, the time for completion shall be within 730 calendar days (about 24 months) from the date of the Notice of Award.

In summary, Tetra Tech will perform these construction support services on a time and material basis while not exceeding the approved budget.

The following is a summary of the anticipated level of service for each task:

Task 1 – Project Management

Tetra Tech will include preparation of monthly invoices and invoice backup spreadsheets. We are assuming a duration of twenty-four (24) months.

Task 2 – Project Meetings

Tetra Tech will attend up to thirty (30) construction progress meetings of two (2) hours each during the construction duration.

Task 3 – Contractor's Request for Information (RFI)

Tetra Tech will respond up to eighty (80) Request for Information (RFI). We have assumed that ten (15) of these responses will require a corresponding sketch or exhibit.

Task 4 – Minor Plan Revisions

Tetra Tech will provide up to one hundred and fifty (150) hours of staff time for minor plan revisions to the construction drawings.

Tetra Tech, Inc.

17885 Von Karman Avenue, Suite 500, Irvine, CA 92614-6213
Tel 949.809.5000 Fax 949.809.5010 www.tetrattech.com

Task 5 – Site Visits

Tetra Tech will conduct up to twenty (20) site visits of two (2) hours each as needed during construction.

Task 6 – Shop Drawing Submittals

Tetra Tech will review and respond up to three hundred (300) shop drawing submittals, including resubmittals. Based on the plans and specifications, we have estimated up to 220 shop drawings submittals with 80 resubmittals.

Task 7 – Energy Control Procedures

Tetra Tech will prepare Energy Control Procedures (ECP’s) in accordance with California Occupational Safety and Health (Cal/OSHA) requirements for all equipment and operations that may store potential energy. Based on preliminary review, we anticipate more than 30 pieces of equipment will require preparation of ECP. Tetra Tech will include a budget of \$40,000 for preparing the ECP’s.

Task 8 – Record Drawings

Tetra Tech will prepare record drawings at the construction completion using Contractor’s and District Inspector’s red-lines. Tetra Tech will submit final record drawings including AutoCAD electronic files, and a single-color PDF electronic file of the entire signed plan set.

Task 9 – Additional Construction Coordination

Tetra Tech will provide additional construction coordination (labor/time spent in addition to responses to RFIs, review of submittals, and other task items listed above) and general engineering support to the District. This task will include: answering general IRWD/Contractor/County of Orange inquiries; coordination with IRWD, Contractor, County of Orange; coordination with and responding to inquiries from SCE, County of Orange, ATT, etc.; and general engineering support as requested by the District.

BUDGET

Tetra Tech will perform the above services on a Time and Material Basis and will provide status summaries to the District each month. The following is our requested budget for the Construction Support Services:

Task 1 – Project Management (24 months)	\$ 6,100
Task 2 – Project Meetings (30)	\$ 11,300
Task 3 – Contractor’s Request for Information (80/15)	\$ 36,200
Task 4 – Minor Plan Revisions (150 hours)	\$ 18,000
Task 5 – Site Visits (20)	\$ 7,900
Task 6 – Shop Drawing Submittals (220 & 80)	\$ 138,800
Task 7 – Energy Control Procedures	\$ 40,000
Task 8 – Record Drawings	\$ 21,700
Task 9 – Additional Construction Coordination	\$ 50,000
Hourly but Not-to-Exceed Budget	\$ 330,000

Mr. Harry Cho, P.E., Senior Engineer
May 26, 2022
Page 3

The following page provides our person-hour estimate per task for this work. We have also included our proposed Hourly Rate Schedule.

Tetra Tech is pleased to submit this proposal to provide the above scope of services for a not-to-exceed fee amount of **\$330,000**. It is our understanding that this work will be performed under a new Agreement for Professional Services including the corresponding new purchase order.

If you have any questions or require additional information, please do not hesitate to call.

Sincerely,



Mark Bush, P.E.
Vice President

P\200-09368-20001\ProjMgmt\Correspondence\Fleming Construction Support Services.doc

Attachments

Irvine Ranch Water District
 1.3 MG Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station
 Construction Phase Services
 Fee Proposal

Task Description							Fees		TOTALS
	Senior Project Manager	Project Engineer	Design Engineer	CADD	WP	Total Hours	Labor	Sub-Contractors Re-imbursables	
Construction Support Services									
Project Management (24 months)	20	0	0	0	0	20	\$6,100	\$0	\$6,100
Project Meetings (30)	10	50	0	0	0	60	\$11,300	\$0	\$11,300
Request for Information (80/15)	8	160	30	30	0	228	\$36,190	\$10	\$36,200
Minor Plan Revisions (150 hours)	0	10	16	124	0	150	\$17,990	\$10	\$18,000
Site Visits (20)	8	32	0	0	0	40	\$7,720	\$180	\$7,900
Shop Drawing Submittals (220/80)	30	480	300	90	8	908	\$138,660	\$140	\$138,800
Energy Control Procedures	30	90	112	0	12	244	\$40,000	\$0	\$40,000
Record Drawings	0	4	16	160	2	182	\$21,380	\$320	\$21,700
Additional Construction Coordination	30	172	70	18	10	300	\$49,900	\$100	\$50,000
Budget Request	136	998	544	422	32	2132	\$329,240	\$760	\$330,000
TOTAL	136	998	544	422	32	2132	\$329,240	\$760	\$330,000



2022

HOURLY CHARGE RATE AND EXPENSE REIMBURSEMENT SCHEDULE

Project Management

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

Engineers

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

Planners

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

Designers & Technicians

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

Health & Safety

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

Construction

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

General & Administrative

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

Information Technology

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

Project Accounting

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

Reimbursable In-House Costs:

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

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

*current GSA POV mileage rate subject to change

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

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EXHIBIT "C"

Bid Results

Bidder Details

Vendor Name Pacific Hydrotech Corp
Address 314 E 3rd Street
Perris, California 92507
United States
Respondee Jimmy Garibaldo
Respondee Title Estimator
Phone 951-943-8803
Email jimmy@pachydro.com
Vendor Type CADIR
License # 518355
CADIR 1000002987

Bid Detail

Bid Format Electronic
Submitted 07/13/2022 1:56 PM (PDT)
Delivery Method
Bid Responsive
Bid Status Submitted
Confirmation # 295840

Respondee Comment

Buyer Comment

Attachments

File Title	File Name	File Type
PHC-Fleming Reservoir and Pump Stations 8 and 9.pdf	PHC-Fleming Reservoir and Pump Stations 8 and 9.pdf	Bid Form

Subcontractors

Showing 11 Subcontractors

Name & Address	Desc	License Num	CADIR	Amount	Type
Allison Mechanical Inc. 1968 Essex Court Redlands, California 92373	HVAC	679866	1000002213	\$174,800.00	
CMC Rebar 5425 Industrial pkwy San Bernardino, California 92407	REBAR	778010	1000000298	\$458,411.00	CADIR
DN Tanks 351 Cypress Lane El Cajon, California 92020	TANK PRESTRESSING	1080890	1000820128	\$848,000.00	
Econo Fence Inc 5261 Pedley Rd Riverside, California 92509	FENCING	337734	1000001395	\$243,600.00	CADIR
Faith Electric LLC 1980 Orange Tree Lane, Suite#106 Redlands, California 92336	ELECTRICAL & INSTRUMENTATION	976648	PW-LR-100071104E	\$1,920,103.00	CADIR
Murphy Industrial Coatings, Inc. 2704 Gundry Ave Signal Hill, California 90755	PAINT AND COATINGS	310594	1000005885	\$149,000.00	
RCB and Sons, Inc. 11997 Magnolia Ave. Riverside, California 92503	LANDSCAPING	349815	1000006636	\$158,600.00	
Standard Demolition 1905 Lirio Ave Ventura, California 93004	DEMOLITION	1020712	1000047290	\$111,885.00	CADIR
Superior Paving Company Inc dba U 1880 N. Delilah St. Corona, California 92879	AC PAVING	865828	1000002563	\$162,250.00	
Sylvester Roofing Co. Inc. 2255 Barham Escondido, California 92029	ROOFING	516696	1000006357	\$99,875.00	
Vertical Horizon Scaffold, Inc 11316 N. Woodside Ave, #H Santee, California 92071	DECK SHORING	1002142	1000631058	\$129,500.00	

Line Items

Discount Terms No Discount

Item #	Item Code	Type	Item Description	UOM	QTY	Unit Price	Line Total	Response Comment
BASE BID ITEMS							\$13,761,500.00	
1			Furnish All Labor, Materials, Equipment, Services, and Appurtenant Work, Except for Items 2 through 10 Below, for the Construction of the 1.3 MG Fleming Zone 8 Reservoir and Zone 8 to 9 Pump Station Project	LS	1	\$12,640,500.00	\$12,640,500.00	Yes
2			Mobilization, Demobilization, and Cleanup (Not to Exceed 4% of Contract Price)	LS	1	\$520,000.00	\$520,000.00	Yes
3			Payment and Performance Bonds, and Insurance	LS	1	\$210,000.00	\$210,000.00	Yes
4			Earthwork Volumes: Cut	CY	3000	\$11.00	\$33,000.00	Yes
5			Earthwork Volumes: Fill excluding Structural Fill and Pervious Layer	CY	2200	\$37.00	\$81,400.00	Yes
6			Landscaping and Irrigation	LS	1	\$188,900.00	\$188,900.00	Yes
7			Erosion Control Measures	LS	1	\$45,200.00	\$45,200.00	Yes
8			Excavation Safety Measures	LS	1	\$18,000.00	\$18,000.00	Yes
9			Startup, Testing and Training	LS	1	\$9,500.00	\$9,500.00	Yes
10			Operation and Maintenance Manuals	LS	1	\$5,000.00	\$5,000.00	Yes
11			Prepare and Maintain Record Drawings	LS	1	\$10,000.00	\$10,000.00	Yes
ALTERNATIVE BID ITEMS							\$3,600.00	
12	A-1		(Optional) Dispose of Existing On-Site Generator	LS	1	\$3,600.00	\$3,600.00	Yes
ADDITIVE AND DEDUCTIVE BID ITEMS							\$0.00	
13			ADDITION (+) OR DEDUCTION (-)	LS	1	\$0.00	\$0.00	Yes


Line Item Subtotals

Section Title	Line Total
BASE BID ITEMS	\$13,761,500.00
ALTERNATIVE BID ITEMS	\$3,600.00
ADDITIVE AND DEDUCTIVE BID ITEMS	\$0.00
Grand Total	\$13,765,100.00

July 25, 2022

Prepared by: W. James / M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook 

ACTION CALENDAR

COASTAL ZONE 1-2 AND 2-4 PUMP STATIONS REHABILITATION CONSULTANT SELECTION

SUMMARY:

The Coastal Zone 1-2 (CZ1-2PS) and the 2-4 Pump Station (CZ2-4PS), which serve Coastal Zones 2 and 4 in Newport Coast, have seldomly been used since the completion of the Coastal Zone 4 Pump Station (CZ4PS). Due to this lack of use, CZ1-2PS and CZ2-4PS and have become inoperable. This project will rehabilitate CZ1-2PS and CZ2-4PS and return them to operational use as the secondary supply of drinking water to the Newport Coast. Staff recommends the Board authorize the General Manager to execute a Professional Services Agreement with GHD in the amount of \$446,243 for design engineering services for the Coastal Zone 1-2 and 2-4 Pump Stations Rehabilitation.

BACKGROUND:

CZ1-2PS and CZ2-4PS are below-grade drinking water pump stations located along Newport Coast Drive in Newport Beach; a location map is provided as Exhibit "A". The pump stations, both constructed in 1990, were designed with similar configurations. The CZ1-2PS is supplied by the interconnection with Metropolitan's Coast Supply Line near Pacific Coast Highway. CZ1-2PS discharges into the Coastal Zone 2 pipeline providing water to the Coastal Zone 2 Reservoir and service to Newport Coast properties located in Zone 2. Downstream of the Coastal Zone 2 Reservoir connection is CZ2-4PS, which discharges into the Zone 4 domestic water pipeline and supplies the Coastal Zone 4 reservoir and the Newport Coast properties located in Zone 4.

After the completion of CZ1-2PS and CZ2-4PS, the CZ4PS at OC-63 on Bonita Canyon Road near State Route 73 was constructed as a second source of supply to the area. This pump station subsequently became the primary feed to the Newport Coast since it was less expensive to deliver water to the area from this pump station. Since then, the CZ1-2PS and CZ2-4PS have not operated with any regularity and have become inoperable with obsolete componentry. This project will rehabilitate both CZ1-2PS and CZ2-4PS and return them to operational condition, providing a redundant water supply source to the Newport Coast. It is also a prerequisite project to the future project at the CZ4PS to replace that facility's electrical gear. The CZ1-2PS and CZ2-4PS will need to be in operation when CZ4PS is taken offline for maintenance activities or when it is operating with reduced capacity.

Consultant Selection:

On March 28, 2022, staff issued a request for proposal for design engineering services for the project to five consultants: David Evans, GHD, Stantec, Tetra Tech, and West Yost. Stantec withdrew after receiving the RFP due to a lack of staff availability. Proposals were received

from the remaining four consultants. Staff completed its evaluation of the proposals and found the following merits in GHD's proposal:

- GHD has a clear and thorough project understanding not only for the rehabilitation of the pump stations, but also understanding the coordination work required to acquire permits from Caltrans and the City of Newport Beach;
- For its technical approach, GHD identified critical issues that will need thoughtful consideration including pump flow configuration (average daily versus maximum day demands), air conditioning improvements for new electronics (e.g., motor control center, and equipment procurement and delivery that will affect the project schedule), and
- GHD has assembled a top tier project team composed of experienced local staff along with experienced subconsultants including N2W (Mechanical/Electrical), NMG Geotechnical and Traffic Control Engineering (David Kuan).

Based on these merits, staff recommends awarding a Professional Services Agreement to GHD in the amount of \$446,243. The consultant selection matrix and GHD's proposal are provided as Exhibits "B" and "C", respectively.

FISCAL IMPACTS:

Coastal Zone 1-2 and 2-4 Pump Stations Rehabilitation, Project 11912, is included in the Fiscal Year 2022-23 Capital Budget. The existing budget is sufficient to fund the project's design phase.

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, Sections 15301 and 15302. Section 15301 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. Section 15302 provides for the replacement of reconstruction of existing structures and facilities where the new structures will be located on the same site as the structure replaced.

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH GHD IN THE AMOUNT OF \$446,243 FOR DESIGN ENGINEERING SERVICES FOR THE COASTAL ZONE 1-2 AND 2-4 PUMP STATIONS REHABILITATION, PROJECT 11912.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Consultant Selection Matrix

Exhibit "C" – GHD Scope of Work and Fee Proposal

Note: This page is intentionally left blank.

EXHIBIT "A"



COASTAL SUPPLY LINE
INTERCONNECTION

COASTAL ZONE 1-2
PUMP STATION

COASTAL ZONE 2
RESERVOIR

COASTAL ZONE 2-4
PUMP STATION

PACIFIC COAST HIGHWAY

NEWPORT COAST DR.

NEWPORT COAST DR.



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EXHIBIT "B"
Coastal Zone 1-2 and 2-4 Pump Station Rehab
Project 11912
Consultant Selection Matrix

	Weights	David Evans		GHD		Tetra Tech		West Yost	
TECHNICAL APPROACH									
*Project Understanding	30%	4		1		2		3	
*Project Approach	30%	3		2		1		4	
*Project Team	20%	4		1		3		2	
*Man Hour Estimates	20%	3		1		2		4	
Forced Ranking System: 1- Best, 2- Second Best, etc.									
Weighted Score		3.50		1.30		1.90		3.30	
CONSULTANT RANKING		4		1		2		3	
PROJECT TEAM									
Project Manager		S.Kamangar, 25		Ulysses Fandino, 20		Tom Epperson, 41		Robert Reid, 33	
Project Engineer		Kathleen Hong, 7		Chris Bartleman, 18		L.Esguerra, 19		Jeff Wanlass, 20	
QC/QA		Rod Langer, 32		Bill Roberts, 27		Not Listed		Tim Banyai, 28	
Process-Mechanical Design		Andi Seidel, 20		James Wang, 24		Matt Vera, 8		Tyler Newman, 6	
Electrical		O. Fernandez, 40		Mehdi Mardi, 27		Mazen Kassar, 29		Michael Rizza, 26	
Structural		Alison Wyatt, 16				Eric Yuen, 15		Joe Wendt, 8	
Traffic Control		TCE		TCE		Peter Kim		TCE	
Geotech		Aesco		NMG		Leighton Consulting		Converse	
Surveying		Robert Vasquez		Calvada		Metz Surveying		Borchard	
Potholing		C Below		USI		C Below		TC Mueller	
Corrosion		Corrpro		Jeff Knauer		V&A		V&A	
PLAN SET SHEET COUNT			Sheets		Sheets		Sheets		Sheets
General			3		5		7		3
Civil /Mechanical/Structural			15		24		23		20
Electrical/Instrumentation			17		28		23		21
Traffic Control			8		10		7		10
TOTAL SHEETS			43		67		60		54
FEE / HOURS		Fee	Hours	Fee	Hours	Fee	Hours	Fee	Hours
Task 1 - Project Management		\$27,020	116	\$24,328	107	\$33,600	130	\$41,639	128*
Task 2 - Preliminary Design		\$88,212	522	\$112,978	331	\$128,799	503	\$171,075	343*
Task 3 - Final Design		\$162,964	870	\$308,937	1460	\$297,601	1817	\$249,698	624*
* Subconsultant hours not included with proposal.									
TOTAL FEE and HOURS		\$278,196	1,508	\$446,243	1,898	\$460,000	2,450	\$462,412	1,095*
Unit Prices									
	\$/dwg	\$6,470		\$6,660		\$7,667		\$8,563	
	\$/hour	\$184		\$235		\$188		\$422	
Professional Liability Insurance		Yes		Yes		Yes		Yes	
General Liability Insurance		Yes		Yes		Yes		Yes	

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EXHIBIT "C"

Proposal for Engineering Design
Services

Coastal Zone 1-2 and Zone 2-4 Pump Station Rehabilitation

RFP No. PR 11912

Irvine Ranch Water District

May 3, 2022

→ The Power of Commitment



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May 3, 2022

GHD Proposal Number: 12578506
GHD DIR Number: 1000018754

Malcolm Cortez, PE
Irvine Ranch Water District
3512 Michelson Drive
Irvine, CA 92612

**Re: Engineering Design Services for the Coastal Zone 1-2 and Zone 2-4 Pump Station Rehabilitation Project
(RFP No PR 11912)**

Dear Mr. Cortez and Members of the Selection Panel:

GHD submits this proposal to the Irvine Ranch Water District (IRWD) to provide engineering design services for the various improvements at the Coastal Zone 1-2 and 2-4 Pump Stations located in the Newport Coast area of the City of Newport Beach.

We understand the many facets of this Project and have assembled a strong team and approach that will meet your project objectives including a dedicated and experienced local project team with proven track records of successes in similar settings to address the challenges and aspects of this Project.

Strong project management helps in determining success of a project. The GHD Team will be led by Project Manager, Ulysses Fandino, PE, who will be the primary contact person for our firm and will be fully committed to helping ensure the success of the project. Ulysses is an experienced project and design manager with over 20 years of applicable professional experience and strong project delivery success. He has an aptitude for bringing together teams of diverse expertise to deliver cost-effective rehabilitation and design options, and to work collaboratively with personnel to understand their needs and incorporate their vital, hands-on knowledge. In addition, Ulysses is very familiar working with IRWD, the City of Newport Beach, and Caltrans since he led the delivery of the Newport Coast Lift Station (NCLS) Rehabilitation Project along Newport Coast Drive and also for a recent Orange County Sanitation District sewer rehabilitation project within Pacific Coast Highway.

Technical expertise in all facets of pump station rehabilitation. Working closely with Ulysses is our Principal-in-Charge, Greg Watanabe, PE, key Mechanical Lead, James Wang, PE (N2W), and key Electrical Lead, Mehdi Mardi, PE, who combined have over five decades in delivering numerous successful pump station projects throughout Southern California with innovative and cost-effective solutions. Greg, James, and Mehdi will leverage their unique technical expertise from dozens of pump station design and rehabilitation as an active participant in the delivery of this project.

In addition, the GHD Team brings IRWD licensed, accredited, and specialized engineers experienced in Condition Assessment, Geotechnical, Traffic Control, Cost Estimating, Risk Management, Operation and Maintenance, and 3D Model Renderings that will be directly applicable for this project.

Collaboration-Innovation-Sustainability. GHD's approach to addressing the project issues includes early collaboration and buy-in from IRWD. This will be accomplished through workshop settings to review operation and maintenance approaches to the pump stations; see first-hand the options for layouts and configurations; determine the feasibility of rehabilitating the switchgears, and to discuss construction options for the new surge tank. In these workshops, GHD's engineers will demonstrate the options available through the use of:

- 3D renderings, showing before and after options
- Aerial images to simulate the impact(s), if any, on the surrounding neighborhood,
- Sustainable and constructible features, and
- Manufacturer cut sheets.

The right team for the project. GHD believes that we are the right team for IRWD to successfully complete the Coastal Zone 1-2 and 2-4 Pump Station Rehabilitation. We are excited about the opportunity to work with IRWD on this project. Our strong, local presence, committed and exceptionally qualified project management and technical team, paired with our collaborative approach enables our team to provide incomparable project delivery. Our team is fully dedicated to delivering technically sound and cost-effective solutions focused on the rehabilitation of the Coastal Zone 1-2 and 2-4 Pump Stations.

We appreciate your consideration of our proposal. We welcome the opportunity to serving you on this project and hearing from you regarding the selection process. If you have any questions, please do not hesitate to contact Ulysses at 949-585-5203 or Ulysses.Fandino@ghd.com.

The below undersigned, have the authorization to bind GHD to this proposal and acknowledges that we have read and understand the RFP.

Regards,



Greg Watanabe, PE
Principal-in-Charge
562.206.7979
Greg.Watanabe@ghd.com



Ulysses Fandino, PE
Project Manager
949.585.5203
Ulysses.Fandino@ghd.com

A. Scope

Our mission is to help you lead through innovation and collaboration with sustainability of operations as the project outcome. The GHD team will collaborate with IRWD and spend time developing potential innovations.

Herein provides the GHD Team's detailed project understanding, project approach, scope of work and methodology that comprehensively define and describe the individual tasks for the project. This scope of work will be used as a basis for later contract negotiations. The scope of work is based upon, but not limited to, the information contained in Section II of the RFP.

GHD has also developed and included a comprehensive list of drawings in this section. Our drawing list includes the estimate sheet number, drawing number, and drawing title.

Background

The Coastal Zone (CZ) 1-2 and 2-4 Pump Stations are below-grade domestic water (DW) pump stations located along the east side of Newport Coast Drive in the City of Newport Beach. The stations supply Coastal Zones 2 and 4. Both pump stations were designed with similar configurations and were constructed in 1990. The pump stations use vertical turbine pumps. Hydraulic actuated ball valves are provided downstream of each pump for flow control purposes. The electrical cabinets for both stations are located below-grade next to the pumps and contain the motor starters and control cabinets. The switchgears are located outside each pump station along the sidewalk. The switchgear for the Coastal Zone 2-4 Pump Station is located across the street from the vault.

The purpose of the CZ 1-2 and 2-4 Pump Stations Rehabilitation Project is to rehabilitate both CZ 1-2 and CZ 2-4 so that they may be brought back into service. Prior to the development of the RFP, a surge and hydraulic model analysis were performed for the system. The surge analysis concluded that a sudden loss of power to CZ 2-4 will result in vapor pressure conditions and possible vapor cavity formation in parts of the distribution system. To prevent this from occurring, a minimum 1,000-gallon pressurized surge tank is required on the discharge side of the pump station. The hydraulic model analysis concluded that the existing CZ 1-2 and 2-4 pumps may be replaced in-kind to meet IRWD's planned operational strategy of operating both the Coastal Zone 4 Pump Station and the CZ 1-2 and 2-4 in unison.

Shortly after the completion of CZ 1-2 and CZ 2-4 Pump Stations, the Coastal Zone 4 Pump Station at OC-63, on Bonita Canyon Drive, was constructed as a second source of supply to the area. This pump station, located in the City of Irvine on the east side of Bonita Canyon Drive north of the State Route 73, is the primary feed to the Newport Coast area. Because it is less expensive to deliver water to Newport Coast from Irvine, the CZ 1-2 and CZ 2-4 pump stations have not been used that often and have become inoperable with many obsolete components.

The pressure relief system installed for CZ 2-4 in 2018 is in great condition and does not require replacement. This system will need to remain in service during construction. Power is fed to this vault from electrical gear within the CZ 2-4 pump station.

Our Team Understands the Scope of Work

As illustrated in these site photos, the existing pumps, electrical, and instrumentation equipment are required for complete replacement.

The GHD team brings proven pump station expertise and experience to make the project a success.



Figure 1: Existing pumps, electrical, and instrumentation at the CZ 2-4 lift station

Project Understanding

The following summarizes our understanding of the CZ 1-2 and CZ 2-4 scope of improvements based on the RFP, Question and Answer (Q&A) Comment Log, pre-proposal site meeting at CZ 2-4 pump station, and associated exhibits with the RFP that included record drawings, pump and motor shop drawings and photos, condition assessment report with photos, surge analysis report, hydraulic model analysis, and geotechnical reports:

- All pumps, valves, and ventilation equipment will require replacement.
- The hydraulic actuated ball valves will be replaced with check valves.
- The piping does not need to be replaced; however, all exposed piping will require re-coating.
- A new surge tank will be constructed adjacent to CZ 2-4. Location of the surge tank will be determined during the preliminary design phase.
- All electrical and instrumentation components for the pump stations will be replaced. These components include the switchboards (i.e., all electrical gear and enclosures), programmable logic controllers (PLCs), motor control centers (MCCs), lighting, flow meters, pressure transmitters, pressure switches, and level switches.
- A temporary power system for the CZ 2-4 pressure relief system will be included in the design so that the system may remain in service during the replacement of the pump station electrical equipment.
- All new equipment and controls will be integrated into IRWD's SCADA system. IRWD will contract directly with a third-party SCADA programmer for PLC programming.
- A condition assessment of the interior surface of the pump cans will be performed.
- Constructing the surge tank underground to CZ 2-4 will require an encroachment permit from the City of Newport Beach.
- If the slope down the canyon is affected, an encroachment permit will be required from the County of Orange Public Works Department, who owns the sloped land.
- Environmental permitting is required if any endangered species and/or biological habitat are impacted during construction.



Project Approach

The GHD team brings the unique combination of knowing what needs to be done, where to look for the needed information, and how to configure contract documents to limit risk, minimize problems and maximize potential for success.

Key to the pump station rehabilitation is a thorough evaluation of critical issues and solutions of the facilities to be replaced/upgraded. Based on the team's past and current designs of other pump stations, we have identified various critical issues and solutions for IRWD's consideration in [Table 1](#) below.

Table 1: Critical Issues and Solutions

Issue	Solution
1 Surge and Transient	<ul style="list-style-type: none"> ✓ Pump selection and operation (VFD versus soft starter) ✓ Check valve selection (oil dashpot or air cushion) ✓ Sequence of operation (staging pump on and off) ✓ Existing pipeline condition assessment and pressure rating
2 System Redundancy	<ul style="list-style-type: none"> ✓ Pump flow configuration (ADD versus MDD) ✓ Standard operation procedure ✓ Standard maintenance procedure
3 HVAC	<ul style="list-style-type: none"> ✓ Separate AC unit mounted to the MCC and control panel to protect electronics ✓ Air-conditioned versus ventilated pump station
4 Accelerated Schedule	<ul style="list-style-type: none"> ✓ Equipment pre-selection/procurement ✓ Early start on permitting and coordination with various agencies ✓ Contractor pre-screening
5 Reduced Construction Cost	<ul style="list-style-type: none"> ✓ Performance based Equipment pre-selection/procurement ✓ High quality bid set and engineering specification ✓ Pre-screening contractor and secure bids ✓ Construction cost and cash flow projection ✓ Value engineering
6 Project Delivery/Risks	<ul style="list-style-type: none"> ✓ Contractor prequalification ✓ Close coordination with agency for permits ✓ Detailed design and construction scheduling ✓ Alternative delivery
7 Electronic-Operation and Maintenance Manual (Optional)	<ul style="list-style-type: none"> ✓ Platform with digitized document ✓ CMMS (predictive, preventive, and corrective maintenance)
8 3D laser scan (Optional)	<ul style="list-style-type: none"> ✓ Laser Scan existing pump station ✓ Building process mechanical/structural/electrical depicted in 3D ✓ Record drawing using 3D ✓ EOM using 3D

System Hydraulics and Pump Configuration Selection

GHD and our subconsultant, N2W Engineering (N2W), will evaluate the existing pump operation based on historical records and frequency of start/stop of the pumps. Based on the result of our evaluation, we will investigate different pump flow configurations in comparison to frequency of pump start/stop as well as average and maximum day demand and the capacity of existing pump barrel and discharge. We will review previous hydraulic information on the mainline in various operating scenarios and tank water level to develop a system curve and single and multiple pump operation curves with variable frequency drive in comparison to single speed; for system flow coverage as well pump start/stop to accommodate the system flow demand or pressure change. This curve will then serve as the basis for evaluating various pump flow options and determine the use of variable frequency drive versus soft starter.

Design parameters: The best efficiency point (BEP), operational complexity and robustness, demonstrated success, and capital, operation, and maintenance costs are the main design parameters to evaluate for the selection of the replacement pumps at the CZ 1-2 and 2-4 pump stations. All these factors will be considered in our evaluation to determine pump selection and the configuration that will yield the most benefit to IRWD.

Pump Selection: The pump selection will be performed with a system curve for the pump stations. The associated reservoir water levels and various pipe roughness coefficients (80-140) for current and future operations will be plotted to generate the system curve. Once the system curve is set, N2W will select the correct pump and the pump curve will be plotted along with pump efficiency at different flow and head. N2W will evaluate the overall pump efficiency at different pumping scenarios and variable speed operation along with the full flow range (i.e., not just a single point close to the best efficiency point). The capital and operation cost of the selected pumping system will be analyzed for life cycle analysis, system robustness, and ease of operation for the final selection of pump and drive.



Process Selection Criteria and Rankings

The GHD team proposes to use a “paired comparison” process selection tool that can systematically rank alternatives available for any project.

Selection Criteria: Capital and O&M costs and performance of the pump alternatives are the main criteria in evaluating the options such as variable frequency drive versus soft starter and hydropneumatic tank versus bladder tank for CZ 2-4 pump station. However, there are other factors that may affect the District’s decision on the final selection including:

- Process robustness (sensitivity to critical parameter, ability to handle ADD and MDD, ability to expansion, etc.)
- Operability and flexibility (system startup/shutdown, flow range coverage, efficiency, ease of maintenance, and operation, etc.)
- Capital cost (pump, valve, electrical drive and panels, pre-cast versus cast in place for surge tank vault etc.)
- System footprint (pump size, drive size, vault size, etc.)
- Operation and maintenance cost (electricity cost, system replacement, HVAC, etc.)
- Environmental impact (drive noise, compressor noise, etc.)
- Constructability (design and construction schedule, flexibility, system tie-in, etc.)

Ranking alternatives: The GHD team proposes to use a “paired comparison” process selection tool that can systematically rank alternatives available for any project. This tool can be utilized throughout the project, and this approach is particularly beneficial in making group decisions when a number of decision makers are involved.

The benefit of this approach is documentation and justification of key decision making that is defensible to be presented to any group within and outside the District if needed.

Grouping criteria: Since there are many potential criteria that affect pump and drive selection, our team has consolidated them into several groups. Figure 2 summarizes these groups with individual criteria and descriptions within each group. The process selection criteria can be adjusted by the District as needed.

Analysis Using the Paired Comparison Tool: After developing the process selection criteria groups, with the District’s input we will perform the paired comparison process selection tool. During this analysis, one criterion is judged to be more important than, less important than, or of equal importance to another criterion. **Comparing only two criteria at one time simplifies the evaluation and minimizes ambiguity in the weighting process.**

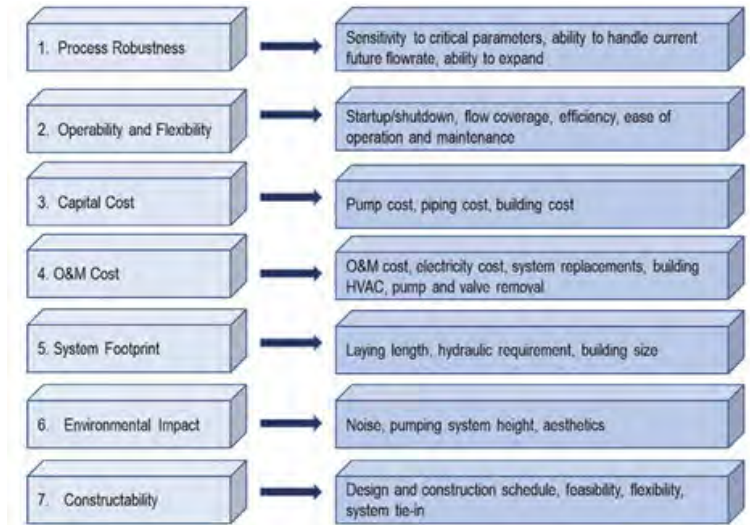


Figure 2: Consolidated Process Selection Criteria Groups

For example, criterion A (Process Robustness) is compared with criterion B (Operation and Flexibility), and if B is more important than A, then B is listed under the weighting table. Sometimes, it may be difficult to choose between the two criteria being evaluated. For that case, both can be listed in the table (e.g., A/B). A mathematical formula is then used to convert the paired comparison selections to a relative weight factor for each criterion rather than randomly assigning values. Figure 3 shows a comparison analysis and the relative weights of the criterion that our team has developed for this project. The example is presented here only to illustrate the capability and benefit of what a systematic approach tool can provide for the evaluation and selection.

Selecting the alternative: Each alternative is assigned an absolute score of 1 to 5 per criterion. These scores are multiplied by the relative weight of a given criterion and then summed for each process. Based on the total scores, the alternative with the highest summation will be recommended as the selected option for detailed design.

Once the District and GHD develop the alternatives recommended for the pump station, we will develop the paired comparison analysis together and determine the best option to meet the District’s goals.

Criteria	Priority							Weight
	A	B	C	D	E	F	G	
Process Robustness		A	A	A	A	A	A	29%
Operability and Flexibility			B	D	E	B	G	10%
Capital Cost				D	C	C	G	10%
Operation and Maintenance Cost					D	D	D	24%
System Footprint						E	E	14%
Environmental Impact							G	0%
Constructability								14%

Figure 3: Proposed process selection criteria paired comparison chart

Surge Tank Design and Siting

GHD fully understands the new surge tank is a top priority for the District, and we encourage the District Engineering and Operations staff's early involvement and discussion on the surge tank design and implementation.

Surge Tank Location: The new surge tank from the CZ 2-4 pump station would be constructed on the discharge side of the pump station which ideally is immediately north of the pump station. Upon the GHD team's further review of the record drawings and investigation of the existing conditions at CZ 2-4 pump station, **we have determined a more ideal location of the surge tank would be immediately south of the pump station and beneath the landscaped parkway along Newport Coast Drive.** We envision the new surge tank to be comprised of two identical 500 gallon vertical bladder tanks connected side-by-side within a concrete vault directly below grade beneath the parkway with access stairs under a hatch similar to the CZ 2-4 pump station. The existing 90-degree elbow on the discharge pipeline from Pump #1 will be replaced with a Tee to make the connection to the two bladder tanks.

The parallel alignments of the District's existing 24-inch water supply pipeline and 20-inch recycled waterline within Newport Coast Drive would be impacted if the surge tank vault is constructed in the street. **Constructing the vault in the parkway provides better access for operations and maintenance staff who can work more safely outside the travel lanes and minimize lane closures that will impact the vehicles traveling on Newport Coast Drive.** The vault within the parkway still avoids impact to the slope down the canyon on the backside of the sidewalk, as well as potential environmental concerns to any protected habitat and plants along the slope. We will investigate any potential cost and/or schedule savings for the vault using a pre-cast system.

Our vision of the dual surge tanks and configuration within the vault that will be constructed below grade are further shown in the 3D renderings presented in [Figure 4](#).

Three Benefits of a Vertical Surge Tank



- **Significantly lowers operation, maintenance, and long-term costs** by eliminating the requirement of extra mechanical equipment such as the air compressor for the horizontal pneumatic surge tank
- **Eliminates corrosion of the steel exterior** of the surge tank when compared to directly burying the tank within the soil which is frequently irrigated for the existing parkway landscaping
- The existing aesthetics along Newport Coast Drive is **not disturbed**

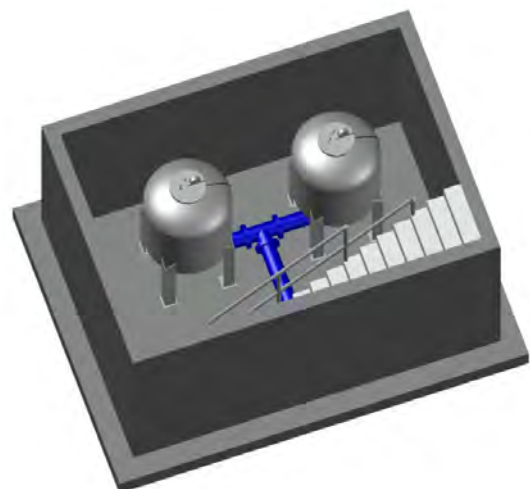
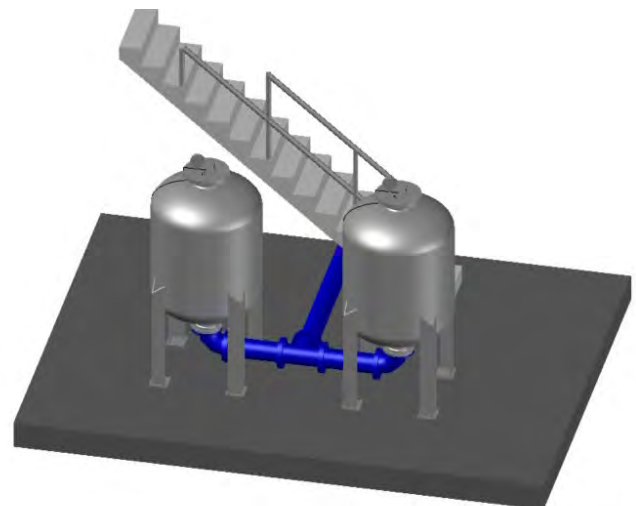


Figure 4: New Surge Tank 3D Renderings

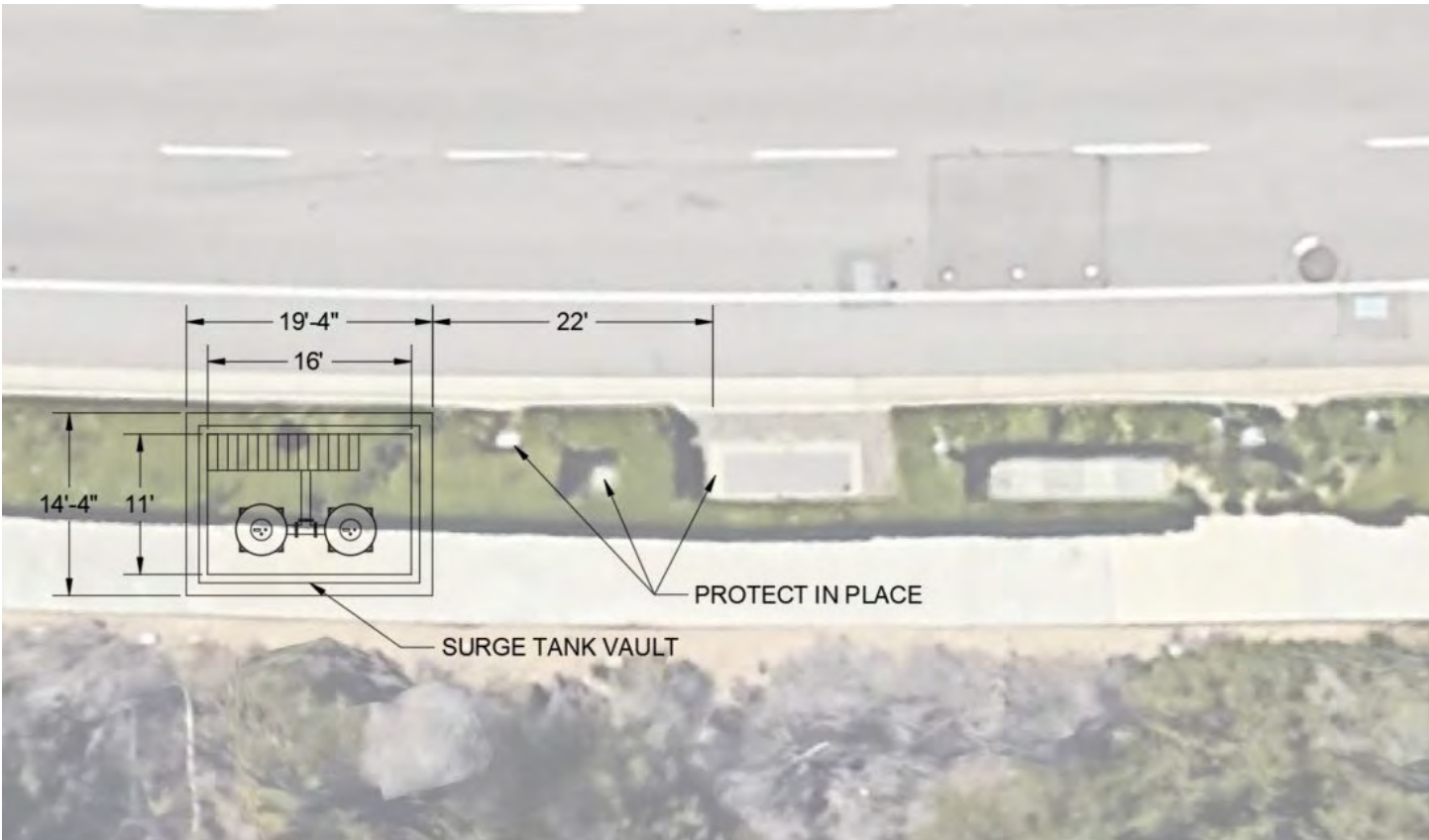
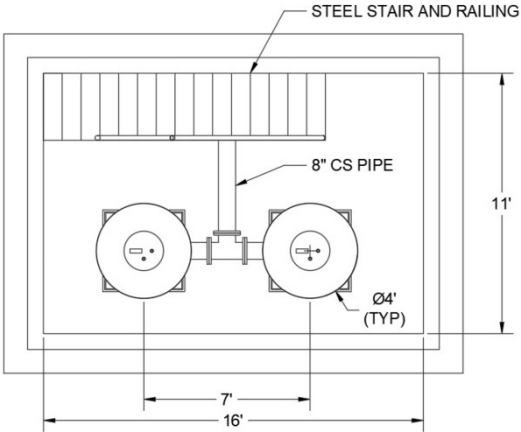
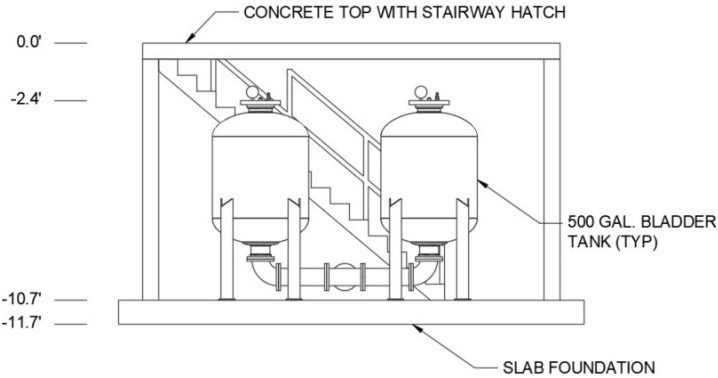


Figure 5: Above: Layout map showing proposed area where new surge tank vault would be. Left: 2D image of the proposed bladder tank



Electrical and Instrumentation

The GHD team has preliminarily reviewed the existing electrical system at each pump station with consideration of associated operation efficiency, flexibility, redundancy, and code compliance. At a minimum, the following will be performed for the electrical and instrumentation replacements:

- Provide detailed control logic via flow diagrams in addition to our Electrical and P&ID drawings and technical specifications.
- Prepare a Sequence of Operation to tie together the control logic diagrams and help minimize any programming by IRWD operations staff.
- Prepare a Pre-Commissioning Plan at the design phase.
 - To determine issues with start-up of the pumps, operating equipment, electrical system and control system, and verify the pump station will operate as desired.
- Replace the existing MCCs, PLCs, switchgears, and enclosures on the same pad as the existing.
 - An electrical system study for load, short circuit, and ArcFlash will be performed for the new system.
- Remove and replace the existing propeller flow meter at the CZ 1-2 pump station meter vault with a newer technology insertion type e-flow meter on the pressure reducing valve located inside the CZ 1-2 PRV vault.
 - The e-flow meter eliminates the need for a typical separate in-line meter and the significantly larger construction costs of the in-line meter.
 - The pressure relief system and equipment installed for the CZ 2-4 pump station PRV in 2018, including the flow transmitter, is in great condition and does not require replacement per the condition assessment report in the RFP.
- Provide a new power hookup that will allow for a temporary backup generator to be connected and keep the pump station operating in the event of a power outage from the main power source.

- Provide temporary power to the existing pressure relief system within the PRV vault for the CZ 2-4 pump station so that the pressure relief system can remain in service during construction.
 - A new PLC panel and DC batteries will be installed inside the existing PRV vault. We anticipate reusing the existing wires and parts from the existing PLC panel inside the pump station for the new PLC panel.

Within this effort, GHD's in-house electrical engineers will work with IRWD staff to establish suction and discharge pressure measurement and set points, pump start and stop, pump speed set point (min and max if equipped with VFD), high pressure alarms, flow measurement, gas detection and alarms, local pump controls, local lockout/stop safety features, etc.



An Example of Successful Collaboration with IRWD

GHD successfully provided engineering services to address IRWD's desire to rehabilitate and upgrade their existing 500-GPM Newport Coast Lift Station along Newport Coast Drive in the City of Newport Beach. GHD prepared preliminary design alternatives, a comprehensive PDR documenting the design approach for the various improvements, and the submittal of 50%, 90%, 100%, and Final Design construction plans, technical specifications, Project Manual, a construction cost estimate, and a construction schedule for the proposed work. Our work included geotechnical, traffic control, surveying, and potholing; And we addressed the following lift station improvements: new Concrete Masonry Unity (CMU) block electrical building and stairwell, new MCC, PLC, lighting, and instrumentation modifications, dry well piping modifications, new flow and pressure monitoring devices on the dry well piping, dry well ventilation replacement, new ventilation for electrical building and stairwell, wet well lining rehabilitation, and 12-inch ductile iron force main rehabilitation. A comprehensive bypass pumping plan was also developed involving levels of redundancy, overflow piping back to the wet well, telemetry monitoring, and emergency response measures.



Geotechnical

Our geotechnical subconsultant, NMG Geotechnical (NMG), brings considerable knowledge and project experience of the overall geological conditions at the pump station sites, throughout the Newport Coast area, and with similar IRWD projects. They have direct knowledge of the project site conditions near the CZ 2-4 pump station. NMG's principal geologist, Terri Wright, was the primary author for the geotechnical report of Coastal 2 and 4 Reservoirs.

The subject pump station site lies in the northwest San Joaquin Hills, adjacent to the coastline. This roadway was graded (as Pelican Hill Road) between 1989 and 1990 and was the first major roadway at Newport Coast. The adjacent golf course and resorts followed in the 1990s through the 2000s.

CZ 1-2 Pump Station: The grading plan for Newport Coast Drive indicates the CZ 1-2 pump station is in a shallow cut area near roadway Station 13+00. A nearby boring drilled in 1988 encountered approximately 14 feet of marine terrace deposits overlying bedrock of the Monterey Formation. The terrace deposits consist of brown to light reddish-brown clayey and silty sand that is generally massive. The bedrock consists of thinly bedded olive gray to light gray, diatomaceous, clayey siltstone with interbedded sandstone and shale. The terrace bedrock contact is near a 147-foot elevation above mean sea level and this pump station is founded in the bedrock.

CZ 2-4 Pump Station: The CZ 2-4 pump station is located to the east of Newport Coast Drive Station 59+50 in a deep fill area. A large landslide was mapped at this location and during grading, a large buttress was constructed (210 feet wide, by 40 feet deep/below the rupture surface). This key construction resulted in nearly complete removal of the landslide materials under the roadway and resulted in 60 to 70 feet of compacted fill under the pump station. The fill consists of a mixture of sandy marine terrace deposits with siltstone and sandstone, and is underlain by bedrock of the Monterey Formation. The 2H:1V fill slope below this site is approximately 80 feet high and covered with thick coastal sage scrub vegetation.

Based on NMG's intimate knowledge of the project sites, which includes the time when Newport Coast Drive was previously constructed and originally named Pelican Hill Road, ***we do not anticipate the stability of the slope down the canyon behind CZ 2-4 pump station will be affected by the excavation of the new surge tank.*** The excavation will be properly shored to maintain the integrity of the existing surface and protection of the slope down the canyon.

Deliverables: *NMG will develop a geologic model for the area and the CZ 2-4 pump station for the 50% submittal. Geologic cross-sections will be prepared to depict the geologic conditions.*

Pump Cans Condition Assessment

A hallmark of many issues at pump stations is corrosion and coating and pump operation. GHD's in-house corrosion experts are second to none in corrosion science and engineering, and will provide IRWD with superior expertise in corrosion assessment and control, coatings, and materials science.

We will provide solutions for coatings, corrosion, and rehabilitation that address the challenges of the water environment specifically on the existing pump cans (1/4" wall thickness welded steel pipe barrel) that have epoxy lining and coating.

GHD's corrosion engineer's efforts will address the key impacts on the existing coatings and materials, and will provide the right recommendations for repairs, such as a splitter or basket strainer for the pump suction, and pump can preparation for fusion bond epoxy so that the rehabilitations are durable and low maintenance.

The small diameters of the steel pump cans (20-inches) may prove difficult for traditional man-entry for condition assessment. GHD's corrosion engineers may employ using a push-type camera system readily available in the industry in order to assess the interior surface of the pump cans.

Safety is a top priority. Prior to conducting the condition assessment, GHD will implement a safety and health plan during the engineering services such as a Job Hazard Analysis, Confined Space Entry, etc. Maintaining a safe and healthy environment at work when operating effectively, and working together to minimize risk, will significantly reduce the number of incidents in the workplace.

City of Newport Beach Permitting

The GHD Team is intimately familiar and experienced with the City of Newport Beach staff, traffic control, and permitting requirements for street closures within City of Newport Beach and Caltrans right-of-way through our previous IRWD project for the Newport Coast Lift Station Rehabilitation and most recently for a current Orange County Sanitation District project located within Pacific Coast Highway within the City Newport Beach.

The City of Newport Beach and Caltrans have a close relationship with permitting temporary traffic lane closures affecting Pacific Coast Highway within the City of Newport Beach. The most efficient approach is to meet with the City of Newport Beach regarding the temporary lane closures and obtain the City's permit first. With the City's permit in hand, the encroachment permit review from Caltrans is decreased from their traditional timeframe of 3 months review to approximately 4-6 weeks of review and approval.

For this project, GHD anticipates multiple permits through the City of Newport Beach and Caltrans during the preliminary design, final design, and construction phases of work defined as follows:

Preliminary Design Phase

IRWD's contractor (SS Mechanical) will be responsible for removing the existing pumps from the CZ 1-2 and 2-4 pump stations. The removal of the existing pumps at both pump stations will require a Temporary Street Use Permit and the supporting traffic control plans for temporary lane and

sidewalk closures to be reviewed and approved by the City of Newport Beach. With the proximity of the CZ 1-2 Pump Station near Pacific Coast Highway, an encroachment permit from Caltrans will also be required due to the impact of the Pacific Coast Highway turning lanes onto Newport Coast Drive. We will demonstrate to City of Newport Beach and Caltrans that the lane closures at CZ 1-2 pump station and Pacific Coast Highway will only take two working days since SS Mechanical will only need this timeframe to remove the pumps at CZ 1-2 pump station. SS Mechanical only needs another 2 working days at CZ 2-4 pump station.

Final Design Phase

Similarly, the soil borings for the geotechnical investigation along Newport Coast Drive at CZ 2-4 pump station and the potholing of existing utilities within the same vicinity of Newport Coast Drive will require a Temporary Street Use Permit and the supporting traffic control plans for approval by the City of Newport Beach.

Construction Phase

The construction phase will also require a City Temporary Street Use Permit and the supporting traffic control plans. However, the City will also require a separate Encroachment Permit due to the excavation required for the new surge tank during the construction phase in the City's right-of-way. While this will require the submission of the IRWD "Approved" plans, the City will not require any design reviews of the IRWD facilities. However, the City will request to review and approve any construction traffic control design plans.

Project Schedule

The GHD Team's compelling understanding of the current bidding environment and risk profiles allows for an optimized construction schedule.

Significant Lead Time: The pump stations employ very large capacity pumps. The lead time among pump vendors will be an important consideration to the construction schedule. **Potential solution:** We recommend pre-qualifying pump vendors and pre-purchasing the pumps that provide the highest value and efficient delivery to mitigate any delay risks to the construction schedule with the Contractor and IRWD's timeframe with starting up the pump stations.

Schedule conflict mitigations: Based on our previous lessons learned with pump stations, the recommended approaches to mitigate schedule conflict risks include:

- Obtain current data and cost from electrical and instrumentation vendors for their standard systems during design
- Determine cost implications and schedule for delivery between a cast-in-place vault or pre-cast vault for the new surge tank
- Obtain updated delivery times for all equipment during design (e.g., pumps, valves, instruments, etc.)

Our project team members have experience in all steps above to minimize the risk for IRWD and achieve project objectives while minimizing overall cost.

Understanding of Project Cost, Schedule, and Cash Flow Enhances Project Delivery

The GHD team has a track record of engineer’s construction cost estimate within the low and high construction bids from qualified bidders on various projects similar to the proposed project.

We will establish a detailed construction cost estimate for the District based on our project understanding and preliminary design. The construction cost estimate will include Construction Specifications Institute (CSI) Division 1 through Division 17 that include general requirements, site work, concrete, metal, thermal and moisture protection, finishes, specialties, equipment, mechanical, electrical, and instrumentations; with detailed quantity takeoffs, unit price, labor, and material for installation; and subtotal cost-based contingency, mobilization and demobilization, insurance, bonding, contractor profit, general condition, and escalation based on the projected construction schedule and local construction cost index history and trends.

Our approach includes detailed schedule and cash flow development as part of the PDR to assist the District in financial planning. Based on the schedule and the preliminary project cost estimate the GHD team can **perform a cash flow analysis**, an example shown in **Figure 6**, to include both design and construction phases with detailed task associated cost allocated in line with the detailed design and construction schedule herein for the District. This model will enable the District to secure funds, optimize the schedule, manage cash flow, avoid delay, minimize change orders, and mitigate risks. This model is also a value engineering tool such as comparing design components such as hydropneumatic versus bladder tank, pipeline material of ductile iron versus cement mortar lined and coated steel, variable frequency drive versus soft starter, etc. These different approaches will be reflected in real construction cost estimates and life cycle analysis which can also be performed using the cost estimate/cash flow development model.

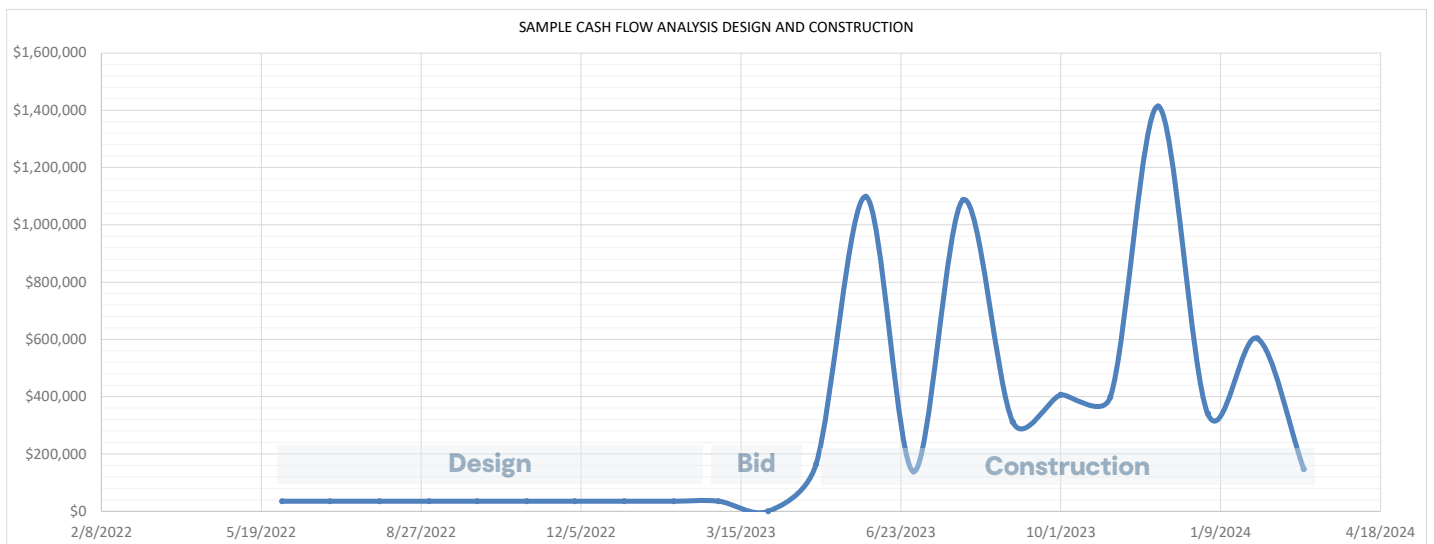


Figure 6: Sample Cash Flow Analysis - Design and Construction

Table 2: Preliminary Cost Estimate

Project: Coastal Zone 1-2 and Zone 2-4 Pump Station Rehabilitation											
Client:	IRWD										
Location:	Newport, CA										
NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	UNIT LABOR	UNIT LABOR COST	MATERIAL SUBTOTAL	MATERIAL TOTAL	LABOR SUBTOTAL	MATERIAL & INSTALLATION SUBTOTAL	MATERIAL & INSTALLATION TOTAL
Division 01 - General Requirements											
1	See General Condition		LS								
2	Total										
Division 02 - Site Work											
3	Site Cleaning		LS								
4	General Demolition		LS								
5	Site Subgrade Preparation		CY								
6	Shoring		SF								
7	Excavation		CY								
8	Soil Disposal		CY								
9	Total										
Division 03 - Concrete											
10	Pre-cast Valut for Surge Tank		CY								
11	Misc concrete		CY								
12	Total										
Division 04 - Masonry											
13	Not Used		SF								
14	Total										
Division 05 - Metals											
15	Pipe support		LS								
16	Hatches		SF								
17	Misc metal (ladder, handrail, etc)		LS								
18	Total										
Division 08 - Openings											
19	Wall penetration		LS								
20	Misc penetration		LS								
21	Total										
Division 09 - Finishes											
22	Painting and Coating		LS								
23	Total										
Division 10 - Specialties											
24	Identification Device		LS								
25	Signage		LS								
26	Total										
Division 11 - Equipment											
27	Water pumps		EA								
28	Surge Tank		EA								
29	Misc Equipment		LS								
30	Total										
Division 12 - Furnishings											
31	Not Used		LS								
32	Total										
Division 13 - Special Construction											
33	Pressure Transmitter		EA								
34	Pressure gauge		EA								
35	Pressure switch		EA								
36	Misc instrumentation		LS								
37	Pump Station SCADA and programming (master panel, PLC, HMI, LCU)		LS								
38	Pump Station HVAC SCADA and programming		LS								
39	Total										
Division 14 - Conveying Equipment											
40	Not Used		EA								
41	Total										
Division 15 - Mechanical											
42	Pump Station fire distinguisher		EA								
43	Pump Station plumbing		LS								
44	Pump Station HVAC		LS								
45	Swing check valves		EA								
46	Ductile iron pipe		LF								
47	Stainless Steel pipe 316		LF								
48	Steel pipe (CML&C)		LF								
49	PVC piping		LF								
50	Pipe Fittings		LS								
51	Misc Valves and Piping		LS								
52	Total										
Division 16 - Electrical											
53	Electrical (MCC, Control Panel, Service Metering, Conduit/Wiring, Lighting, Grounding, VFD/Soft Starter, etc)		LS								
54	Total										
Construction Total											
55	Contingency		25%								
56	Mobilization and Insurance (Percentage of Subtotal 1)		5%								
57	General Conditions (Percentage of Subtotal 2)		9%								
58	Contractor Profit (Percentage of Subtotal 3)		15%								
59	Escalation to Mid-Point of Construction 2023 (Percentage of Subtotal 4)		3%								
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Project Management and QA/QC

Effective project management begins with effective communication between GHD's Project Manager, the GHD Team and IRWD staff.

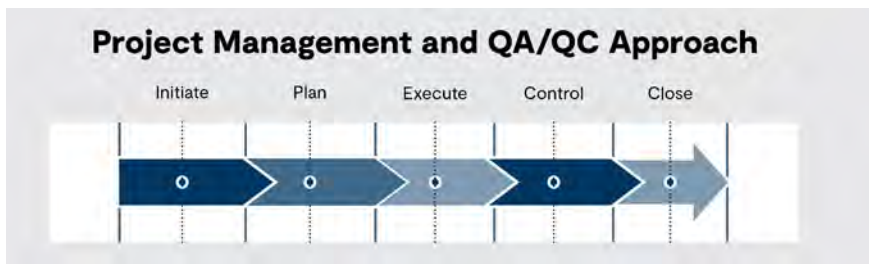


Figure 7: Successful project delivery is at the core of GHD's Project Management and QA/QC approach

GHD has formal standardized project management procedures and protocol in place to effectively manage all of our projects. Ulysses Fandino will provide overall contract management and maintain effective communications with IRWD's project staff throughout the duration of the project. Within the first five days of the contract award, GHD will prepare a Project Management Plan (PMP), which will include a detailed work plan that outlines our approach, schedule and identified deliverables, our Project Quality (QA/QC) Plan, and other pertinent information for the project team members. The PMP is distributed to the project team and IRWD staff.

Scope, Schedule, and Cost Management

Scope management begins with a detailed Work Breakdown Structure (WBS) that includes clearly defined deliverables, responsibilities, schedules, budgets, assumptions, and constraints. GHD's Project Manager, Ulysses Fandino, will act to prevent scope creep from all sources (internal and external). Should the need for scope change be identified, GHD will immediately notify IRWD's Project Manager and follow the change management protocol developed in the PMP. Scope impacts will be captured during regular progress meetings and documented in meeting notes and the Design Issues Log. The preparation and maintenance of a comprehensive schedule, consistent with the WBS, allows IRWD and the GHD Project Team to plan and monitor progress. A Critical Path Method (CPM) based schedule using Microsoft Project will include milestones, submittal preparation, in-house Quality Control reviews, and IRWD reviews. GHD's management team will review and update the project status in the detailed schedule on a bi-weekly basis to make certain that critical path activities are maintained on schedule. Monthly updates will also be prepared, analyzed, and incorporated into a monthly progress report.

Any potential risks to the schedule will be identified and added to the Risk Management Log to track and manage. The budget procedures, reports and the baseline budget fundamental to the management of the costs and will be included in the PMP. Earned value will be determined throughout the project based on physical percent complete at the activity level of the project schedule within the WBS established in the PMP. Ulysses will

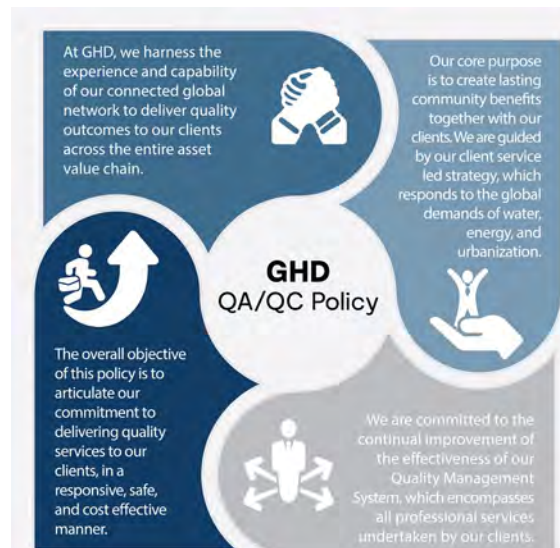
review the progress of the project along with the earned value measurements to detect issues early and take corrective actions to reduce any variances.

This review will also help ensure that the billing does not exceed the estimated fee in the PMP for services rendered to date and that our fee is properly tracked with the progress of work.

Project Status Reporting

GHD will prepare monthly progress reports at the same time as monthly invoices to provide a clear, transparent summary of the project scope, budget, and schedule status. Activities required for the preparation of the Monthly Progress Report will include:

- Compile and analyze actual project expenditures
- Evaluate project progress using Microsoft Project by estimating the percent complete and earned value for each task
- Update project schedule and discuss status of critical path activities
- Identify potential risks to the project and proposed mitigation plans or schedule/cost impacts
- Update project logs tracking decisions, actions, and design issues



Quality Assurance/Quality Control

GHD's Quality Assurance/Quality Control (QA/QC) process is an ongoing activity throughout the project under the direction of the Project Manager, Ulysses Fandino, and the Quality Control Manager, Bill Roberts, with peer reviews being completed for each client submission including PDR, 50%, 90%, 100% and Final Design submittals. This process minimizes construction changes and project risks for GHD projects and clients.

The QA/QC plan will be submitted as part of the PMP and will comply with our mandatory peer reviews under our ISO 9001:2015 Quality System program. It will identify and schedule the QA/QC milestones for all project deliverables and will provide a series of project deliverable checks and reviews that will be completed by qualified and experienced senior personnel. A flow chart that delineates all of the major components of our QA/QC plan is provided in **Figure 7**.

Typically, the QA/QC process is performed at two levels for the GHD Team. The first is through an independent technical review, consisting of an independent quality control check coordinated by Bill Roberts. This review is conducted at important stages of each project to review the technical direction of the project and to give input to criteria development and the evaluation of alternatives.

The second level of quality assurance is the detailed technical coordination review; performed by the discipline based Technical Leads at key submittal stages. These Technical Leads provide an essential role to the project as experts in their field. Their reviews will ensure clarity,

accuracy, completeness, constructability, consistency, and safety of the design, with an objective of identifying errors, omissions, and conflicts.

Proof of quality reviews for each design deliverable will be performed by the Technical Leads based on their respective discipline. Generally, the Quality Control Manager is responsible to review overall contents of the deliverable and consolidate discipline-based reviews. The following procedures are required for each discipline review comment:

- All comments must be categorized as minor, major, or preferential change, and implemented in accordance with the detailed review instructions.
- Major changes or changes influencing other disciplines must be itemized in a separate memorandum to the Project Manager.
- Minor changes must be marked directly on the check set in red ink.

Staffing Tasks Efficiently and Completing Projects On Time and within the Allocated Budget

GHD's approach to staffing tasks efficiently and completing projects on time and within the allocated budget is based upon developing a tailored solution given the conditions, opportunities, and constraints of the project. GHD offers outstanding resources to support the needs of our clients.

We are familiar with the project's goals, challenges, and opportunities, and can efficiently start project work on day one. We have assembled a comprehensive and talented group of specialists specifically chosen to meet the

project goal. GHD's Project Manager, Ulysses Fandino, will proactively manage the engineering and design tasks to stay on time and budget.

Ulysses will work with the design team to identify design gaps and resolution of potential constructability issues. Early agreement with IRWD staff on the content and the level of details for our deliverables would also simplify their reviews by IRWD and our QC staff.

Design Kickoff Meeting and Early Engagement of IRWD Engineering and Operation staff

Shortly after receiving Notice of Award, we will convene the Design Kickoff meeting to discuss the scope of work and project objectives with the project team. Since the initial parts of the project require significant involvement from IRWD's operations and maintenance staff to provide site access, insight to the existing pump station conditions, and schedule for field investigations, we recommend they be represented at this initial meeting.

Ulysses will lead the GHD team on briefing IRWD about the project and our initial plan and schedule, and gaining IRWD's concurrence on the project objectives and overall direction of the project. IRWD's O&M input will be critical to understand the existing problems that are experienced at the pump stations, and to begin the process of coordinating investigatory work at the facility. Key areas of operations for discussion at the design kickoff include general overview of concerns from operations perspective, pump and electrical system replacement, sequence of operation, system hydraulics, surge analysis and mitigation, etc. The future Surge Tank Workshop meeting will also be scheduled at the Design Kickoff.

Scope of Work

Task 1 – Project Management

We will conduct project management activities to ensure adherence to scope, schedule, and budget; promote efficient communication between IRWD and others as required; and implement an effective QA/QC program.

A. Meetings: Organize, attend, and conduct meetings as required. We will prepare and submit meeting agendas for IRWD review and concurrence at least five days prior to the meeting. We will submit meeting minutes to IRWD within one week after each meeting. We will provide meeting minutes following each meeting and maintain an action and decision log during design. For all design presentation meetings, the meeting will occur within two days following the submittal. For budgeting purposes, we will budget for the meetings listed in the table below at a minimum.

B. Quality Assurance/Quality Control (QA/QC): We will develop and implement proven QA/QC measures throughout the project to ensure ongoing and consistent quality control throughout all project phases for the successful project delivery by the GHD team. We will prepare and provide to IRWD our Project Management Plan (PMP) that contains our Work Plan, Project Quality (QA/QC) Plan, Change Management Plan, Design Issues Log, and Risk Management Log. We will also prepare our Project Status Reports monthly at the same time as our monthly invoices.

Table 3: Project Meetings

Meeting/Workshop	Description
Design Kickoff	One (1) one-hour meeting
Preliminary Design Site Visit	One (1) two-hour field visit
Surge Tank Workshop	One (1) one-hour meeting
Present the Draft Preliminary Design Report	One (1) two-hour meeting
Present the 50% design	One (1) two-hour meeting
Present the 90% design. Discuss significant IRWD comments, and discuss how the comments were addressed	One (1) one-hour meeting
Present the 100% design. Discuss significant IRWD comments, and discuss how the comments were addressed	One (1) one-hour meeting

Task 2 – Preliminary Design Report

The GHD Team will prepare a preliminary draft report (PDR) presenting the conceptual plan for all improvements. As a minimum, the report will address the following:

A. Utility Search: We will perform utility research to locate utilities or other physical features including all IRWD utilities and any other utilities owned by other agencies at each site. Utility research will include completing a desktop evaluation of available record drawings. We will determine the estimated number of potholes required for final design.

B. Survey: We will retain the services of our surveying subconsultant, Calvada, to complete required surveying work. The GHD Team will review the existing record drawings to determine the additional survey work required to complete final design. Calvada will survey the site areas at Coastal Zone 1-2 and 2-4 pump stations, including the above-ground switchgears for each pump station. Calvada will also determine the Caltrans right-of-way lines along Pacific Coast Highway for preparing of the traffic control plans necessary to obtain the permits from City of Newport Beach and Caltrans for the removal of the pumps, the field investigations, and ultimate construction of the pump station improvements.

C. Site Layout: We will prepare an overall site layout that show the pump stations, outdoor electrical equipment, major buried piping, and the surge tank. A site layout will be provided for each surge tank alternative.

D. Surge Tank: Our subconsultant, N2W, will design a surge tank at the Coastal Zone 2-4 Pump Station based on the surge analysis previously performed by IRWD’s consultant, Scott Foster, as provided in the RFP. We will lead a one-hour focused meeting with IRWD staff to determine the alternatives used for the analysis in the report. The selected alternative will be included in final design. Analysis will consider both a horizontal tank with air compressor and a vertical bladder tank. Direct burial and placement inside of a vault will also both be considered.

E. Electrical: We will review the electric power available at the site and determine if there is sufficient power at each site to power any new equipment or if any electric power upgrades are required. Provide a preliminary layout showing the location of the new MCC, PLCs, and switchboards for each pump station.

F. Instrumentation: We will review the existing PLC and instrumentation conduits and determine what modifications and new construction will be required for the new equipment, alarms, and signals. They will provide control narratives that explain the methods of operation

for both pump stations and surge tank. Control narratives will include both local and remote operation.

G. Preliminary Geotechnical Analysis: Our subconsultant, NMG Geotechnical (NMG), will perform a preliminary analysis of the soil conditions based on existing geotechnical reports and other publicly available geological information. NMG will review the information to develop a preliminary understanding of the soil conditions for use in the surge tank alternative analysis. NMG will begin development of a geotechnical report for the selected surge tank site during preliminary design so that geotechnical field information may be incorporated into the 50% design submittal.

The preliminary geotechnical design scope of work will include the following subtasks:

- **Project Initiation and Background Review**
Includes geotechnical review of preliminary project information, prior geotechnical reports, and other geotechnical and groundwater data pertaining to the site. We will review and compile the site-specific geotechnical data combined with NMG's significant work experience in Newport Coast. We will develop a geologic model for the area and the CZ 2-4 pump station for the 50% submittal. This task will include site reconnaissance and field mapping to document the existing geotechnical conditions.
- **Preliminary Geotechnical Analysis and Design**
NMG will review preliminary project and design information provided by GHD. The prior data from the borings, laboratory testing, grading and construction will be utilized to develop the geotechnical design parameters and perform preliminary analysis. Geologic cross-sections will be prepared to depict the geologic conditions.
- **Preliminary Geotechnical Report**
A preliminary geotechnical design report will be prepared for the 50% submittal package. The report will provide a summary of the existing geotechnical information and the anticipated geotechnical constraints for the final design phase. The report will include a geotechnical map and cross-sections to present the compiled data.

H. Condition Assessment: GHD's corrosion engineers will perform a condition assessment of the interior surface of the pump cans. IRWD will remove the pumps and dewater the cans as required for entry. Results of the assessment will be documented in the report. The assessment will include structural recommendation for concrete rehabilitation. GHD's recommendations will be implemented during final design.

I. Right-of-Way/Easements: We will identify all easements required for work occurring off IRWD property. We will provide an AutoCAD drawing of the site to the IRWD Right-of-Way agent who will prepare the easement documents.

J. Permitting and Agency Coordination: We will identify all permits and their controlling agencies required during the construction phase, including but not limited to the City of Newport Beach, Caltrans, County of Orange, Orange County Fire Authority (OCFA), and Air Quality Management District (AQMD). We will prepare applications and secure permits with appropriate agencies. IRWD will reimburse GHD for actual permit

fees without surcharge. Agencies typically approve the final permits upon completion of the final design construction plans and specifications.

K. California Environmental Quality Act (CEQA) Documentation: Per the Q&A Comment Log of the RFP, CEQA documentation assistance will not be required during preliminary design.

L. Construction Schedule: We will prepare an initial preliminary construction schedule for the project using Microsoft Project.

M. Preliminary Engineer's Estimate: Knowing the importance of estimating construction budgets, GHD will appropriately prepare an engineer's cost estimate using the guidelines established by the American Association for the Advancement of Cost Engineering (AACE) for the development of Opinion of Probable Construction Costs (OPCC). GHD will utilize an AACE Class 3 guideline for the Preliminary Design Report which stipulates an accuracy range between -15% to +20% and a typical contingency of 5% to 20%.

N. Pump Removal Traffic Control Drawings and Permitting: GHD's traffic control subconsultant, Traffic Control Engineering (TCE), will provide traffic control drawings (plans) for pump removal at the Coastal Zone 1-2 and Coastal Zone 2-4 Pump Stations within 3 weeks of the Notice of Award. We will immediately coordinate development of the traffic control plans with IRWD's Contractor (SS Mechanical), the City of Newport Beach, and Caltrans. A Caltrans encroachment permit will also be required due to Coastal Zone 1-2's proximity to Pacific Coast Highway. Coordination with the City of Newport Beach and Caltrans will include completing and submitting the respective permit applications, submitting traffic control plans, and addressing review comments. IRWD will reimburse GHD for actual permit fees without surcharge.

Upon Notice of Award, TCE's traffic engineers will appropriately perform a field review to determine the existing street system, driveways that may be affected, and existing traffic conditions. TCE will develop traffic control strategies and coordinate with GHD, City of Newport Beach, and Caltrans, to determine the most cost-effective plan. Due to a rigger crane to be used by SS Mechanical and the crane outriggers extended into the street lanes, traffic control plans are anticipated along Newport Coast Drive for the impact to the north-bound vehicle lanes (curb and middle) and bike lane at CZ 1-2 pump station; and the north-bound curb and middle lanes, bike lane and the Viewpoint parking lot driveway at CZ 2-4 pump station. Traffic control plans are anticipated along Pacific Coast Highway for the impact to the west- and east-bound lanes turning northerly into Newport Coast Drive.

TCE will prepare engineered traffic control plans consistent with the City's and Caltrans' standards including signing, legends, and other construction detour standards and ready for submission to the City and Caltrans for their respective reviews and approvals.

For this task, we anticipate to coordinate and conduct two (2) meetings with the City of Newport Beach and Caltrans. We will perform these additional meetings similar to our scope in Task 1A.

O. Preliminary Design Report: We will prepare a draft PDR incorporating the results of Tasks 2A through 2N and present findings and recommendations at a submittal meeting. The PDR will include the updated list

of proposed design plan sheets. IRWD comments will be incorporated into a final PDR and submitted to IRWD. The PDR will serve as the basis for final design.

Task 3 – Final Design

GHD will perform the following Final Design task items below for the preparation of Contract Documents that include construction specifications (Project Manual), construction plans, traffic control plans, a construction cost estimate, and a construction schedule.

A. Project Manual: We will prepare a Project Manual in standard IRWD format for the Contract Documents. IRWD's front end documents will be utilized, and we will assess IRWD's documents to determine any needed supplemental special provisions that should be added to comply with IRWD's general provisions and front-end requirements. The Project Manual will describe the allowable shutdown durations and sequencing associated with any connections and tie-ins to existing IRWD facilities. The Project Manual will also include the IRWD General Technical Specifications, modifications thereto, and any project specific technical specifications.

B. Construction Plans: We will prepare detailed construction drawings for each set of Contract Documents in the latest version of AutoCAD and using NCS V4.0 layering standards, on 24-inch x 36-inch sheets utilizing IRWD's standard border template. Separate sheets with sheet index/location map/legend, general notes, index map, construction notes, phasing, and detail connections will be included. Construction notes will be used (callouts on the plans are not allowed) on all construction drawings. Existing IRWD utilities will be identified on the plan view by as-built plan set number with the pipeline material and IRWD pressure zone labeled. The index map will include sheet legend, final alignment, valve locations, surrounding streets, and significant project site locations. Construction plans will be prepared using the NAVD 88 and NAD 83 survey standards.

Drawing List: Construction plans will include plan and profile sheet(s), pipeline connection details, and all details necessary for the construction of the pump station rehabilitation improvements. **Table 4**, at the end of this section, is our drawing list that is anticipated for the project.

Traffic Control Plans: GHD's traffic control subconsultant, TCE, will define the Traffic Control necessary for the construction of the pump station improvements and will design the engineered traffic control plans accordingly. Traffic control plans are anticipated along Newport Coast Drive for the impact to the north-bound curb and middle lanes and bike lane at CZ 1-2 pump station; curb and middle lanes, bike lane, and Viewpoint parking lot driveway at CZ 2-4 pump station, and south-bound curb and bike lanes at the CZ 2-4 Switchgear pad. Traffic control plans are anticipated along Pacific Coast Highway for the impact to the west- and east-bound lanes turning northerly into Newport Coast Drive.

C. Geotechnical Report: Our subconsultant, NMG Geotechnical, will conduct a geotechnical investigation for the selected surge tank site at CZ 2-4 pump station. Investigation will include two (2) borings to determine the subsurface conditions. The findings of the investigation will be documented in a geotechnical report. At minimum, the report will include a summary of the preliminary findings, a site overview, description of the subsurface and geological features, interpretation of collected field data, engineering recommendations for design and construction, and a copy of the boring logs. The geotechnical report will be included in the Project Manual as an appendix.

The final design geotechnical scope of work will include the following subtasks:

- **Initiation for Field Exploration and Permitting**
Includes site reconnaissance to mark boring locations and coordination with DigAlert for utility clearance. NMG will submit for the required permits from the City and County, as needed.
- **Geotechnical Field Exploration**
Drilling, sampling and logging of two hollow-stem auger borings, 15 to 30 feet deep. Undisturbed soil samples will be obtained from the borings at 2.5- to 5-foot intervals utilizing Modified California sampling methods, and bulk samples will be obtained from the near-surface. The borings will be backfilled with soil cuttings and tamped for compaction. Excess soil cuttings will be spread thinly across the site. We anticipate that the field work will be completed in one-half day. Assessment of contaminated soils or other environmental issues are not a part of our services.
- **Laboratory Testing**
Laboratory testing of selected soil samples for in-place moisture and density, general soil classification (grain size), including hydrometer and Atterberg limits, direct shear, consolidation, sand equivalent, and maximum density and optimum moisture content to determine relative compaction. Corrosivity testing will also be performed, including pH, resistivity, chloride, and sulfate.
- **Plan Review and Geotechnical Analysis**
NMG will coordinate with GHD to review the surge tank design plan and other related improvements. Data analysis and review will include preparation of boring logs, evaluation of laboratory test results, soil and groundwater conditions, lateral earth pressure, evaluation of the adjacent slope, slope stability related to trench excavation and temporary shoring, trench backfill and compaction requirements, pavement section thickness, and preparation of remedial recommendations, as warranted by the findings and proposed project.

Our recommendations will be provided in accordance with standard IRWD requirements and Greenbook standards and specifications for design and construction.

Final Report Preparation

We will prepare a final report presenting our geotechnical findings, conclusions and recommendations for project design and construction. The geotechnical map data will be presented on base mapping files.

D. Pothole Investigation: GHD’s potholing subconsultant, Underground Solutions (USI), will perform potholing services via vacuum excavation methods for ten (10) potholes, per the estimated number of potholes in the RFP. USI’s potholing scope includes five (5) potholes ranging from 0 feet to 6 feet depth and five (5) potholes ranging from 6 feet to 10 feet depth. USI will prepare a “Subsurface Utility Report” with the pothole data, photos, and locations map.

USI will repair the existing asphalt pavement with hot-patch base pavement. It is anticipated traffic control will be conducted in accordance with the WATCH Manual based on experience from the GHD team.

Before the potholes are backfilled and hot-patched, Calvada will survey the locations of the exposed potholes for up to four (4) potholes per day for a total of three (3) days. The survey elevations will be tied to the existing topographic survey and site layout exhibits from the PDR. After the potholes are backfilled and hot-patched, USI will mark each location with PK nails and paint or with stake for any future survey.

If additional potholes are needed, they will be invoiced at the proposed unit price.

E. Project Schedule: We will maintain and consistently update the project schedule, which will include a detailed schedule for both design and construction activities. The schedule will be updated to include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. We will continue to use Microsoft Project to update the project schedule.

F. Opinion of Probable Construction Cost: We will prepare a detailed and itemized opinion of probable construction cost (OPCC) for the proposed facilities, which will be updated and submitted with each of the design deliverables (50%, 90%, 100% and Final). The OPCC will be in the form of the Schedule of Work as included in the Bid Documents section of the Project Manual. We will provide the OPCC utilizing AACE guidelines similar to our services identified in Task 2M. However, based upon the advanced stage of the project in the Final Design phase, the AACE classification will be advanced accordingly. The table below summarizes GHD’s anticipated level of accuracy and associated contingencies.

Submittal	AACE Class	Accuracy Range	Typical Contingency
50%	2	-10% to +15%	0% to 10%
90%	2	-10% to +15%	0% to 10%
100%	1*	+/- 5%	0% to 5%
Final Design	1*	+/- 5%	0% to 5%

*Class 1 estimates are reserved for actual contractor proposals from finalized bidding documents and addenda.

G. Design Deliverables: GHD has adopted the detailed breakout of the 50%, 90%, 100% and Final Design Deliverables for this task as provided in the scope of work, and GHD has replicated the same task structure in the preliminary project schedule (**C. Schedule**).

H. California Environmental Quality Act (CEQA)

Documentation: This proposed project is subject to CEQA, and IRWD will prepare and file the CEQA environmental document. We will provide IRWD with data regarding construction activities that will impact the environment for IRWD to complete and file the final CEQA document. We have budgeted \$4,000 for this task as directed in the RFP.

I. Addenda Preparation and Pre-Bid Meeting: We will assist IRWD with providing information and clarification of bid documents to prospective bidders. This will include the preparation of up to three (3) addenda including revisions to the design plans and specifications and assistance with addressing bidder questions. The scope of work for this task will include the following subtasks:

- **Plan Revisions (3 Addenda):** For this task, we have budgeted sixteen (16) hours of appropriate staff time for plan revisions to the construction drawings.
- **Specification Revisions (3 Addenda):** For this task, we have budgeted sixteen (16) hours of appropriate staff time for revisions or additions to the project specifications.
- **Bidder Questions:** For this task, we have budgeted eight (8) hours of appropriate staff time to address and respond to bidder questions.
- **Pre-Bid Meeting:** During the bidding period, we will attend a two-hour pre-bid meeting. This will include a site visit with potential bidding contractors. IRWD will lead the pre-bid meeting. We have budgeted sixteen (16) hours of appropriate staff time for this task.

Project Assumptions

- The number of pumps at each pump station will remain unchanged.
- Modifications to pump piping will be limited to those required to accommodate changes for the new pumps, new check valve, and new surge tank.
- No changes (retrofits) to the existing pump station vaults or access hatches will be performed.
- Existing conduits will be reused where feasible.
- Existing MCC, PLC, and switchgear pads will be reused and unchanged.
- The project will not include any community outreach.
- Participation in any residential board meetings is not included in this scope of work.
- Any additional scope items required not specifically listed in GHD’s scope of work can be provided as an amendment to the contract.



Innovative Scope Items (Optional)

GHD's team of experts bring an operation and maintenance focus.

We can provide tools such as Standard Operating Procedures and Electronic-Operation and Maintenance Manual to document how the station is designed to operate, enhancing communication across the IRWD organization. ***Through GHD team's experience, we know the repair and rehabilitation solutions that work to develop alternatives that provide lasting value, are cost-effective, and are within budget.*** We would be pleased to perform these optional items upon request by the District and mutual agreement and fee of the additional work.

Standard Operating Procedures

GHD can prepare standard operation procedures (SOP) to incorporate control descriptions and PLC programming.

Electronic-Operation and Maintenance Manual (EOM)

Documenting O&M requirements is a significant tool to establishing asset durability, which results in the most cost-effective and lowest life-cycle cost facility achievable. The GHD team brings unparalleled asset management skills and has documented these durability requirements for many projects. Establishing the Contractor's performance specification based on asset life and target life-cycle cost significantly reduces project risks associated with early equipment failures and unexpected maintenance costs.

3D Laser Scan

GHD can provide reality capture services for the existing pump station vaults. The vaults will be scanned by high fidelity LiDAR which will be translated into a Revit model. That Revit model would not only serve as the basis for the pump replacement design but will also function as an asset management model once the project is complete. This asset management model will allow IRWD to track each assets' maintenance schedule and planned end of life, allowing IRWD to procure proper parts and funding well in advance of the actual work.

Table 4: GHD's proposed Drawing List

Sheet	Sheet No.	Drawing Title
G-1	1	Title Sheet
G-2	2	Sheet Index, Location Map, Legend, and Survey Control
G-3	3	General and Contractor Notes
G-4	4	Coastal Zone 1-2 P.S. Overall Site Plan and Staging Plan
G-5	5	Coastal Zone 2-4 P.S. Overall Site Plan and Staging Plan
D-1	6	Coastal Zone 1-2 P.S. Demolition Plan
D-2	7	Coastal Zone 1-2 P.S. Demolition Details and Photos I
D-3	8	Coastal Zone 1-2 P.S. Demolition Details and Photos II
D-4	9	Coastal Zone 2-4 P.S. Demolition Plan
D-5	10	Coastal Zone 2-4 P.S. Demolition Details and Photos I
D-6	11	Coastal Zone 2-4 P.S. Demolition Details and Photos II
C-1	12	Coastal Zone 1-2 P.S. Civil Plan
C-2	13	Coastal Zone 1-2 P.S. Civil Details
C-3	14	Coastal Zone 2-4 P.S. Civil Plan
C-4	15	Coastal Zone 2-4 P.S. Civil Details
M-1	16	Mechanical Notes and Symbols
M-2	17	Coastal Zone 1-2 P.S. Mechanical Plan
M-3	18	Coastal Zone 1-2 P.S. Mechanical Section and Details
M-4	19	Coastal Zone 2-4 P.S. Mechanical Plan
M-5	20	Coastal Zone 2-4 P.S. Surge Tank Mechanical Plan
M-6	21	Coastal Zone 2-4 P.S. Mechanical Section and Details
H-1	22	Ventilation Notes and Symbols
H-2	23	Coastal Zone 1-2 P.S. Ventilation Plan and Details
H-3	24	Coastal Zone 1-2 P.S. Ventilation Plan and Details
S-1	25	Structural Notes and Symbols
S-2	26	Coastal Zone 2-4 P.S. Surge Tank Vault Foundation and Roof Plan
S-3	27	Coastal Zone 2-4 P.S. Surge Tank Vault Structural Sections
S-4	28	Coastal Zone 2-4 P.S. Surge Tank Vault Structural Details
S-5	29	Coastal Zone 2-4 P.S. Surge Tank Vault Access Stairs & Guardrail Details
E-1	30	Electrical Notes and Symbols
E-2	31	Coastal Zone 1-2 P.S. Electrical Site Plan
E-3	32	Coastal Zone 1-2 P.S. Single Line Diagrams and Load Calculations
E-4	33	Coastal Zone 1-2 P.S. Control Panel Elevations and Diagrams
E-5	34	Coastal Zone 1-2 P.S. Power Plan
E-6	35	Coastal Zone 1-2 P.S. Control Plan
E-7	36	Coastal Zone 1-2 P.S. Lighting and Grounding Plan
E-8	37	Coastal Zone 1-2 P.S. Schematics
E-9	38	Coastal Zone 1-2 P.S. Conduit and Wire Schedules
E-10	39	Coastal Zone 2-4 P.S. Electrical Site Plan

Sheet	Sheet No.	Drawing Title
E-11	40	Coastal Zone 2-4 P.S. Single Line Diagrams and Load Calculations
E-12	41	Coastal Zone 2-4 P.S. Control Panel Elevations and Diagrams
E-13	42	Coastal Zone 2-4 P.S. Power Plan
E-14	43	Coastal Zone 2-4 P.S. Control Plan
E-15	44	Coastal Zone 2-4 P.S. Lighting and Grounding Plan
E-16	45	Coastal Zone 2-4 P.S. Schematics
E-17	46	Coastal Zone 2-4 P.S. Conduit and Wire Schedules
E-18	47	Electrical Details I
E-19	48	Electrical Details II
E-20	49	Coastal Zone 2-4 P.S. PRV Suggested Temporary Power Plan I
E-21	50	Coastal Zone 2-4 P.S. PRV Suggested Temporary Power Single Line Diagram
E-22	51	Coastal Zone 2-4 P.S. PRV Suggested Temporary Power Details I
E-23	52	Coastal Zone 2-4 P.S. PRV Suggested Temporary Power Details II
I-1	53	Instrumentation Notes and Symbols I
I-2	54	Instrumentation Notes and Symbols II
I-3	55	Communication Block Diagram
I-4	56	Coastal Zone 1-2 P.S. P&ID
I-5	57	Coastal Zone 2-4 P.S. P&ID
T-1	58	Traffic Control Plan General Notes and Vicinity Map
T-2	59	Coastal Zone 1-2 P.S. Traffic Control Plan Newport Coast Drive Northbound
T-3	60	Coastal Zone 1-2 P.S. Traffic Control Plan Pacific Coast Highway Eastbound
T-4	61	Coastal Zone 1-2 P.S. Traffic Control Plan Pacific Coast Highway Westbound
T-5	62	Coastal Zone 2-4 P.S. Traffic Control Plan Newport Coast Drive Northbound
T-6	63	Coastal Zone 2-4 P.S. Traffic Control Plan Newport Coast Drive Northbound
T-7	64	Coastal Zone 2-4 P.S. Traffic Control Plan Newport Coast Drive Northbound
T-8	65	Coastal Zone 2-4 P.S. Traffic Control Plan Newport Coast Drive Southbound
T-9	66	Coastal Zone 2-4 P.S. Traffic Control Plan Newport Coast Drive Southbound
T-10	67	Coastal Zone 2-4 P.S. Traffic Control Plan Newport Coast Drive Southbound

B. Team

GHD team members have been specifically selected for their ability to collaborate and to provide innovative and sustainable solutions for IRWD.

GHD presents a team of local, experienced professionals, dedicated to providing a high quality pump station rehabilitation project to increase the overall system operation reliability and redundancy, while preserving the aesthetics of the City of Newport Beach Newport Coast community.

Team Organization

The GHD Team is led by Project Manager, Ulysses Fandino, PE, and Principal-in-Charge, Greg Watanabe, PE from GHD's Irvine office. They are supported by technical specialists whose specific role and responsibilities are outlined in their bios. GHD is fulfilling these roles and responsibilities to deliver a high quality design to IRWD, on time and within the project budget. **Figure 9** is our organization chart.

As Project Manager, Ulysses will assume responsibility for schedule and budget control, overall project management, and the coordination and preparation of deliverables. He brings a proven record of committed client service, and will effectively communicate input from IRWD to the GHD Team to achieve desired results. Ulysses will leverage the team's technical and subconsultant expertise to bring forward innovative solutions for this project.

Subconsultants

GHD has assembled a team with an overall emphasis on efficiency, centrally located in Orange County, and bringing the **"right people"** to the project. The GHD Team is dedicated to completing the project by integrating seamlessly and collaborating closely with IRWD staff. This team of professionals will be dedicated throughout the life of the project and no staffing changes will occur without prior approval from IRWD. **Increased efficiency through project team continuity is just one benefit of our team.**

GHD's role as the Prime is to lead all engineering services, meetings, permitting, bidding support, and to coordinate with our specialty teaming partners. Specific roles and responsibilities of individual GHD Team members were provided in above including our key subconsultants/teamingpartners. We have chosen to supplement our core design team with specialist in mechanical, cost estimating, coatings and corrosion protection, survey, utility locating, traffic engineering, and geotechnical engineering.

GHD's Teaming Partners include:

- N2W - Mechanical, I&C, and Cost Estimating
- NMG Geotechnical, Inc. - Geotechnical Engineering
- Traffic Control Engineering - Traffic Engineering
- Calvada - Surveying
- Underground Solutions Inc. - Utility Locating/Potholing

The GHD Team are committed to provide a successful project to IRWD. Our key staff have a long, successful history of working together. Our experience, capabilities, commitment, and enthusiasm of our Team are key components to a successful project.

Value to IRWD

- Experienced and proven project manager who will oversee the multidisciplinary team
- Dedicated Project Principal and Quality Control Manager whose role it is to deliver high quality submittals on-time and to IRWD's standards
- A team of highly-skilled professionals who will draw upon their relevant experience and expertise to expeditiously produce and deliver this important project for IRWD
- Able to reach out to our 430+ staff in California and/or 4,000+ staff in North America to provide additional specialty personnel if required
- Clear reporting lines of communication within the GHD Team and with IRWD



Figure 8: IRWD's Newport Coast Lift Station - Collaboration in Action. The GHD Team led by Greg Watanabe, our Principal-in-Charge, recently completed the design and construction of the abovenoted pump station. This is also a good example of collaboration with our subconsultants USI and TCE.

Subconsultant, Role, DIR	Value to IRWD
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DIR Number: 1000868761
Role: Mechanical/ I&C / Cost Estimating

- ✓ Full-service environmental engineering consultant and contractor that services the water and wastewater sec
- ✓ Long-term successful collaboration with GHD on several projects, including IEUA RP-1 Intermediate Pump Station Improvements, Oceanside Pure Water Program Lift Station and Pipelines, OMUC Well No. 50 IX Treatment Facility Final Design, and OMUC Well Nos. 37, 39, 50 IX Treatment Facilities, LBWD Sodium Hypochlorite Ammonia Upgrades and WVWD WTP Expansion
- ✓ Work with their clients to adapt a seamless approach to the project forming a relationship that results in quicker assessment and problem solving, while also minimizing expense



DIR Number: 1000012946
Role: Geotechnical Engineering

- ✓ Long-term service provider to IRWD - over 25 years - including for on-call services
- ✓ Extensive knowledge of the overall project development and existing geologic conditions of the project area, having provided geotechnical services in the Newport Coast area since the 1980s
- ✓ Project experience includes grading and construction for the IRWD tank site, the roadway and utility infrastructure, the golf courses, numerous residential developments, and the Pelican Hill Resort



DIR Number: 1000018146
Role: Traffic Engineering

- ✓ On-going contracts with IRWD, City of Newport Beach, Orange County Sanitation District, Orange County Water District, Costa Mesa Sanitary District, Long Beach Water Department, City of Chino, Los Angeles County Sanitation District, and LA City Bureau of Engineering for providing as-needed traffic control design.



DIR Number: 1000007149
Role: Surveying

- ✓ Performed numerous land surveys within the Northern and Southern California regions
- ✓ Long-term relationship with GHD having collaborated on numerous projects
- ✓ Known for their communication, coordination and quality of deliverables, enabling their clients, like GHD, be on time and on budget with the project



DIR Number: 1000007851
Role: Utility Locating / Potholing

- ✓ Providing locating and vacuum excavation utility potholing services to their clients for almost 20 years
- ✓ Uses air/vacuum excavation for positive utility identification which has minimal impact to the infrastructure and surrounding environment



Principal-in-Charge
 Greg Watanabe, PE

Project Manager
 Ulysses Fandino, PE

Quality Manager
 Bill Roberts, PE, BCEE

Design Team

Project Engineer

Chris Bartleman, PE

Civil / Project Manual

Casey Raines, PE

Traffic Control

David Kuan, TE (TCE)

Surveying

Saul Melgarejo Jr., LSIT (Calvada)

Lead Mechanical / I&C / Cost Estimating

James Wang, PE (N2W)

Lead Corrosion

Jeff Knauer, PE, ME, NACE CP SPECIALIST

Geotechnical

Karl Markouizos, RCE (NMG)

Potholing

TC Mueller (USI)

Lead Electrical

Mehdi Mardi, PE

Permitting

Pedro Alvarez, PE

Ventilation

Mike Southworth, PE, LEED AP BD+C

Figure 9: Organization Chart

Proposed Line-of-Communication between IRWD, Prime Team Members & Subconsultants

The GHD Team members lines of communication and reporting authority are shown in our Organizational Chart. Subconsultant/Teaming Partners are also denoted in the Organizational Chart. Ulysses will directly report to IRWD, but all submittals will require internal review/coordination by the Quality Manager, Bill Roberts. Subconsultants will directly report to our Project Manager, Ulysses and collaborate seamlessly as one cohesive project team.

Bios

The GHD Team brings over 200 years of combined experience from our Project Manager, Principal-in-Charge, Technical Leaders and specialty teaming partners. We have assembled a team with local, Southern California experience – and that is primarily located in Southern California. We have provided a brief bio of each key proposed team member and their respective resumes are provided in the Appendix. Each of our proposed key personnel are located in California, are licensed and accredited professionals with experience in the improvement and rehabilitation of pump stations, similar to the Coast Zone 1-2 and Zone 2-4 Pump Station Rehabilitation project.



Leadership & Accountability

The GHD team brings proven experience in delivering projects for IRWD and other agencies, specifically on pump station rehabilitation.

Project Manager

Ulysses Fandino, PE

Ulysses brings more than 20 years of total experience as project manager and project engineer. Throughout his career he has specialized in facilitating capital improvement programs and project management, with an emphasis in the planning, analysis, and design of pipeline systems throughout California. This work entails design and construction for both new and modified facilities including the retrofit and rehabilitation of the IRWD Newport Coast Lift Station and other numerous public utility, municipal, and federal clients throughout the States of California and Arizona. He has demonstrated his ability to effectively communicate input from client staff to diverse design teams to achieve desired results. Ulysses has a proven record of managing multi-disciplinary teams to provide on-time, on-budget deliverables, while providing desired performance, forwarding innovative solutions, and maintaining regulatory compliance.

About Ulysses

- ✔ Extensive project management experience
- ✔ Record of success in rehabilitation design and construction for IRWD
- ✔ Efficiently manages multi-disciplinary teams and subconsultants



Principal-in-Charge

Greg Watanabe, PE

Greg leads GHD's pipelines, tunneling, and trenchless business practice in the Western US and has over 20 years of experience in the design and management of complex multi-discipline water/wastewater projects as large as \$1 billion (CapEx). Greg has previously served as Project Principal, Project Manager, or Project Engineer on over two dozen pumping station projects ranging from 600 to 4.3 million gallons per day (GPD) with working pressures exceeding 460 psi. Greg has the unique qualifications to oversee this project and had the ability to combine his technical excellence with his experience as a proven leader as both a consulting engineer and an owner. His owner experience originates from previously managing the engineering department for a California municipality, which included the oversight of a \$90 million capital improvement program.

About Greg

- ✔ 20 years of experience in designing complex projects
- ✔ Extensive pump station rehabilitation design and construction experience



Bill Roberts, PE, BCEE

Quality Manager

Years Experience: 27

Why Bill?

- ✓ Served as the Quality Manager on more than 55 booster pump station modifications, upgrades, rehabilitation, and replacement projects

Bill offers more than 27 years of planning, designing, and constructing water improvements for municipalities and utilities. He has sealed more than 1,200 engineering documents and served as the Quality Control Manager on more than 55 booster station modifications, upgrades, rehabilitation, and replacement projects. Bill's project experience includes water models, waterlines, wells, disinfection improvements, water facility upgrades and modifications, PRVs, and large diameter meter replacements. Bill is regarded as GHD's regional technical expert in water pumping, storage, and transmission systems. In addition to ensuring technical accuracy, Bill applies his vast experience to identify and correct constructibility, potential change orders, and construction cost concerns during the quality control process.



Chris Bartleman, PE

Project Engineer

Years Experience: 18

Why Chris?

- ✓ Experience delivering complex projects in Southern California
- ✓ Served as project engineer on many complex, high profile projects benefiting several major public works clients

Chris brings 18 years of design, planning, and construction management experience in wastewater treatment and water treatment plants, adsorption treatment facilities for wellheads, water reservoirs, pumping plants, deep gravity sewer, trenchless installations, high pressure transmission pipelines, sewer lift stations, chemical feed and injection, and metered pressure reducing facilities. He also has experience in inspection, construction administration, shop drawing review, and change order negotiations.



James Wang, PE

Lead Mechanical, I&C, Cost Estimating

Years Experience: 24

Why James?

- ✓ Known for delivering innovative and cost-effective solutions
- ✓ Successfully delivered IRWD's California-MWRP Emergency Discharge project

James has civil and environmental engineering experience spanning back to 1997; working as project manager, design manager, design lead, and project engineer. He has completed nearly 100 projects in water and wastewater treatment plant, recycling and desalination facility, bio-solid and bio-gas, pump station and pipeline, hydraulic modeling, and SCADA system. His areas of expertise include: studies, planning, design, cost estimate, construction management, operation and maintenance of treatment plant, water distribution and sewage collection system, water quality testing and modeling, and AutoCAD. James is proficient in innovative and cost-effective design. He is also experienced in electrical, process, and instrumentation, mechanical, structural, and architectural design.



Years Experience: 27

Mehdi Mardi, PE

Lead Electrical

Why Mehdi?

- ✓ Extensive experience in electrical design of water infrastructure
- ✓ Extensive medium- and low-voltage design experience

Mehdi is a professional electrical engineer with over 27 years of experience in electrical and I&C serving various industries and disciplines including municipal water. He has been involved specifically in construction and commissioning for Water and Wastewater treatment facility, pump stations, desalination, industrial gas production, hydropower generation, land field gas, and oil and gas field projects. Additionally, his experience covers medium- and low-voltage motor controls and distribution, as well as control, automation, Supervisory Control and Data Acquisition (SCADA), and instrumentation design.



Years Experience: 22

Jeff Knauer, PE, ME, NACE CP SPECIALIST

Lead Corrosion

Why Jeff?

- ✓ Specializes in condition assessment and corrosion control
- ✓ Subject matter expert in all forms of corrosion assessment and engineering

Jeff has over 22 years of hands-on experience with condition assessment of welded steel pipe and reinforced concrete water and wastewater infrastructure for municipal, private, and federal infrastructure. Jeff has served as the corrosion engineer for condition assessment and rehabilitation projects throughout the Western United States and the Pacific Islands. He is licensed in civil engineering, mechanical engineering, and is a Certified NACE CP Specialist. Jeff also has experience with the design of corrosion control solutions in challenging environments and is an accomplished task leader for large-scale corrosion assessment and rehabilitation projects and provides expert witness services.



Years Experience: 10

Pedro Alvarez, PE

Permitting

Why Pedro?

- ✓ Site/civil engineering services for design, planning, and rehab of water/wastewater/stormwater, infrastructure projects

Pedro is a versatile engineer with 10 years of experience in the design, planning, and rehabilitation of municipal, water, wastewater, stormwater, and infrastructure projects. Pedro is responsible for project engineering tasks that require interdepartmental coordination, utility research, design, and construction support for Capital Improvement Program (CIP) projects. |



David Kuan, TE

Traffic Control

Years Experience: 38

Why David?

- ✓ Unprecedented Knowledge of city, state, federal regulations and a comprehensive understanding of transportation planning, analysis and studies, and traffic control design from previous work as traffic engineer for both the City of Orange and OC San

David brings a unique perspective, having worked for the City of Orange as City Transportation Engineer for nearly 40 years and RWD and City of Newport Beach for 15. He has a keen understanding of formulating and implementing traffic reduction measures for the community and a background in State and Federal funding programs. He provides RWD and City of Newport Beach traffic engineering and transportation expertise with related projects.

David is a subject matter expert in all forms of traffic/transportation engineering including impact analysis, traffic reduction measures, access studies, parking studies, traffic signal coordination, circulation master plan and general plan throughout Southern California.



Karl Markouizos, RCE

Geotechnical

Years Experience: 33+

Why Karl?

- ✓ Extensive experience in field exploration and monitoring, grading and earthwork, slope stability analysis, design of shallow and deep foundations, liquefaction and settlement analysis

Karl has over 33 years of geotechnical experience on numerous public works, residential and commercial projects in Southern California. His has worked with the IRWD, County of Orange, County of Riverside, and other local county and city agencies and utility companies. He has considerable experience with field exploration and monitoring, field and laboratory soil testing, grading and earthwork, slope stability analysis, design of shallow and deep foundations, liquefaction and settlement analysis, structural pavement design, and flood control and utility improvements.

Prior projects include the development of hillside and flatland sites up to 4,000 acres; infrastructure projects have included large buried and above ground tanks, channel improvements, basin construction, and cistern construction. Karl has also provided design support of temporary and permanent shoring for large excavations, retaining walls, bridges and parking structures.

C. Schedule

The GHD team has collaborated to prepare a task-by-task schedule ([Figure 10](#)) in concert with the Scope and Approach presented in this proposal. The schedule, like the plan, is organized to be as sequential as possible, providing for increased project delivery efficiency.

D. Budget

Per the instructions received in the Q&A Comment log, we have submitted our Fee Proposal as a separate PDF file. GHD has prepared a detailed budget proposal including our fee schedule and breakdown of the fee by task. We've also included our standard rates.

E. Conflict of Interest

GHD is committed to IRWD and confirms that personal or organizational conflicts of interest prohibited by law do not exist.

F. Joint Venture

GHD is not proposing any joint venture, but is subcontracting the following firms for this project:

- N2W Engineering — Mechanical/ I&C/ Cost Estimating
- NMG Geotechnical, Inc. — Geotechnical Engineering
- Traffic Control Engineering, Inc. — Traffic Control Engineering
- Underground Solutions Inc.. — Potholing
- Calvada Surveying Inc.. — Surveying

G. Contract

GHD has reviewed the Professional Services Agreement, attached as Exhibit "I" in the RFP, and we take no exception to the Agreement.

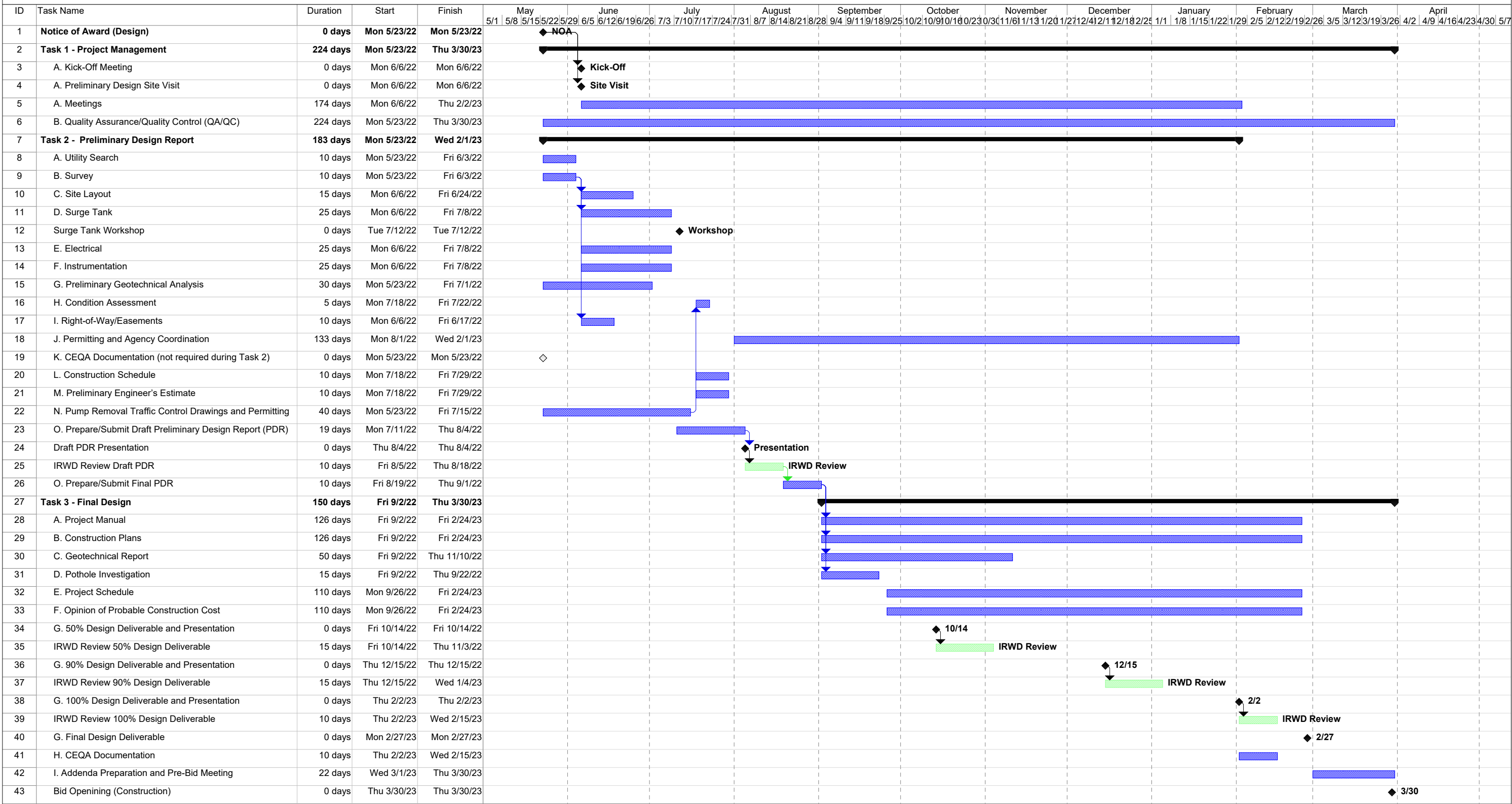
H. Insurance

In Appendix B, GHD has included evidence of our professional liability coverage and worker's compensation.

I. Public Work Requirement

GHD's DIR number is presented in the cover letter of this proposal document. In Section B, we introduce our subconsultants and have included their DIR number in the table.

Irvine Ranch Water District Coastal Zone 1-2 and 2-4 Pump Station Rehabilitation Project PROPOSED SCHEDULE



Appendix B

Proof of Insurance



ADDITIONAL REMARKS SCHEDULE

AGENCY Willis Towers Watson Northeast, Inc.		NAMED INSURED GHD Services Inc. 2055 Niagara Falls Blvd., Suite 3 Niagara Falls, NY 14304	
POLICY NUMBER See Page 1		NAIC CODE See Page 1	
CARRIER See Page 1		EFFECTIVE DATE: See Page 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
 FORM NUMBER: 25 FORM TITLE: Certificate of Liability Insurance

Excess Liability follows form over General Liability, Auto Liability and Employers Liability policies.

INSURER AFFORDING COVERAGE: Lloyd's Syndicate 2623 (Beazley Furlong Limited) NAIC#: C2166
 POLICY NUMBER: W29657200301 EFF DATE: 12/01/2021 EXP DATE: 12/01/2022

TYPE OF INSURANCE:	LIMIT DESCRIPTION:	LIMIT AMOUNT:
Pollution Liability	Each Occurrence:	\$2,000,000
	Aggregate:	\$2,000,000

July 1, 2021

RE: GHD Services Inc.

Workers' Compensation Experience Modification (EMR)

To Whom It May Concern:

Effective July, 1 2021 – below is the five (5) year experience modification ratings (EMR) for the GHD Services Inc. workers' compensation insurance program:

<u>Year</u>	<u>EMR</u>
2021-2022	.77
2020-2021	.72
2019-2020	.71
2018-2019	.61
2017-2018	.72

Please let me know if you have any questions or concerns.

Sincerely,



Jeffrey Bakowski, CRIS
Associate Director
Willis Towers Watson Northeast, Inc
75 Arlington Street | Floor 10 | Boston, MA 02116
T 800-843-5404 x45311 | D 860-756-7311 | F 860-278-5776

→ Fee Proposal

320 Goddard Way, Suite 200
Irvine, CA 92618
USA
www.ghd.com



June 27, 2022

Malcolm Cortez, PE
Irvine Ranch Water District
3512 Michelson Drive
Irvine, CA 92612

Re: Revised Fee Proposal for Engineering Design Services for the Coastal Zone 1-2 and Zone 2-4 Pump Station Rehabilitation Project (RFP No. PR 11912)

Dear Mr. Cortez and Members of the Selection Panel:

Enclosed for your consideration is GHD's fee proposal to provide engineering design services for the Coastal Zone 1-2 and Zone 2-4 Pump Station Rehabilitation Project. We are very excited about this project and look forward to working with IRWD on this important endeavor. Our fee proposal outlines the project tasks, team member hours, hourly rates, subconsultant costs, and reimbursable expenses associated with our approach and scope to accomplish IRWD's goals. GHD will bill these services monthly at a "time and materials" basis with a maximum not-to-exceed amount of \$446,243 as shown in the attached Fee Proposal.

As a professional service provider, GHD is always willing to work with our clients to arrive at a scope of work that meets budget goals. We thank you for your consideration of this proposal. Please feel free to contact myself, or Ulysses Fandino, our Project Manager, with questions regarding our proposal, accompanying fees, and level of effort estimate.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "Greg Watanabe".

Greg Watanabe, PE
Principal-in-Charge
562.206.7979
Greg.Watanabe@ghd.com

A handwritten signature in blue ink, appearing to read "Ulysses Fandino".

Ulysses Fandino, PE
Project Manager
949.585.5203
Ulysses.Fandino@ghd.com

→ The Power of Commitment



FEE PROPOSAL for Irvine Ranch Water District
 Coastal Zone 1-2 and Zone 2-4 Pump Station Rehabilitation
 Revised June 27, 2022

Description	Principal In Charge	QA/QC	Project Manager	Project Engineer	Lead Electrical Engineer	Lead Corrosion Engineer	Civil/Project Manual	Ventilation	Corrosion Engineer	N2W (Sub) Mechanical / I&C/ Cost Estimating	N2W (Sub) Senior Engineer	N2W (Sub) Staff Engineer	N2W (Sub) CAD Designer	Permitting	Electrical Engineer	Staff Electrical Engineer	CAD Designer	Admin	Total Hours	Labor Total	TCE (Traffic Control)	USI (Potholing)	Calvada (Surveying/RO W)	Subs Markup	Total Subs	Disb.	Total Disb.	Estimated Project Total	
	Greg Watanabe \$284	Bill Roberts \$261	Ulysses Fandino \$237	Chris Bartleman \$219	Mehdi Mardi \$219	Jeff Knauer \$237	Casey Raines \$237	Mike Southworth \$196		James Wang \$242	\$207	\$190	\$155	Pedro Alvarez \$196	\$169	\$169	\$143	\$128											
Task1	4	4	51	10	10	0	0	0	0	10	10	0	0	0	0	0	0	0	8	107	\$24,156	\$0	\$0	\$0	\$0	\$0	\$172	\$172	\$24,328
Subtask 1.1 Meetings	4	0	32	10	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	76	\$17,585	\$0	\$0	\$0	\$0	\$0	\$172	\$172	\$17,757
Subtask 1.2 QA/QC	0	4	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	31	\$6,571	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,571
Task2	2	2	16	50	20	8	12	2	32	20	38	9	0	44	24	4	36	12	331	\$64,972	\$29,000	\$0	\$11,875	\$6,131	\$47,006	\$1,000	\$1,000	\$112,978	
Subtask 2.1 Utility Search	0	0	1	2	4	0	2	0	0	2	2	0	0	0	8	0	0	0	0	21	\$4,274	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,274
Subtask 2.2 Survey	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	\$675	\$0	\$0	\$11,875	\$1,781	\$13,656	\$0	\$0	\$14,331	
Subtask 2.3 Site Layout	0	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0	12	0	18	\$3,102	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,102	
Subtask 2.5 Electrical	0	0	0	0	4	0	0	0	0	0	0	0	0	0	8	2	0	0	14	\$2,566	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,566	
Subtask 2.6 Instrumentation	0	0	0	0	4	0	0	0	0	0	0	0	0	0	8	2	0	0	14	\$2,566	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,566	
Subtask 2.8 Condition Assessment	0	0	0	0	0	2	0	0	16	0	0	0	0	0	0	0	0	0	18	\$3,066	\$0	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$4,066	
Subtask 2.9 Right-of-Way/Easements	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	8	0	12	\$2,056	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,056	
Subtask 2.10 Permitting and Agency Coordination	0	0	0	8	0	0	0	0	0	0	0	0	0	24	0	0	0	8	40	\$7,480	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,480	
Subtask 2.11 Construction Schedule	0	0	2	8	0	0	0	0	0	2	8	0	0	0	0	0	0	0	20	\$4,365	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,365	
Subtask 2.12 Preliminary Engineer's Estimate	0	0	2	2	0	0	0	0	0	8	12	9	0	0	0	0	0	0	33	\$7,036	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,036	
Subtask 2.13 Pump Removal TC Drawings and Permitting	0	0	2	8	0	0	0	0	0	0	0	0	0	12	0	0	0	2	24	\$4,834	\$29,000	\$0	\$0	\$4,350	\$33,350	\$0	\$0	\$38,184	
Subtask 2.14 Preliminary Design Report	2	2	8	16	8	6	4	2	16	8	16	0	0	8	0	0	16	2	114	\$22,952	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,952	
Task3	4	54	53	136	68	0	52	26	16	61	138	216	78	0	140	220	183	15	1460	\$277,801	\$11,000	\$12,775	\$3,150	\$4,039	\$30,964	\$172	\$172	\$308,937	
Subtask 3.1 Project Manual	0	6	6	24	0	0	32	0	0	12	16	16	0	0	0	0	0	4	116	\$25,586	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,586	
Subtask 3.2 Construction Plans	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	\$3,648	\$11,000	\$0	\$1,650	\$2,650	\$12,650	\$0	\$0	\$16,298	
Subtask 3.4 Pothole Investigation (10 potholes)	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	8	1	12	\$1,947	\$0	\$12,775	\$3,150	\$2,389	\$18,314	\$0	\$0	\$20,261	
Subtask 3.6 Project Schedule	0	0	2	8	0	0	0	0	0	2	8	0	0	0	0	0	0	0	20	\$4,365	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,365	
Subtask 3.7 Probable Construction Cost	0	0	2	8	0	0	0	0	0	16	24	0	0	0	0	0	0	0	50	\$11,058	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,058	
Subtask 3.8 50% Design Deliverable	1	20	8	24	20	0	8	12	8	8	32	70	27	0	40	80	53	2	413	\$76,725	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,725	
Subtask 3.9 90% Design Deliverable	1	16	8	16	20	0	6	8	4	6	26	60	27	0	40	60	53	2	353	\$65,021	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65,021	
Subtask 3.10 100% Design Deliverable	1	8	4	8	16	0	4	4	2	6	20	40	16	0	40	40	32	2	243	\$44,647	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$44,647	
Subtask 3.11 Final Design Deliverable	1	4	4	8	8	0	2	2	2	4	8	30	8	0	20	40	16	2	159	\$29,211	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,211	
Subtask 3.12 CEQA Documentation	0	0	3	8	0	0	0	0	0	0	0	0	0	0	0	0	9	2	22	\$4,006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,006	
Subtask 3.13 Plan Revisions (3 Addenda)	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	12	0	16	\$2,610	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,610	
Subtask 3.14 Specification Revisions (3 Addenda)	0	0	1	12	0	0	0	0	0	1	2	0	0	0	0	0	0	0	16	\$3,521	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,521	
Subtask 3.15 Bidder Questions (8 hours)	0	0	1	3	0	0	0	0	0	2	2	0	0	0	0	0	0	0	8	\$1,791	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,791	
Subtask 3.16 Pre-Bid Meeting (1 Meeting)	0	0	4	4	4	0	0	0	0	4	0	0	0	0	0	0	0	0	16	\$3,666	\$0	\$0	\$0	\$0	\$0	\$172	\$172	\$3,838	
Total Labor Hours	10	60	120	196	98	8	64	28	48	91	186	225	78	44	164	224	219	35											
Estimated Project Total	\$2,840	\$15,660	\$28,440	\$42,924	\$21,462	\$1,896	\$15,168	\$5,488	\$7,776	\$21,977	\$38,502	\$42,694	\$12,110	\$8,624	\$27,716	\$37,856	\$31,317	\$4,480	1898	\$366,929	\$40,000	\$12,775	\$15,025	\$10,170	\$77,970	\$1,344	\$1,344	\$446,243	



FY2022 US West Region Fee Schedule *

Finance Class Code Name	Fee Range		
Technical Director	\$ 217.00	-	\$ 315.00
Professional	\$ 127.00	-	\$ 200.00
Design Technician	\$ 169.00	-	\$ 290.00
Drafting/Design	\$ 105.00	-	\$ 153.00
Business Services Manager	\$ 220.00	-	\$ 315.00
Admin Officer	\$ 75.00	-	\$ 243.00
Construction Manager	\$ 245.00	-	\$ 290.00
Engineer/Supervisor	\$ 150.00	-	\$ 217.00
Inspector/Specialist	\$ 80.00	-	\$ 169.00
Operator/Labourer	\$ 95.00	-	\$ 125.00

- 1 Rates are for employees of all GHD companies.
- 2 All travel cost will be invoiced at coach class rates. Lodging and meal expenses will be at cost unless per diem rate is negotiated.
- 3 Reimbursement for direct expenses incurred for proposed services, including sub-consultant services, will be billed at cost plus 15%.
- 4 Reimbursement for vehicles used for proposed services will be at the federally approved mileage rates or at a negotiated monthly rate.
- 5 Overtime for non-exempt employees will be charged at 1.5 times the hourly billing rate.
- 6 If prevailing wage are applicable, the above billing rates will be adjusted proportionate to the increase in labor cost.
- 7 The Rate Schedule is subject to change annually (July 1st each year).

Note: This page is intentionally left blank.