

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

July 8, 2019

PLEDGE OF ALLEGIANCE

CALL TO ORDER

5:00 p.m., Board Room, District Office
15600 Sand Canyon Avenue, Irvine, California

ROLL CALL

Directors Reinhart, Matheis, Swan, and Withers and President LaMar

NOTICE

If you wish to address the Board on any item, including Consent Calendar items, please file your name with the Secretary. Forms are provided on the lobby table. Remarks are limited to three minutes per speaker on each subject. Consent Calendar items will be acted upon by one motion, without discussion, unless a request is made for specific items to be removed from the Calendar for separate action.

COMMUNICATIONS TO THE BOARD

1. A. Written:

B. Oral:

2. ITEMS RECEIVED TOO LATE TO BE AGENDIZED

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

PUBLIC HEARING

3. 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 communications.
- e. Request legal counsel to describe the nature of the proceedings.
- f. Hear any person who wishes to speak regarding the 2019 Report on Water Quality Relative to Public Health Goals.
- g. Inquire of the Board if it has any comments or questions.
- h. Close the hearing and receive and file the report.

CONSENT CALENDAR

Resolution No. 2019-21

Items 4-9

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

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

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the June 24, 2019 Regular Board meeting be approved as presented.

6. LUMP SUM PAYMENT OPTION FOR EMPLOYER CONTRIBUTIONS FOR FY 2019-20 TO THE CALIFORNIA PUBLIC EMPLOYEES RETIREMENT SYSTEM

Recommendation: That the Board approve the lump sum payment for employer contributions to the California Public Employees Retirement System (CalPERS) by making a one-time contribution of \$5,246,805 for the District's FY 2019-20 employer contribution.

7. SUMMARY OF VENDOR EXPENDITURE COMMITMENTS EXCEEDING \$100,000 FOR FISCAL YEAR 2019-20

Recommendation: That the Board approve the list of vendor commitments greater than \$100,000 based on approved Fiscal Year 2019-20 operating budget expenditures.

8. PROPOSED CELL SITE AGREEMENT EXTENSION

Recommendation: That the Board approve Amendment No. 2 to the Telecommunications Premises Master Lease Agreement between Irvine Ranch Water District and Crown Castle MU LLC.

9. MICHELSON FORCE MAIN IMPROVEMENTS BUDGET INCREASE, CONTRACT CHANGE ORDER, AND VARIANCE

Recommendation: That the Board authorize a budget increase in the amount of \$750,000, from \$2,217,300 to \$2,967,300, authorize the General Manager to execute Contract Change Order No. 7 in the amount of \$113,317.72 with Insituform Technologies, and authorize the General Manager to execute Variance No. 4 in the amount of \$46,370 with Kleinfelder for the Michelson Force Main Improvements, Project 07097.

ACTION CALENDAR

10. INFORMATION SERVICES PROFESSIONAL SERVICES SUPPORT CONTRACT RENEWALS

Recommendation: That the Board authorize the General Manager to execute Professional Services Agreements for the period July 1, 2019 to June 30, 2020 with Infosys Ltd. for \$350,000 for managed support services and one-time projects; Outsource Technical for \$225,000 for on-call programming, analysis, project management, and networking services; and Skoruz Technologies for \$225,000 for on-call programming, analysis, and project management services.

11. EMAIL MIGRATION PROJECT CONSULTANT SERVICES

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Novcoast to implement the Email Migration Project in the amount of \$180,000 and approve a budget increase in the amount of \$58,500 each for Projects 10543 and 10544 for a total amount of \$117,000.

12. IRVINE LAKE NATIVE WATER YIELD AGREEMENT AND IRVINE LAKE PIPELINE SETTLEMENT AGREEMENT

Recommendation: That the Board authorize the General Manager to execute the Irvine Lake Native Water Yield Agreement and authorize the General Manager to execute the Irvine Lake Pipeline Settlement Agreement.

13. SETTING CONNECTION FEES AND PROPERTY TAXES FOR FISCAL YEAR 2019-20

Recommendation: That the Board adopt the following resolutions revising connection fees and property taxes as proposed: 1) resolution adopting changes to the connection fees as set forth in the schedule of rates and charges to the Rules and Regulations of IRWD for water, sewer, recycled water, and natural treatment system service, 2) resolution establishing *ad valorem* tax revenues for FY 2019-20, and 3) resolution amending allocation of *ad valorem* property taxes to debt service, subject to pledge.

Reso. No. 2019-

Reso. No. 2019-

Reso. No. 2019-

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.

OTHER BUSINESS - Continued

14. General Manager's Report
15. Directors' Comments
16. Receive oral update(s) from District liaison(s) regarding communities within IRWD's service area and provide information on relevant community events.
17. Adjourn

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

July 8, 2019

Prepared by: L. Oldewage / J. Colston

Submitted by: K. Burton

Approved by: Paul A. Cook



PUBLIC HEARING

REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS

SUMMARY:

The 2019 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 2016, 2017 and 2018. 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 2019 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 this hearing was published in the Orange County Register on June 23, 2019. A Notice was also posted in the District office on June 24, 2019. 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: 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: Describe the proceeding.

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 2019 REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS BE RECEIVED AND FILED.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

The 2019 Report on Water Quality Relative to Public Health Goals was reviewed by the Engineering and Operations Committee on June 26, 2019.

LIST OF EXHIBITS:

Exhibit "A" – 2019 Report on Water Quality Relative to Public Health Goals PWS #3010092

EXHIBIT "A"

IRVINE RANCH WATER DISTRICT
REPORT ON WATER QUALITY
RELATIVE TO PUBLIC HEALTH GOALS
PWS #3010092
June 26, 2019

BACKGROUND:

Provisions of the California Health and Safety Code (Reference No. 1) specify that larger (>10,000 service connections) water utilities prepare a special report by July 1, 2019 if their 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. Reference No. 2 is a list of all regulated constituents with the Maximum Contaminant Levels (MCLs) and PHGs or MCLGs. Reference 3 is OEHHA's February 2019 Health Risk Information for Public Health Goal Report.

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. (See Reference No. 1)

If a constituent was detected in Irvine Ranch Water District's (IRWD) water supply in 2016, 2017 or 2018 at a level exceeding an applicable PHG or MCLG, this report provides the information required by the 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 the OEHHA which is part of Cal-EPA 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.

Water Quality Data Considered:

All of the water quality data collected by the IRWD system from 2016 to 2018 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 2017, 2018 and 2019.

Guidelines Followed:

The Association of California Water Agencies (ACWA) formed a workgroup which prepared guidelines for water utilities to use in preparing these newly required reports. The ACWA guidelines were used in the preparation of this report and 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 difficult, if 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. Table 1 summarizes the information in this section.

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: 3.0 ppb in DRWF Well 2, 3.2 ppb in DRWF Well 4, 6.6 ppb in DRWF Well 5, and 4.1 ppb in DRWF Well 6. 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 3.6 ppb. We have detected arsenic in five of IRWD's five Irvine Desalter Project (IDP) wells at the following levels: 3.6 ppb in IDP Well 76, 3.7 ppb in IDP Well 77, 3.4 ppb in IDP Well 107, 5.0 ppb in IDP Well 110 and 4.1 ppb in IDP Well 115. The highest concentration of arsenic detected in product water from the IDP Potable

Treatment Plant (IDP/PTP) was 3.3 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, electrodialysis 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 2, 4, 5 and 6 that would reliably reduce the arsenic levels to below the PHG would be approximately \$19,424,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$157 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 4.7 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 \$230,322,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$1,857 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. Chlorite was detected in imported water produced at the Baker Water Treatment Plant (BWTP), the highest level detected was 0.60 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. So, no cost estimate has been prepared, but this would eliminate the Santiago Reservoir as an emergency source of raw water supply to the BWTP facility.

Coliform Bacteria:

In the month of July 2017, we collected 281 samples from our distribution system for coliform analysis. Of these samples, 0.7% were positive for coliform 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 chloramine at our sources to assure that the water served is microbiologically safe. The chloramine 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 one of IRWD's 27 wells at a level 1.5 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. Following blending with water from 1 other well and treatment for color removal at the Deep Aquifer Treatment System (DATS) 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 1.0 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 one of IRWD's 27 wells at a level of 4.0 pCi/l in IDP Well 115. Gross alpha activity was detected in imported water purchased from the MWD and the highest level was 4 pCi/l. Gross alpha activity was detected in BWTP product water and the highest level was 6.2 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 \$8,707,000 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 \$230,322,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$1,857 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 6 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 \$230,322,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$1,857 per year.

Nitrate/Nitrite Nitrogen and Nitrate Nitrogen:

The PHG and the MCL, or drinking water standard, for nitrate/nitrite nitrogen is 10 ppm. The PHG and the MCL, or drinking water standard, for nitrate nitrogen is 10 ppm. We have detected nitrate/nitrite nitrogen and nitrate nitrogen in one of IRWD's 27 wells at levels of 13 ppm nitrate/nitrite nitrogen and 13 ppm nitrate nitrogen in Well 21. The 21-22 Desalter is an RO facility which reduces nitrate/nitrite nitrogen and nitrate nitrogen levels in the water from Well 21. Nitrate/nitrite nitrogen and nitrate nitrogen were detected in the 21-22 Desalter product water. The highest level detected for nitrate/nitrite nitrogen was 9.8 ppm and the average level was 3.6 ppm. The highest level detected for nitrate nitrogen was 9.8 ppm and the average level was 3.6 ppm. The levels detected in the treated water were below the MCL. The category of health risk associated with nitrate/nitrite nitrogen and nitrate as nitrate, and the reason that a drinking water standard was adopted for it, is that people who drink water containing nitrate/nitrite nitrogen or nitrate as nitrate above the MCL could experience an acute risk of hemotoxicity causing methemoglobinemia. The numerical health risk for cancer at a PHG and a MCL of 10 ppm is not applicable. Since the nitrate/nitrite nitrogen and nitrate nitrogen levels in the treated water are consistently below the PHG no further treatment is necessary, so no cost estimate has been prepared.

Perchlorate:

The PHG for perchlorate is 1 ppb. The MCL, or drinking water standard, for perchlorate is 6 ppb. We have detected perchlorate in two of IRWD's 27 wells at the following

levels: 4.6 ppb in DRWF Well 3 and 5.0 ppb in Well 21. All levels were below the MCL. The category of health risk associated with perchlorate, and the reason that a drinking water standard was adopted for it, is that people who drink water containing perchlorate above the MCL throughout their lifetime could experience an increased risk of thyroid effects (endocrine toxicity) or neurological developmental defects (neurodevelopment toxicity). The numerical health risk for cancer at a PHG of 1 ppb is not applicable. The numerical health risk for cancer at a MCL of 6 ppb is not applicable. The water from all DRWF wells in operation is blended prior to entering the IRWD's drinking water distribution system. Perchlorate was not detected at the entry point to the distribution system. The 21-22 Desalter is an RO facility which reduces perchlorate levels in the water from Well 21. Perchlorate was not detected in the product water from the 21-22 Desalter facility. Since the perchlorate levels in the treated water are consistently below the PHG no further treatment is necessary, so no cost estimate has been prepared.

Tetrachloroethylene:

The PHG for tetrachloroethylene is 0.06 ppb. The MCL, or drinking water standard, for tetrachloroethylene is 5 ppb. We have detected tetrachloroethylene in one of IRWD's 27 wells at a level of 0.5 ppb, the detection limit for reporting, in DRWF Well 3. All levels were below the MCL. The category of health risk associated with tetrachloroethylene, and the reason that a drinking water standard was adopted for it, is that people who drink water containing tetrachloroethylene above the MCL throughout their lifetime could experience an increased risk of cancer. The numerical health risk for a PHG of 0.05 ppb is 1×10^{-6} (1 in 1,000,000). The numerical health risk for a MCL of 5 ppb is 8×10^{-5} (8 in 100,000). The water from all DRWF wells in operation is blended prior to entering the IRWD's drinking water distribution system. Tetrachloroethylene was not detected at the entry point to the distribution system. Since the tetrachloroethylene levels in the treated water are consistently below the PHG no further treatment is necessary, so no cost estimate has been prepared.

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 one of IRWD's 27 wells at a level of 6.8 pCi/l in IDP Well 115. 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 2.8 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 is an RO facility which reduces uranium 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 uranium level to the MCLG would be approximately \$8,707,000 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 \$230,322,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$1,928 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 2, 4, 5 and 6 that would reliably reduce the levels of arsenic to levels below the PHG or MCLG would be approximately \$19,424,000 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 also chlorite levels) to the PHG or MCLG would be approximately \$8,707,000 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 \$230,322,000 per year including annualized capital and O&M costs. This would result in an assumed increased cost for each customer of \$2,084 per year to lower the levels of Arsenic, gross alpha activity, gross beta activity, hexavalent chromium and uranium to levels below the PHG or MCLG.

Table 1: Summary of PHG Exceedences

CONTAMINANT	UNITS	PHG [MCLG]	MCL	Level of Detection	Status
Arsenic	ppb	0.004	10	ND – 6.6	1
Bromate	ppb	0.1	10	ND – 4.7	2
Chlorite	ppm	0.05	1.0	ND – 0.60	2
Fluoride	ppm	1	2	ND – 1.5	1
Gross Alpha Activity	pCi/L	[0]	15	ND – 6.2	1
Gross Beta Activity	pCi/L	[0]	50	ND – 6	1
Nitrate/Nitrite Nitrogen	ppm	10	10	ND – 13	1
Nitrate Nitrogen	ppm	10	10	ND – 13	1
Perchlorate	ppb	1	6	ND – 5.0	2
Tetrachloroethylene	ppb	0.06	5	ND – 0.5	2
Coliform Bacteria	% Present	0	5	0 – 0.7	2
Uranium	pCi/L	0.43	20	ND – 6.8	1

Notes: Hexavalent Chromium was reported in 2016 PHG report, but is not required to be reported in 2019 PHG report.

Status: 1 – Reported in 2016 PHG report

2 – Not reported in 2016 PHG 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:

- No.1 Excerpt from California Health & Safety Code: Section 116470 (b)
- No.2 Table of Regulated Constituents with MCLs, PHGs or MCLGs
- No.3 Health Risk Information for Public Health Goal Report, February 2019

CALIFORNIA PUBLIC HEALTH GOAL REQUIREMENTS
REFERENCE NO. 1

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).

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants

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

Last Update: December 26, 2018

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

Reference No. 2
2019 PHG Triennial Report: Calendar Years 2016-2017-2018

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

Reference No. 2
2019 PHG Triennial Report: Calendar Years 2016-2017-2018

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	0.0000017	1999
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	2018 draft

Reference No. 2
2019 PHG Triennial Report: Calendar Years 2016-2017-2018

Bromoform	--	0.0010	0.0005	2018 draft
Chloroform	--	0.0010	0.0004	2018 draft
Dibromochloromethane	--	0.0010	0.0001	2018 draft
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 2019



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 2019

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 Public Health Goals (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.

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

¹ Health and Safety Code Section 116470(b)

² Health and Safety Code Section 116365

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 (<http://www.oehha.ca.gov>). Also, technical fact sheets on most of the chemicals having federal MCLs can be found at <http://www.epa.gov/your-drinking-water/table-regulated-drinking-water-contaminants>.

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	digestive system toxicity (causes vomiting)	0.02	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: http://oehha.ca.gov/multimedia/green/pdf/GC_Regtext011912.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
Diethylhexyl-phthalate (DEHP)	carcinogenicity (causes cancer)	0.012	1×10^{-6}	0.004	3×10^{-7} (three per ten million)

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
1,2-Dibromo-3-chloropropane (DBCP)	carcinogenicity (causes cancer)	0.0000017 (1.7×10 ⁻⁶)	1×10 ⁻⁶	0.0002	1×10 ⁻⁴ (one per ten thousand)
1,2-Dichlorobenzene (o-DCB)	hepatotoxicity (harms the liver)	0.6	NA	0.6	NA
1,4-Dichlorobenzene (p-DCB)	carcinogenicity (causes cancer)	0.006	1×10 ⁻⁶	0.005	8×10 ⁻⁷ (eight per ten million)
1,1-Dichloroethane (1,1-DCA)	carcinogenicity (causes cancer)	0.003	1×10 ⁻⁶	0.005	2×10 ⁻⁶ (two per million)
1,2-Dichloroethane (1,2-DCA)	carcinogenicity (causes cancer)	0.0004	1×10 ⁻⁶	0.0005	1×10 ⁻⁶ (one per million)
1,1-Dichloroethylene (1,1-DCE)	hepatotoxicity (harms the liver)	0.01	NA	0.006	NA
1,2-Dichloroethylene, cis	nephrotoxicity (harms the kidney)	0.013	NA	0.006	NA
1,2-Dichloroethylene, trans	immunotoxicity (harms the immune system)	0.05	NA	0.01	NA
Dichloromethane (methylene chloride)	carcinogenicity (causes cancer)	0.004	1×10 ⁻⁶	0.005	1×10 ⁻⁶ (one 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
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
Ethylene dibromide (1,2-Dibromoethane)	carcinogenicity (causes cancer)	0.00001	1×10 ⁻⁶	0.00005	5×10 ⁻⁶ (five 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
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	<1×10 ⁻⁶ (PHG is not based on this effect)	0.015 (AL ⁸)	2×10 ⁻⁶ (two per million)
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

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
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
Nitrate and Nitrite	hematotoxicity (causes methemoglobinemia)	10 as nitrogen ¹⁰	NA	10 as nitrogen	NA

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
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)
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

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
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)
Tetrachloroethylene (perchloroethylene, 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

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
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-Trichlorobenzene	endocrine toxicity (harms adrenal glands)	0.005	NA	0.005	NA
1,1,1-Trichloroethane	neurotoxicity (harms the nervous system), reproductive toxicity (causes fewer offspring) hepatotoxicity (harms the liver) hematotoxicity (causes blood effects)	1	NA	0.2	NA
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)

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
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
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

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 @ MCLG	California MCL ⁴ (mg/L)	Cancer Risk @ 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
Dichloroacetic acid (DCA)	carcinogenicity (causes cancer)	0	0	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.

Office of Environmental Health Hazard Assessment
Water Toxicology Section
February 2019

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 @ MCLG	California MCL ⁴ (mg/L)	Cancer Risk @ California MCL
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
Disinfection byproducts: trihalomethanes (THMs)					
Bromodichloromethane (BDCM)	carcinogenicity (causes cancer)	0	0	none	NA
Bromoform	carcinogenicity (causes cancer)	0	0	none	NA
Chloroform	hepatotoxicity and nephrotoxicity (harms the liver and kidney)	0.07	NA	none	NA
Dibromo-chloromethane (DBCM)	hepatotoxicity, nephrotoxicity, and neurotoxicity (harms the liver, kidney, and nervous system)	0.06	NA	none	NA

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 @ MCLG	California MCL ⁴ (mg/L)	Cancer Risk @ California MCL
Total trihalomethanes (sum of BDCM, bromoform, chloroform and DBCM)	carcinogenicity (causes cancer), hepatotoxicity, nephrotoxicity, and neurotoxicity (harms the liver, kidney, and nervous system)	none	NA	0.08	NA
Radionuclides					
Gross alpha particles ⁹	carcinogenicity (causes cancer)	0 (²¹⁰ Po included)	0	15 pCi/L ¹⁰ (includes ²²⁶ Ra but not radon and uranium)	up to 1x10 ⁻³ (for ²¹⁰ Po, the most potent alpha emitter)
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 2x10 ⁻³ (for ²¹⁰ Pb, the most potent beta-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.

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July 8, 2019
Prepared and
submitted by: K. Swan
Approved by: Paul A. Cook



CONSENT CALENDAR

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

SUMMARY:

Pursuant to Resolution 2006-29 adopted on August 28, 2006, approval of attendance of the following events and meetings are required by the Board of Directors.

Events/Meetings

Steven LaMar

June 25 IRWD Business Outreach Luncheon

Mary Aileen Matheis

June 25 IRWD Business Outreach Luncheon
July 19 Southern California Water Coalition's Quarterly Meeting & Luncheon, Carlsbad

Doug Reinhart

June 25 IRWD Business Outreach Luncheon

Peer Swan

May 22 Water UCI Middle School Challenge
June 5 West Basin MWD Caucus
June 11 OCBC Infrastructure Committee Meeting
June 25 IRWD Business Outreach Luncheon

John Withers

June 25 IRWD Business Outreach Luncheon
July 30 ACWA Region 10 Program, Mission Viejo

RECOMMENDATION:

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

LIST OF EXHIBITS:

None.

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July 8, 2019
Prepared and
submitted by: L. Bonkowski
Approved by: Paul A. Cook



CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes of the June 24, 2019 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE JUNE 24, 2019 REGULAR BOARD MEETING AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – June 24, 2019 Minutes of Regular Board Meeting

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EXHIBIT "A"

MINUTES OF REGULAR MEETING – JUNE 24, 2019

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President LaMar on June 24, 2019 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Also Present: General Manager Cook, Executive Director of Finance and Administration Clary, Executive Director of Technical Services Burton, Executive Director of Water Policy Weghorst, Executive Director of Operations Chambers, Director of Water Resources Sanchez, Director of Public Affairs Beeman, Director of Human Resources Roney, General Counsel Collins, Director of Water Operations Zepeda, Director of Water Quality and Regulatory Compliance Colston, Director of Water Operations Roberts, Director of Treasury and Risk Management Jacobson, Director of Administrative Services Mossbarger, and members of staff and the public.

WRITTEN COMMUNICATIONS: None.

ORAL COMMUNICATIONS: City of Irvine's Councilmember Mike Carroll thanked the Board for inviting both City Manager John Russo and himself to tonight's Board meeting.

ITEMS TOO LATE TO BE AGENDIZED:

General Manager Cook reported that an item came to staff's attention after the agenda was posted on Friday relative to a license agreement for the County of Orange to access and use recreational rights to Irvine Lake which he asked to be added to the Action Calendar as 11A (see page 7). On MOTION by Matheis, seconded by Withers, and unanimously carried (5-0) (Matheis, Withers, Reinhart, LaMar, and Swan voting aye), THE BOARD FOUND THAT THERE WAS A NEED TO TAKE IMMEDIATE ACTION ON THE LICENSE WITH THE SERRANO WATER DISTRICT AND THE COUNTY OF ORANGE TO ALLOW THE COUNTY OF ORANGE TO ACCESS AND USE RECREATIONAL RIGHTS TO IRVINE LAKE FOR SHORELINE FISHING PURPOSES BEGINNING JULY 1, 2019, AND FOUND THAT THIS CAME TO THE ATTENTION OF THE DISTRICT SUBSEQUENT TO THE AGENDA BEING POSTED, AND THIS MATTER WAS ADDED TO THE AGENDA AS ITEM 11A OF THE ACTION CALENDAR.

PUBLIC HEARING

PROPOSED CHANGES TO THE SCHEDULE OF THE RATES AND CHARGES EFFECTIVE JULY 1, 2019

The District's Fiscal Year (FY) 2019-20 and 2020-21 Operating Budgets were adopted at the April 22, 2019 IRWD Board meeting. The proposed changes to IRWD's rates and charges were publicly noticed by mail as required under Proposition 218, and protests to the implementation of those rates and charges have been tallied by the District's independent

PUBLIC HEARING (Continued)

auditors. Pursuant to the requirements of Proposition 218, a Public Hearing on the rates and charges is required.

President LaMar declared it to be the time and place for a hearing on the proposed changes to the rates and charges and asked Secretary Bonkowski how the hearing was noticed. Director Withers left the Board Room at 5:10 p.m.

Secretary Bonkowski said that the hearing was noticed by mail and presented an Affidavit of Mailing. On MOTION by Matheis, seconded by Swan, and carried (4-0), (Matheis, Swan, Reinhart, and LaMar voting aye and Withers absent), THE AFFIDAVIT OF MAILING BY AN INDEPENDENT PROCESSING FIRM AS PRESENTED BY THE SECRETARY WAS RECEIVED AND FILED.”

President LaMar asked Legal Counsel Collins to describe the nature of the proceedings. Legal Counsel Collins said that the public hearing is held, pursuant to Proposition 218, Article XIID of the Constitution of the State of California, for all persons interested to be heard, to present objections or protests, including any written comments submitted, concerning the increase in property-related rates and charges and any proposed new property-related rates and charges.

President LaMar asked for a staff report from the Executive Director of Finance or her Designee on the proposed rates and charges and inquire whether there have been any written communications.

Executive Director of Finance and Administration Clary said that as of June 20, 2019, nine written protest letters were received by the District, which represents less than 0.01% of the total customers, substantially less than the 50% which would have been required to prevent the Board from adopting the current proposed rates and charges.

Using a PowerPoint presentation, Manager of Strategic Planning and Analysis Smithson reviewed the schedule for budget and rate adoption, reviewed the key driver comparison to the prior year budget for both the FY 2019-20 and FY 2020-21, and described the potable and recycled rate development. Mr. Smithson reviewed the proposed rates for a typical residential customer for both fiscal years, and a comparison of proposed rates with other agencies based on a 15 cfs usage and imported water. Mr. Smithson said that for the Proposition 218 notices, 104,323 notices were mailed, and as of June 20, 2019, 782 letters were returned as undeliverable. He said that separate notices were sent for residential, commercial, landscape and Newport North. He said that the primary issues raised by the protest letters was one protesting the rate increase percentages by tier, and one protesting sewer changes and the rate increase, with the other seven letters being a simple protest of the rate increase. He said that these letters are included in the Board agenda package, and that staff will be responding with individual responses. Director Withers returned to the Board room at 5:18 p.m. Mr. Smithson further said that the verification of protest letter counts were performed by the District’s independent auditors, Davis Farr.

President LaMar inquired whether there is anyone present who wished to address the Board regarding the proposed changes to the rates and charges. There was no one who wished to be heard.

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

On MOTION by Matheis, seconded by Swan, and unanimously carried, THE HEARING WAS CLOSED AND THE FOLLOWING RESOLUTION WAS ADOPTED BY TITLE:

RESOLUTION NO. 2019 -17

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH
WATER DISTRICT, ORANGE COUNTY, CALIFORNIA
RESCINDING RESOLUTION NO. 2018-16 AND ADOPTING
CHANGES TO THE SCHEDULE OF RATES AND CHARGES FOR FISCAL YEAR 2019-
20 AS SET FORTH IN EXHIBIT “B” AND CHANGES TO THE SCHEDULE OF RATES
AND CHARGES FOR FISCAL YEAR 2020-21 AS SET FORTH IN EXHIBIT “C”
TO THE RULES AND REGULATIONS OF IRVINE RANCH WATER DISTRICT
FOR WATER, SEWER AND RECYCLED WATER SERVICE

CONSENT CALENDAR

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

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

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

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the June 10, 2019 Regular Board meeting be approved as presented.

6. MAY 2019 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 May 2019 Summary of Payroll ACH payments in the total amount of \$2,025,956 and approve the May 2019 accounts payable Disbursement Summary of warrants 398264 through 399225, Workers’ Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$18,754,485.

7. FISCAL YEAR 2019-20 LEGAL SERVICES PROVIDED BY ALSTON & BIRD

Recommendation: That the Board authorize the General Manager to execute a variance to the Letter of Engagement with Alston & Bird for legal services related to complex issues and litigation extending the term to June 30, 2020, and increasing the not-to-exceed value of the contract by \$2,500,000.

8. RESOLUTION COMMENDING ROBERT “BOB” HILL FOR HIS DEDICATED SERVICE TO THE EL TORO WATER DISTRICT AND THE WATER INDUSTRY

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

RESOLUTION NO. 2019-18

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT COMMENDING
ROBERT R. “BOB” HILL FOR HIS DEDICATED AND LOYAL
SERVICE TO THE EL TORO WATER DISTRICT AND THE
WATER INDUSTRY

ACTION CALENDAR

AMENDMENT NO. 2 TO THE AGREEMENT BETWEEN IRVINE RANCH WATER DISTRICT AND BARDEEN PARTNERS, INC. FOR SERVICES RELATED TO THE REAL ESTATE INVESTMENT PROGRAM

General Manager Cook reported that recently staff and legal counsel reviewed the bylaws, governing documents, and agreements for Bardeen Partners, Inc. Mr. Cook said that two of documents reviewed were an agreement with Bardeen Partners, Inc., for services related to the Real Estate Investment Program along with its first amendment. He said that this review revealed that the agreement needed to be amended to reflect the current District committee assigned to oversee IRWD’s real estate investments. He said that Amendment No. 2 to the Agreement will replace IRWD’s Real Estate Investment Committee, which no longer exists, with IRWD’s Finance and Personnel Committee – the committee with oversight of the District’s real estate investments.

On MOTION by Withers, seconded by Swan, and unanimously carried, THE BOARD APPROVED AMENDMENT NO. 2 TO THE AGREEMENT BETWEEN IRVINE RANCH WATER DISTRICT AND BARDEEN PARTNERS, INC. FOR SERVICES RELATED TO REAL ESTATE INVESTMENT PROGRAM.

FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR THE SYPHON RESERVOIR GEOTECHNICAL INVESTIGATIONS PROJECT

Using a PowerPoint presentation, Principle Engineer Mori provided an overview of the environmental review of the Syphon Reservoir’s Geotechnical investigation project. Mr. Mori said that in 2010, IRWD acquired the Syphon Reservoir from the Irvine Company and integrated this facility into the IRWD recycled water storage and distribution

system. He said that IRWD has completed several analyses and studies of the feasibility and constructability of expanding the current reservoir from its current size of 500 acre-feet (AF) to up to 5,000 AF. He said that the proposed Syphon Reservoir Improvement Project will expand recycled water storage to meet the seasonal demand of IRWD's recycled water customers and enhance water supply reliability by maximizing the use of recycled water in IRWD's service area.

Mr. Mori said that in 2013, IRWD implemented the Syphon Interim Facilities Project which included minor improvements to integrate the reservoir into IRWD's recycled water system, and in June 2017, the Board approved an expenditure authorization for work on supporting engineering services and environmental documentation for the Syphon Reservoir Improvement Project.

Mr. Mori said that the proposed Syphon Reservoir Geotechnical Investigations Project is necessary to characterize the geologic and geotechnical conditions at the reservoir site and it will evaluate the dam foundation and abutments to determine the appropriate excavation depths and the requirements for dam seepage control measures. The investigations will also evaluate the characteristics of potential dam construction materials that could be extracted from borrow areas on the project site and used to construct the new dam. The investigations will verify the location and historical activity of the previously documented inactive (for approximately 35,000 years) Central Valley Fault. In order to accomplish these goals, the work will involve a combination of exploratory test pits, borings and geophysical surveys to characterize the subsurface conditions of the soil at each exploratory location. Prior to the start of these activities, the reservoir will be drained to allow the reservoir bottom to dry out so that the borings, test pits, and trenches can be implemented on dry land.

Director of Water Resources Sanchez reported that a Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) for the Syphon Reservoir Geotechnical Investigations Project was prepared by environmental consultants at Environmental Science Associates (ESA). Ms. Sanchez said that the Draft IS/MND was circulated for a 30-day public review period and that eight letters providing comments on the Draft IS/MND were received from the Gabrieleno Band of Mission Indians-Kizh Nation, the City of Irvine, South Coast Air Quality Management District, Orange County Public Works, Orange County Fire Authority, the Transportation Corridor Agencies, U.S. Fish & Wildlife Service (USFWS) / CA Department of Fish & Wildlife (CDFW), and the Department of Water Resources. She said that staff reviewed all comments received and worked with ESA to prepare responses to comments and a Mitigation Monitoring and Reporting Plan. She said that staff also coordinated with USFWS and CDFW to ensure that the agencies were satisfied with the response to comments. As a result of this coordination, USFWS and CDFW issued a joint letter stating that they do not object to the activities proposed for the Syphon Reservoir Geotechnical Investigations Project. The joint letter from the wildlife agencies is included in the Final IS/MND.

Director Reinhart said that this item was reviewed by the Engineering and Operations Committee on May 21, 2019. Director Swan commented that the District needs to be aware of any historic landslides, that alternative projects be revisited with staff, and to provide the Board with updates relative to any mitigation credits. Director Matheis thanked staff for their efforts on this project. On MOTION by Reinhart, seconded by Matheis, THE BOARD FOUND ON THE BASIS OF THE WHOLE RECORD BEFORE

IT (INCLUDING THE FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION AND THE COMMENTS RECEIVED) THAT THERE IS NO SUBSTANTIAL EVIDENCE THAT THE SYPHON RESERVOIR GEOTECHNICAL INVESTIGATIONS PROJECT WILL HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND THAT THE FINAL MITIGATED NEGATIVE DECLARATION REFLECTS IRWD'S INDEPENDENT JUDGMENT AND ANALYSIS; ADOPTED THE PROPOSED FINAL MITIGATED NEGATIVE DECLARATION FOR THE SYPHON RESERVOIR GEOTECHNICAL INVESTIGATIONS PROJECT AND THE ASSOCIATED MITIGATION MONITORING AND REPORTING PROGRAM; APPROVED THE SYPHON RESERVOIR GEOTECHNICAL INVESTIGATIONS PROJECT; AND AUTHORIZED STAFF TO POST AND FILE A NOTICE OF DETERMINATION.

NOMINATION OF STEVE LAMAR AS A CANDIDATE FOR PRESIDENT OF THE ASSOCIATION OF CALIFORNIA WATER AGENCIES

General Manager Cook reported that the Association of California Agencies (ACWA) Nominating Committee is seeking nominations for candidates to serve as the ACWA President and Vice President for the 2020-2021 two-year term and will recommend a slate of candidates for election by the ACWA membership at its fall conference in December 2019. Mr. Cook said that IRWD Director Steve LaMar is currently serving as the ACWA Vice President for the 2018-2019 term and has expressed an interest in the position of ACWA President.

Prior to a motion, Director Swan said that he was also interested in an ACWA Region 10 open Board member seat, and asked for the Board to support a resolution to nominate him.

On MOTION by Matheis, seconded by WITHER, and unanimously carried, THE BOARD SUPPORTED THE NOMINATION OF DIRECTOR STEVE LAMAR FOR PRESIDENT OF ACWA FOR A TWO-YEAR TERM BEGINNING JANUARY 1, 2020 AND THAT THE FOLLOWING RESOLUTION BE ADOPTED BY TITLE SUBJECT TO NON-SUBSTANTIVE CHANGES AND IN ACCORDANCE WITH ACWA'S REQUIREMENTS:

RESOLUTION NO. 2019-

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA
NOMINATING STEVE LAMAR AS A CANDIDATE FOR PRESIDENT OF THE
ASSOCIATION OF CALIFORNIA WATER AGENCIES

and

On MOTION by Matheis, seconded by Swan and unanimously carried, THE BOARD ADOPTED THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2019-20

PLACING IN NOMINATION PEER A. SWAN AS A
MEMBER OF THE ASSOCIATION OF CALIFORNIA
WATER AGENCIES REGION 10

LICENSE FOR COUNTY TO ACCESS AND USE RECREATION RIGHTS TO IRVINE LAKE

General Manager Cook reported on the License for the County of Orange to access and use recreational rights to Irvine Lake which had been placed before each Board member. He noted that the District and Serrano Water District are the co-owners of Irvine Lake which maintains operations of the reservoir, and that the County of Orange and Serrano Water District are co-owners of the recreational rights. Mr. Cook said that this License will enable interim fishing for a 12-month period from July 1, 2019 to June 30, 2020. He said that legal counsel has reviewed the document and recommended non-substantial changes.

Director Swan said that both Serrano and the District are accommodating the County's request to open the lake for recreational fishing. He said that there remains outstanding issues such as the boundary issues that need to be resolved before a license is extended for a longer period of time. Director Swan recommended that the License be approved with an additional recital to be added describing ongoing negotiations with the County on other issues related to Irvine Lake. On MOTION by Reinhart, seconded by Matheis, and unanimously carried, THE GENERAL MANAGER WAS AUTHORIZED TO EXECUTE THE LICENSE FOR COUNTY TO ACCESS AND USE RECREATIONAL RIGHTS TO IRVINE LAKE WITH THE SERRANO WATER DISTRICT AND THE COUNTY OF ORANGE IN A FORM SUBSTANTIALLY SIMILAR TO THE FORM PRESENTED AT THE MEETING AND SUBJECT TO THE ADDITION OF THE RECITAL REQUESTED BY DIRECTOR SWAN.

GENERAL MANAGER'S REPORT

General Manager Cook reported on a recycled water pipeline repair job performed under an urgent necessity contract. He said that A and Y Company performed the repair of an eight-inch AC pipe that was installed in 1983 which failed in the Irvine Spectrum at a cost of \$113,777.

DIRECTORS' COMMENTS

Director Reinhart reported on his attendance at a SOCWA Board meeting and a WACO monthly meeting.

Director Withers reported on his attendance on behalf of OCSD at meetings in Washington, DC. He said that he will be attending the Business Outreach Luncheon tomorrow and on Wednesday an OCSD Board meeting.

Director Swan reported on his attendance at a WACO Planning Committee meeting, a City of Newport Beach and UCI event relative to water quality and coastal impacts, a meeting relative to sustaining OC watersheds, a CASA Federal Legislative Committee meeting, and an OCBC Infrastructure Committee meeting. He said tomorrow he will be attending the District's Business Outreach Luncheon and will be attending a North-South meeting.

Director Matheis reported on her attendance at a California Water Law and Policy Conference in San Francisco.

Director LaMar reported on his attendance at a MWDOC Public Affairs and Legislative Committee meeting and a Natural Communities Coalition annual field trip.

COMMUNITY UPDATE

Consultant Bruce Newell reported that all was going well in Santiago Canyon with no activities to report this evening.

CLOSED SESSION

Legal Counsel Collins said that the following Closed session will be held:

CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION - Pursuant to Government Code Section 54956.9(d)(1): *Orange County Water District v. Sabic Innovative Plastics US, LLC, et al.*, Case No. 30-2008-0078246-CU-TT-CXC

OPEN SESSION

Following the Closed Session, the meeting was reconvened with Directors LaMar, Matheis, Swan, Withers and Reinhart present. General Counsel Collins announced that the Board authorized a dismissal of the cross-complaint in exchange for the dismissal of the action against the District.

ADJOURNMENT

President LaMar adjourned the meeting at 6:30 p.m.

APPROVED and SIGNED this 8th day of July, 2019.

President, IRVINE RANCH WATER DISTRICT

Secretary IRVINE RANCH WATER DISTRICT


APPROVED AS TO FORM:

Claire Hervey Collins, Legal Counsel
– Lewis Brisbois

July 8, 2019

Prepared by: E. Lin

Submitted by: C. Clary

Approved by: Paul A. Cook 

ACTION CALENDAR

LUMP SUM PAYMENT OPTION FOR EMPLOYER CONTRIBUTIONS FOR FY 2019-20 TO THE CALIFORNIA PUBLIC EMPLOYEES RETIREMENT SYSTEM

SUMMARY:

Staff recommends that the Board approve a lump sum payment option for employer contributions to the California Public Employees Retirement System (CalPERS) by making a one-time contribution of \$5,246,805 for the District's Fiscal Year (FY) 2019-20 employer contributions to CalPERS. This recommendation is consistent with the "pre-funding approach" developed by the Board during the operating budget process and with prior years.

BACKGROUND:

The total minimum required employer contribution is the sum of the CalPERS Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) plus the Employer Unfunded Accrued Liability (UAL) contribution amount (billed monthly in dollars). Beginning in FY 2009-10, the District elected to utilize the lump sum payment option for the total minimum required employer contribution as it benefits from not incurring interest expense at the assumed actuarial interest rate, which is currently 7.25%.

Beginning two fiscal years ago, only the UAL portion of the employer contribution can be prepaid in full no later than July 31, 2019. The normal cost contributions, estimated to be \$2.9 million, will be made as part of the payroll reporting process. CalPERS indicates that IRWD's UAL lump sum payment will be \$5,246,805, as provided in Exhibit "A". The total cost for choosing the monthly payments option is approximately \$5,433,674, so the lump sum payment option saves IRWD approximately \$186,869.

FISCAL IMPACTS:

The District's approved operating budget for FY 2019-20 includes an employer contribution of \$7.9 million for the CalPERS requirement. The payments are consistent with the impacts identified in setting rates for FY 2019-20.

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.

Action Calendar: Lump Sum Payment Option for Employer Contributions for FY 2019-20 to the California Public Employees Retirement System

July 8, 2019

Page 2

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 2, 2019.

RECOMMENDATION:

THAT THE BOARD APPROVE THE LUMP SUM PAYMENT FOR EMPLOYER CONTRIBUTIONS TO THE CALIFORNIA PUBLIC EMPLOYEES RETIREMENT SYSTEM (CALPERS) BY MAKING A ONE-TIME CONTRIBUTION OF \$5,246,805 FOR THE DISTRICT'S FY 2019-20 EMPLOYER CONTRIBUTION.

LIST OF EXHIBITS:

Exhibit "A" – Letter from CalPERS regarding lump sum prepayment amount

Exhibit "A":

CalPERS Actuarial Valuation - June 30, 2017
 Miscellaneous Plan of the Irvine Ranch Water District
 CalPERS ID: 5161985321

Required Contributions

		Fiscal Year
Required Employer Contribution		2019-20
Employer Normal Cost Rate		8.480%
<i>Plus, Either</i>		
1) Monthly Employer Dollar UAL Payment	\$	452,806
<i>Or</i>		
2) Annual UAL Prepayment Option	\$	5,246,805
Required PEPRAs Member Contribution Rate		6.50%
<p><i>The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars).</i></p> <p><i>Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change.</i></p> <p><i>In accordance with Sections 20537 and 20572 of the Public Employees' Retirement Law, if a contracting agency fails to remit the required contributions when due, interest and penalties may apply.</i></p> <p><i>For additional detail regarding the determination of the required contribution for PEPRAs members, see Appendix D. Required member contributions for Classic members can be found in Appendix B.</i></p>		

	Fiscal Year	Fiscal Year
	2018-19	2019-20
Normal Cost Contribution as a Percentage of Payroll		
Total Normal Cost	14.855%	15.707%
Employee Contribution ¹	7.345%	7.227%
Employer Normal Cost ²	7.510%	8.480%
Projected Annual Payroll for Contribution Year	\$ 32,700,267	\$ 34,133,602
Estimated Employer Contributions Based On Projected Payroll		
Total Normal Cost	\$ 4,857,626	\$ 5,361,365
Employee Contribution ¹	2,401,835	2,466,835
Employer Normal Cost ²	2,455,791	2,894,530
Unfunded Liability Contribution	4,684,542	5,433,674
% of Projected Payroll (illustrative only)	14.326%	15.919%
Estimated Total Employer Contribution	\$ 7,140,333	\$ 8,328,204
% of Projected Payroll (illustrative only)	21.836%	24.399%

¹ For classic members, this is the percentage specified in the Public Employees Retirement Law, net of any reduction from the use of a modified formula or other factors. For PEPRAs members, the member contribution rate is based on 50 percent of the normal cost. A development of PEPRAs member contribution rates can be found in Appendix D. Employee cost sharing is not shown in this report.

² The Employer Normal Cost is a blended rate for all benefit groups in the plan. A breakout of normal cost by benefit group is shown in Appendix D.

Actuarial Assumptions

In 2017, CalPERS completed its most recent asset liability management study incorporating actuarial assumptions and strategic asset allocation. In December 2017, the CalPERS Board of Administration adopted relatively modest changes to the asset allocation that reduced the expected volatility of returns. The adopted asset allocation was expected to have a long-term blended return that continued to support a discount rate assumption of 7.00 percent. The Board also approved several changes to the demographic assumptions that more closely aligned with actual experience. These new actuarial assumptions were first used in this, the June 30, 2017 valuation to set the Fiscal Year 2019-20 contribution for public agency employers.

On December 21, 2016, the CalPERS Board of Administration lowered the discount rate from 7.50 percent to 7.00 percent using a three-year phase-in beginning with the June 30, 2016 actuarial valuations. The **minimum employer contributions for Fiscal Year 2019-20 determined in this valuation were calculated using a discount rate of 7.25 percent.** The projected employer contributions on Page 5 are calculated assuming that the discount rate will be lowered to 7.00 percent next year as adopted by the Board. The decision to reduce the discount rate was primarily based on reduced capital market assumptions provided by external investment consultants and CalPERS investment staff. The specific decision adopted by the Board reflected recommendations from CalPERS staff and additional input from employer and employee stakeholder groups. Based on the investment allocation adopted by the Board and capital market assumptions, the reduced discount rate schedule provides a more realistic assumption for the long-term investment return of the fund.

Notwithstanding the Board's decision to phase into a 7.0 percent discount rate, subsequent analysis of the expected investment return of CalPERS assets or changes to the investment allocation may result in a change to this discount rate schedule.

For more details and additional rationale for the selection of the actuarial assumptions, please refer to the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017 that can be found on the CalPERS website under: "Forms and Publications". Click on "View All" and search for Experience Study.

All actuarial assumptions (except the discount rates used for the hypothetical termination liability) represent an estimate of future experience rather than observations of the estimates inherent in market data.

Economic Assumptions

Discount Rate

The prescribed discount rate assumption adopted by the Board on December 21, 2016 is 7.25 percent compounded annually (net of investment and administrative expenses) as of 6/30/2017.

The Board also prescribed that the assumed discount rate will reduce to 7.0 percent compounded annually (net of expenses) as of 6/30/2018. This change to the discount rate assumption is not reflected in the determination of required contributions determined in this report for Fiscal Year 2019-20.

Termination Liability Discount Rate

The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date.

The hypothetical termination liabilities in this report are calculated using an observed range of market interest rates. This range is based on the lowest and highest 20-year Treasury bond observed during an approximate 2-year period centered around the valuation date. The 20-year Treasury bond has a similar duration to most plan liabilities and serves as a good proxy for the termination discount rate. The 20-year Treasury yield was 2.61 percent on June 30, 2017.



BENEFITS AND EMPLOYMENT TAX

HEALTH INSURANCE AND EMPLOYER CONTRIBUTIONS FY 2019-20

(in thousands)	FY 2018-19	FY 2019-20	Change
Insurance and Benefits			
Health Ins Actives	\$ 5,423	\$ 5,889	\$ 466
Dental Premiums	442	464	22
Wrkrs Comp Premiums	692	727	35
Wrkrs Comp Paid Claims	813	735	(78)
Life Ins Actives	153	174	21
LT Disability Premiums	136	155	19
Medical Premiums - Retirees	151	170	19
Vision Benefit Premiums	82	85	3
RHCAP Payments - OPEB	344	496	152
Life Ins Retirees	11	13	2
Other	64	182	118
	<u>\$ 8,311</u>	<u>\$ 9,089</u>	<u>\$ 778</u>
Employment Tax and PERS			
PERS Employer Portion	\$ 7,468	\$ 7,897	\$ 429
PERS In Excess Of ARC	1,787	1,372	(415)
401A Employer Match Portion	850	924	74
401A Employer Direct Portion	160	367	208
Medicare Tax	498	525	27
St Unemployment Tax	50	50	0
	<u>\$ 10,813</u>	<u>\$ 11,135</u>	<u>\$ 322</u>
Total Insurance, Benefits, and Taxes	<u>\$ 19,124</u>	<u>\$ 20,224</u>	<u>\$ 1,101</u>

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July 8, 2019

Prepared by: A. Aguilar

Submitted by: R. Jacobson / C. Clary

Approved by: Paul A. Cook



CONSENT CALENDAR:

SUMMARY OF VENDOR EXPENDITURE COMMITMENTS
EXCEEDING \$100,000 FOR FISCAL YEAR 2019-20

SUMMARY:

In advance of each coming fiscal year, staff initiates or renews commitments with vendors for certain products and services included in the approved operating budget for that year. At the beginning of each fiscal year, staff provides a list of those vendors with commitments expected to total \$100,000 or greater in that fiscal year. This list of vendor commitments excludes contracts and agreements which have been previously approved by separate Board action and contracts that were required as a matter of “urgent necessity”. Consistent with provisions included in the IRWD Policy Regarding Authorization of Expenditures, staff recommends that the Board approve the list of vendor expenditure commitments greater than \$100,000 for Fiscal Year (FY) 2019-20.

BACKGROUND:

Included in IRWD’s annual operating budgets are expenditures for line items such as chemicals, fuel, hauling of biosolids, and other products and services which result in commitments greater than \$100,000. Many of these expenditures are made through cooperative agreements for more favorable pricing and other terms, or have been previously competitively bid and in some cases are for specialized products (e.g., certain chemicals) provided by a single supplier.

IRWD structures these commitments as open purchase orders which typically consist of multiple individual transactions on a “not-to-exceed” basis during the fiscal year where the cumulative total of these purchase orders is expected to exceed \$100,000. The Board-approved purchasing policies authorize staff to procure goods and services by providing a summary list to the Board of these open purchase orders that will exceed \$100,000.

A list of the planned vendor commitments exceeding \$100,000 for FY 2019-20 is attached as Exhibit "A". This summary includes vendor names, descriptions of the products or service being provided and estimated annual expense. Excluded from this list are contracts in excess of \$100,000, which have been previously approved by separate Board action and are within their approved contract period as well as recurring utility bills and water purchases. It also excludes vendors who perform work required as a matter of “urgent necessity”, as allowed under the approved District policies.

The total planned expenditure amount for the listed vendors for FY 2019-20 is \$5,266,600, representing approximately 3.1% of total planned expenditures in the approved operating budget. Consistent with provisions included in the IRWD Policy Regarding Authorization of Expenditures, staff recommends that the Board approve the list of vendor commitments greater than \$100,000 for FY 2019-20.

FISCAL IMPACTS:

Total planned expenditures for FY 2019-20 for vendor commitments greater than \$100,000 (excluding contracts/agreements approved by separate Board action) are \$5,266,600, representing approximately 3.1% of total planned expenditures in the approved FY 2019-20 operating budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 2, 2019.

RECOMMENDATION:

THAT THE BOARD APPROVE THE LIST OF VENDOR COMMITMENTS GREATER THAN \$100,000 BASED ON APPROVED FISCAL YEAR 2019-20 OPERATING BUDGET EXPENDITURES.

LIST OF EXHIBITS:

Exhibit "A" – Summary of Vendor Expenditure Commitments Exceeding \$100,000 for Fiscal Year 2019-20

FY 2019-2020 PURCHASE ORDERS OVER \$100K

Exhibit "A"

Supplier	Service	FY 18/19 Open PO#	Requester	Dept	PO Amount
BioMagic Inc.	FY 19/20 Open PO for odor control chemical deliveries (BioMagic 500 @ \$5.85/gal) as part of the odor control program to various locations determined by IRWD from 7/1/19 through 6/30/20. Operating Budget - Board Approved. (2-Way)	607895	H. Solis	570	\$ 275,000.00
Brentagg Pacific Inc.	FY 19/20 Open PO for citric acid 50% (#531966) at BWTP from 7/1/19 through 6/30/20.	607831	K. Reideler	420	\$ 300,000.00
California Barricade, Inc.	FY 19/20 Open PO to provide IRWD traffic control services for the Construction & Repairs Dept. from 7/1/19 through 6/30/20. (Primary Supplier)	607472	B. Clinton O. Escobar M. Cano	420	\$ 150,000.00
California Barricade, Inc.	FY 19/20 Open PO to provide IRWD traffic control services for the Collections Dept. from 7/1/19 through 6/30/20. (Primary Supplier)	607882	H. Solis	570	\$ 188,000.00
Chem Tech International	FY 19/20 Open PO for Mini-Bulk sodium hypochlorite 12.5% deliveries (\$1.52/gallon) for DATS only from 7/1/19 through 6/30/20	607834	B. Clinton	420	\$ 150,000.00
Chem Tech International, Inc.	FY 19/20 Open PO for CL-50 corrosion control at SGU and PAP sites from 7/1/19 through 6/30/20.	607832	D.Paulson	420	\$ 200,000.00
Culligan of Santa Ana	FY 19/20 Open PO for resin exchange service at BWTP from 7/1/19 through 6/30/20.	607835	K. Reideler	420	\$ 300,000.00
Duke's Root Control, Inc.	FY 19/20 Open PO to provide Collections Dept with contractor root abatement service for the treatment of designated gravity sewer lines within the District from 7/1/19 through 6/30/20.	608086	H. Solis	570	\$ 125,000.00
Enterprise Holdings, Inc.	FY 19/20 Open PO to Enterprise Rideshare for 25 van pool leases for IRWD from 7/1/19 through 6/30/20. (margo) (3-way)	607983	A. Hall	140	\$ 281,900.00
Haaker Equipment, Inc.	FY 19/20 Open PO for 1500 Gallon Truck Mounted Sewer Jetter from Haaker Equipment Inc. from 7/1/19 through 6/30/20.	NA	J. Sciabica	870	\$ 374,000.00
Helpmates Staffing Services	FY 19/20 Open PO for billing services for temporary contract labor utility workers from 7/1/19 through 6/30/20. (Field Services)	607827	D. Crowe	425	\$ 160,000.00
Hill Brothers Chemical	FY 19/20 Open PO for the delivery of odor control product (Oxy-Can) at various sites in the District. Price at \$3.05/gal., min. 300 gal del. Fuel surcharge of \$20 + freight charges. Operating Budget - Board Approved. from 7/1/19 through 6/30/20. (2-Way)	607896	H. Solis	570	\$ 265,000.00
Landcare Holdings, Inc.	FY 19/20 Open PO for system irrigation repairs, extra landscaping, rodent control, tree/shrub planting & mulch as required from 7/1/19 through 6/30/20	611147	S. Parsons	515	\$ 108,000.00

FY 2019-2020 PURCHASE ORDERS OVER \$100K

Supplier	Service	FY 18/19 Open PO#	Requester	Dept	PO Amount
Merrimac Petroleum, Inc.	FY 19/20 Open PO for gasoline and diesel motor fuel from 7/1/19 - 6/30/20 (cooperative agreement with the County of Orange through January 8, 2023) (2-way)	607690	J. Dayer	870	\$ 550,000.00
Olin Corporation	FY 19/20 Open PO for bulk sodium hypochlorite 12.5% (#105004 NSF approved) at BWTP from 7/1/19 through 6/30/20.	607861	D. Paulson	420	\$ 220,000.00
Olin Corporation	FY 19/20 Open PO for bulk sodium hypochlorite 12.5% for DATS, PTP, & domestic sites from 7/1/19 through 6/30/20	607862	D. Paulson	420	\$ 200,000.00
Olin Corporation	FY 19/20 Open PO for bulk sodium hypochlorite 12.5% at IDF (2520 Susan St. Santa Ana) from 7/1/19 through 6/30/20.	608966	B. Clinton	420	\$ 120,000.00
Olin Corporation	FY 19/20 Open PO for bulk sodium hypochlorite 12.5% for Rattlesnake Reservoir from 7/1/19 through 6/30/20.	607856	B. Wesson	420	\$ 150,000.00
Olin Corporation	FY 19/20 Open PO to supply MWRP with Sodium Hypochlorite 12.5% for Effluent Disinfection, MBR and Odor Scrubber deliveries as required from 7/1/19 through 6/30/20. SOCWA Agreement. Operating Budget - Board Approved. (2-Way)	609735	J. Perez	550	\$ 589,700.00
Summit Chemical Specialty Products	FY 19/20 Open PO for bulk Sumaclear 1000 aluminum chlorohydrate 50% at BWTP from 7/1/19 through 6/30/20.	607865	K. Reideler	420	\$ 200,000.00
Univar Corporation	FY 19/20 Open PO for bulk hydrochloric acid 15% (NSF approved) at BWTP from 7/1/19 through 6/30/20	607866	K. Reideler	420	\$ 100,000.00
Waterline Technologies, Inc.	FY 19/20 Open PO for sodium hypochlorite 12.5% (#10-2007) mini-bulk deliveries to Irvine Lake Pipeline (Irvine Park) & San Joaquin Reservoir (Newport Beach) from 7/1/19 through 6/30/20	607867	B. Wesson	420	\$ 100,000.00
Weck Laboratories, Inc.	FY 19/20 Open PO for Laboratory Analysis as requested for Water Quality Analysis Dept. from 7/1/19 through 6/30/20.	607531	J. La	600	\$ 160,000.00
Total					\$ 5,266,600.00

July 8, 2019

Prepared by: A. Shinbashi

Submitted by: R. Jacobson / C. Clary

Approved by: Paul A. Cook



CONSENT CALENDAR

PROPOSED CELL SITE AGREEMENT EXTENSION

SUMMARY:

Staff recently concluded negotiations with Crown Castle to amend its current cell site lease agreement with IRWD to provide an option to extend the term for up to four additional successive terms of five years each. In exchange for the lease extension, Crown Castle will pay the District an up-front fee of \$30,000, modify the annual lease rate increase from 3% to 4% and reimburse IRWD for costs related to delays caused by Crown Castle during the Zone 1 Reservoir project.

BACKGROUND:

IRWD and Mountain Union Telecom of California (later merged with Crown Castle) entered into a cell tower lease at the Zone 1 Reservoir located in Irvine in November 1999. The initial term expired in November 2014. The initial lease agreement included three optional lease extension periods of five-years each. The lease was renewed for the first renewal term, and the current expiration date of the lease is November 21, 2019. Under the current lease, Crown Castle has two optional lease extensions remaining. A copy of the current lease is attached as Exhibit "A".

Proposed Lease Extension and Terms:

Based on Crown Castle's interest in extending the cell site lease term, staff negotiated proposed terms to amend the lease to extend the term for up to two additional successive terms of five years each, bringing the lease option extensions going forward to a total of four. If the remaining terms are fully exercised, the final expiration date of the lease will be November 21, 2039.

In consideration for the additional renewal terms, Crown Castle will provide the following:

1. Extension Fee: Crown Castle will pay IRWD a one-time up-front fee of \$30,000 for executing the agreement extension;
2. Rent Escalation Increase: The annual rent escalation will increase from 3% to 4% effective at the beginning of the next term on November 22, 2024;
3. After-Hour Charges: Crown Castle agrees to pay IRWD \$180 per hour if staff resources are required after business hours, holidays, and on weekends; and
4. Reimbursement for Construction Delay: Crown Castle will reimburse IRWD \$26,485 for construction delay costs incurred during the Zone 1 Reservoir Project.

The remainder of the original lease terms and conditions will remain unmodified and in full force and effect, including the District's preservation of the preemptive right to use the facility for its original intended purpose and one-year termination notice.

The proposed extension agreement terms and conditions have been reviewed and approved by District counsel. Staff has verified that the rental amount of \$2,400 per month is consistent with the current market rate, and that the 4% rent escalation increase (beginning in November 2024) is at or above market rate. A copy of the proposed amendment to the lease is attached as Exhibit “B”.

FISCAL IMPACTS:

Fiscal impacts are described above.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 2, 2019.

RECOMMENDATION:

THAT THE BOARD APPROVE AMENDMENT NO. 2 TO THE TELECOMMUNICATIONS PREMISES MASTER LEASE AGREEMENT BETWEEN IRVINE RANCH WATER DISTRICT AND CROWN CASTLE MU LLC.

LIST OF EXHIBITS:

Exhibit “A” – Current Lease between IRWD and Crown Castle and Amendment No. 1

Exhibit “B” – Proposed Lease Amendment No. 2

TELECOMMUNICATIONS PREMISES MASTER LEASE AGREEMENT

This Lease Agreement ("Lease") is entered into by and between IRVINE RANCH WATER DISTRICT, a California water district organized pursuant to California water district law ("Lessor"), and MOUNTAIN UNION TELECOM OF CALIFORNIA LLC, a California limited liability corporation ("Lessee"), on this 22 day of November 1999.

RECITALS

- A. WHEREAS, LESSOR is the owner of the following land and/or water works buildings or facilities lying and being situated at Zone 1 Reservoir located within Lessor's jurisdictional boundaries, being the property more specifically described on Exhibit A attached hereto (the "Real Property"); and
- B. WHEREAS, LESSEE desires to lease certain ground and/or water works building or facilities space (the "Premises") for the construction of LESSEE'S equipment, building and tower for the purpose of establishing and maintaining a radio transmission tower facility for LESSEE'S use and that of its Sublessees, licensees and customers; and
- C. LESSOR understands and accepts that LESSEE'S primary business is the leasing, subleasing and licensing to its Sublessees, licensees, and customers of telecommunications facilities and space on the tower and in the building space located on the Premises.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants and promises contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lessor and Lessee agree as follows:

1. Lease of Premises. Lessor hereby leases to Lessee, and Lessee leases from Lessor, on the terms hereinafter set forth, the Premises, sufficient for the construction and maintenance of LESSEE'S tower, equipment and building, together with all necessary easements for access, ingress, egress and utilities. Said Premises are described in Exhibit "A" and shown on Exhibit "B" attached hereto and incorporated herein by reference.

2. Use of Premises.

(a) Lessee shall have the right to use the Premises solely for the purpose of constructing, operating, maintaining reconstructing, modifying, adding to and removing telecommunications facilities, including but not limited to a tower and associated buildings, radio frequency transmitting and receiving antennas, satellite receiving stations, transmitting stations,

batteries, utilities, supporting structures and improvements, cables and other related equipment ("Telecommunications Facilities"). Subject to 2(d) below, Lessee shall have exclusive use of the Premises for such purpose.

(b) Lessee shall be solely responsible for, and Lessor shall provide reasonable cooperation to Lessee in, making application for and obtaining all licenses, permits, consents, authorizations and approvals that Lessee deems necessary or appropriate for Lessee's use of the Premises. Lessee agrees to reimburse Lessor for all necessary costs and expenses, actually and reasonably incurred by Lessor, in providing this cooperation. Lessee understands that Lessor's real properties may have deed restrictions that restrict use of the property to specified purposes. Lessee shall be responsible for negotiating the removal or modification of any deed restriction as may be necessary or appropriate for Lessee's use of the Premises, subject to approval by Lessor, and shall be responsible for satisfying the conditions, if any, imposed in conjunction with such removal or modification. Failure of Lessee to obtain necessary licenses, permits, consents, authorizations and approvals within one year of Lease Commencement Date shall cause this Lease to be terminated immediately.

(c) The Premises shall be used by the Lessee as the Master Lease holder who shall have the sole right to lease to Sublessees, licensees, and customers utilizing their own systems, equipment, and facilities for any lawful activity in connection with the provision of wireless communication services, including, without limitation, the transmission and reception of radio communication signals on various frequencies and the construction, maintenance and operation of related communication facilities. Lessee's use of the Premises shall comply with all applicable federal, state and local laws, ordinances, building codes and regulations.

(d) Lessee's use of the Premises shall at all times be subject to Lessor's paramount right to use Premises for purposes for which it was acquired. The rights granted to Lessee shall be subject at all times to the paramount right of Lessor to use Premises for the purposes for which it was acquired by Lessor.

3. Term.

(a) The initial term ("Initial Term") of this Lease shall be for fifteen years beginning on the execution hereof ("Lease Commencement Date") and will terminate on the 15th anniversary of the Lease Commencement Date.

(b) As long as Lessee is not in default of any provision of this Lease, Lessee shall have the right, to be exercised in Lessee's sole discretion, except as provided in Paragraph 26 (a)(v), to extend this Lease at the expiration of the Initial Term for up to three additional successive terms of five years each (each a "Renewal Term"). Each Renewal Term shall, subject to the provisions of Paragraphs 4 and 5 below, be on the same terms and conditions as set forth herein. This Lease shall automatically be renewed for each Renewal Term unless Lessee is then in default or unless Lessee notifies Lessor in writing, not less than ninety (90) days prior to the expiration of the Initial Term or Renewal Term (collectively referred to as "Term"), as the case may be, then in effect, of Lessee's intention not to renew.

(c) In the event Lessor's exercise of its paramount right to use the Premises for the purposes for which it was granted results in a material interference with Lessee's ability to use the Premises, Lessor shall use good faith efforts to locate a substitute premises ("Substitute Premises") for Lessee within the Lessor's Real Property which: (a) contain enough rentable area to accommodate Lessee's Telecommunication Facilities; (b) contain improvements of a sufficient height to allow adequate relocation of the tower to permit radio telecommunications transmission as existed at the original location; (c) are made available to Lessee at the then current rental rate then in effect for such space.

(i) In the event adequate Substitute Premises can be located, Lessor shall give Lessee not less than one (1) year's written notice of the date on which Lessee shall have completed the relocation of the Telecommunications Facilities to the Substitute Premises. Lessor and Lessee shall execute an amendment to this Lease modifying the description of the Premises and development and use conditions as necessary and appropriate, and this Lease shall remain in full force and effect. Lessee shall pay all relocation costs incidental to such substitution of the Premises.

(ii) In the event an adequate Substitute Premises cannot be located, Lessor has the right to terminate this Lease with no further liability to Lessee thereunder, and Lessee shall remove all facilities from Premises within one year of written notice, at Lessee's expense.

4. Minimum Rent.

(a) Lessee shall pay Lessor, without offset or deduction, a basic annual minimum rent in the amount of \$12,000 (the "Minimum Rent") during the term of this Lease subject to paragraph 4(b). The Minimum Rent shall be payable in advance in monthly installments of \$1,000 on the first day after the Rent Commencement Date (defined below) and on the first day of each calendar month thereafter during the term of this Lease. If the end of the term of this Lease falls on other than the first day of a given calendar month, Minimum Rent shall be prorated for the resulting partial calendar month according to the number of days in such partial month.

(b) The payment of monthly Minimum Rent installments by Lessee to Lessor under the terms of this Lease shall commence on the day the facilities become operational or on the ninety-first day after construction commences on the site or on the first anniversary of the Lease Commencement Date, whichever occurs first ("Rent Commencement Date").

5. Percentage Rent. In addition to Minimum Rent provided for in Paragraph 4, Lessee shall be obligated to pay to Lessor as "Percentage Rent" an amount equal to the difference (not less than zero) between the Minimum Rent and 45% percent of the Gross Income (as defined below). During the first five years of the Initial Term, in the calculation of Percentage Rent, Gross Income shall be reduced by the cost of constructing the capital

improvements amortized over the first five years of the agreement term commencing with the completion of the improvements, i.e., $.45 \times [\text{Gross Income} - (\text{capital improvement cost} \div 5)] - \text{Minimum Rent}$. Percentage Rent shall be paid on a calendar year basis due at the times specified in Paragraph 6. To the extent Gross Income above Minimum Rent is insufficient to amortize capital improvements in the first five years, then the deficiency is to be deducted from Gross Income in the sixth and each succeeding year until amortized.

(a) The term "Gross Income" for any calendar year or partial calendar year shall mean any and all payments received by the Lessee from Sublessees, licensees, and customers in connection with the use and/or occupancy of any portion of the demised Premises, including specifically, without limitation:

- (i) Any and all rent, base, percentage and overage, received by the Lessee;
- (ii) Payments for cancellation, modification or termination of subleases, including the payment of any judgments, minus the costs including reasonable attorney's fees, incurred in obtaining and enforcing said judgments; and
- (iii) Payments under rental and business interruption insurance received by Lessee.

There shall expressly be excluded from Gross Income the following:

- (i) Reimbursements by Sublessees to Lessee of operating expense, common area costs, Lessee improvements and damage and indemnification claims and reimbursements;
- (ii) The proceeds of insurance, other than rental and business interruption insurance;
- (iii) Unforfeited security deposits received from Sublessees.
- (iv) All sums collected and paid out for sales taxes, use taxes, excise taxes and similar taxes to be collected from Sublessees, licensees and customers and paid by Lessee.
- (v) All sums collected and paid out for utilities to be collected from Sublessees, licensees and customers and paid by Lessee.

(b) If the term hereof expires or is terminated other than on the last day of a calendar year, Percentage Rent shall be prorated for such partial calendar year according to the number of days in such calendar year. Each calendar year shall be considered an independent accounting period for the purposes of determining the amount, if any, of Percentage Rent payable hereunder.

(c) All Minimum Rent and Percentage Rent payments shall be made payable to IRWD Controller and mailed to Irvine Ranch Water District at Post Office Box 57000, Irvine, California 92619-7000.

6. Statement of Gross Income. Within 90 days after the end of each calendar year, including, if this Lease is terminated other than at the end of a calendar year, within 90 days after such date of termination, Lessee shall prepare and deliver to Lessor a statement of Lessee's Gross Income during the calendar year preceding the due date of such statement to be accompanied by a statement of an independent certified accountant, to the effect that such statement has been prepared in furtherance of Paragraph 5 hereof. The payment of any Percentage Rent due for such calendar year or partial calendar year shall be remitted to Lessor along with the submission of each said statement

7. Audit. Lessor, may upon written notice to Lessee, at its sole cost and expense, have the Statement of Gross Income audited by an independent certified public accountant, who shall have access to all of Lessee's books, accounts, and available records necessary to make a full and complete audit of Gross Income for the Premises. Said audit shall be made during normal business hours at Lessor's expense and in a manner which shall not unreasonably interfere with the conduct of Lessee's business. At the conclusion of such audit, lessor shall promptly reveal the results and give copies of such audit to Lessee. Lessor and Lessee each agree to pay promptly any amount determined to be owed to the other party based upon such audit. Lessee shall reimburse Lessor for the reasonable cost of any such audit, if such audit shall establish an understatement of Percentage Rent by Lessee in excess of three percent (3%).

8. Define Rent. The rents specified as Minimum Rent and Percentage Rent, which Lessee is required to make hereunder to or on behalf of or for the benefit of Lessor shall be deemed to be "Rent." Minimum Rent, Percentage Rent and said other sums payable hereunder shall be deemed "Rent" under this Lease, and any remedies now or hereafter afforded to Lessor by the laws of the State of California for collection of such rents shall be available to Lessor, in addition to any rights and remedies specified herein. Any reimbursable construction costs or other fees paid to Lessor or the government body having jurisdiction over the use of Lessor's property for communications use shall not be considered Rent.

9. Books and Records. Lessee covenants that there will be kept with respect to the business transacted at, in, on, about or from the Premises, for a period of at least 36 months following the end of each calendar year, true and accurate books or account and records, conforming to generally accepted cash method accounting principles and showing in detail Gross Income.

10. Late Payment Charges. Lessee hereby acknowledges that late payment by Lessee to Lessor of rent and other sums due hereunder will cause Lessor to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges. Accordingly, if any installment of rent or any other sum due from Lessee shall not be received by lessor within thirty (30) calendar days after such amount shall be due, Lessee shall pay to Lessor a late charge equal to two and one half percent (2.5%) of such overdue amount. In no event shall the late charge exceed the maximum allowable by law. The parties hereby agree that such late charge will incur by reason of late payment by Lessee. Acceptance of such late charge by Lessor shall in no event constitute a waiver of Lessee's default with respect to such overdue amount, nor prevent Lessor from exercising any of the other rights and remedies granted hereunder.

11. Utilities.

(a) Lessee shall have the right to obtain necessary public utility services furnished to the Telecommunications Facilities via an extension of such utility facilities by the public utility upon, over or under the Real Property; provided, that Lessor reserves the right to approve the location of any public utility facilities on the Real Property (excluding the Premises), which approval shall not be unreasonably withheld or delayed; and provided, that Lessor shall furnish the public utility with any rights upon, over or under the Real Property which the public utility may legally require as a condition of furnishing the utility service to Lessee.

(b) As partial consideration for Minimum and Percent Rent paid under this Lease, Lessor grants to Lessee an easement ("Easement") for ingress, egress, and access to the Premises as may be required for the construction, installation and maintenance of utility facilities by the appropriate electric and telephone companies for the purpose of servicing Lessee's tower and equipment.

12. Taxes. Lessor agrees to pay all real and personal property taxes assessed against the Real Property, excepting any personal property taxes or possessory interest taxes that may be assessed by reason of the construction by Lessee of the Telecommunications Facilities, which Lessee shall pay within fifteen (15) days upon receipt of invoice; provided, however, that Lessee shall be notified promptly of any taxes for which it is charged so that it may appear before the taxing authority to contest such assessments.

13. Construction of Improvements.

(a) Lessee shall have the right, but not the obligation, at anytime following the full execution of this Lease to enter the Premises for the purpose of making necessary inspections and engineering surveys, soils tests and other reasonably necessary tests (collectively "Tests") to determine the suitability of the Premises for Lessee's Facilities. Lessee will notify Lessor of any proposed tests or pre-construction work and will coordinate the scheduling of same with Lessor. During any Tests or pre-construction activities, Lessee will have in force the insurance coverages required by Paragraph 23.

(b) Lessee has the right to construct, maintain and operate on Premises the Telecommunication Facilities more particularly described in attached Exhibit "C". In connection therewith, Lessee has the right to do all work necessary to prepare, maintain and alter the Premises for Lessee's communications operations and to install utility lines and transmission lines connecting antennas to transmitters and receivers. Except as otherwise specifically provided herein, all of Lessee's construction and installation work shall be performed at Lessee's sole cost and expense and in a good workmanlike manner per construction industry standards.

(c) Title to Lessee's Facilities and any equipment placed on the Premises by Lessee shall be held by Lessee. All of Lessee's Facilities shall remain the property of Lessee and are not fixtures. Lessee has the right to remove the Telecommunication Facilities at its sole expense on or before the expiration or termination of this Lease. Lessor shall not be responsible for protecting Lessee's facilities or the Premises from vandalism, theft, fire, flood or other casualty, or damage by third party acts or omissions.

(d) No improvements shall be constructed or maintained on the Premises without Lessor's prior written approval of plans and specifications as provided in Paragraph 14.

(e) The Telecommunications Facilities shall be erected and completed by Lessee free of all liens and claims against Lessor's right, title and interest in and to the Premises, and Lessee agrees that no such lien or claim of any contractor, sub-contractor, mechanic, laborer, or any other person or material whosoever involved with such construction and completion of the Telecommunications Facilities shall attach to Lessors's right, title or interest in and to the Premises. If, at anytime during the term of the Lease, any lien is filed against Lessor's right, title and interest in and to the Premises purporting to be for labor or material furnished or to be furnished to Lessee (or anyone holding by, under or through Lessee), or for any other reason (other than acts of Lessor), Lessee shall discharge same or cause same to be discharged of record within thirty (30) calendar days after the date Lessee is notified of the existence of such lien, or sooner if the Telecommunications Facilities are in jeopardy of forfeiture or sale by the party performing the work in respect to which the construction lien was filed, unless Lessee shall dispute and contest same within said time period in good faith and with due diligence, and in such case such lien need not be discharged until adjudged to be valid. Upon being adjudged valid, Lessee may continue to contest same; provided, that as a condition precedent to contesting same, Lessee shall first post, with the Clerk of the Superior Court of Orange County, California, or with such court, title company or other entity as shall be reasonably approved by Lessee, a bond or other security equal to that amount determined to be due and owing in such adjudication, to be applied by Lessee, for failing to do so, by Lessor in satisfaction of such amount, should such adjudication not be reversed or the case be remanded for further proceedings upon termination of appeal; and, in any event, Lessee shall pay such amount before any execution on either Lessor's or Lessee's right, title and interest in and to the Premises. Notice is hereby given that Lessee is not the agent of Lessor and has no authority to contract on behalf of Lessor, and Lessor shall not be liable for any labor or material furnished or to be furnished to Lessee, and that no mechanics' or other lien for any such labor or materials shall attach to or affect the reversionary fee simple title or other estate or interest of Lessor in and to the Premises. Lessee shall keep Premises free from any liens arising out of any work performed, material furnished, or obligations incurred by Lessee, or any tenant or subtenant thereof.

14. Plans and Specifications. Prior to commencing any construction, Lessee shall obtain Lessor's approval of Lessee's registered engineer's certified construction plans and specifications, which approval shall not be unreasonably withheld. Approval or disapproval shall be communicated in the manner provided for notices, and disapproval shall be accompanied by specification of the grounds for disapproval; provided that Lessor's failure to disapprove within thirty (30) days after the delivery to Lessor shall be conclusively considered to be approval. If the Lessee has notified Lessor in writing not less than fifteen (15) and not more than twenty-five (25) days after delivery of plans and specifications of the date on which such deemed approval will occur. The approval period may be extended by mutual consent. Lessor reserves the right to require the plans and specifications to meet stricter standards than those applied by permitting agencies, including, but not limited to, the height and appearance of the antenna tower. Such stricter standards will be communicated during Lessor's review. If Lessee and Lessor fail to reach agreement on the plans and specifications within one year of Lease Commencement Date, this Lease shall be terminated immediately.

Within ninety (90) calendar days of completion of Lessee's construction on the Premises, as well as completion of any alterations, reconstruction or restorations by Lessee on the Premises as necessary to leave the Premises in good condition and working order after completion of Lessee's construction, alteration, or reconstruction, Lessee shall deliver to Lessor a complete set of "as-built" plans/specifications of the project.

15. Access. Lessee shall be entitled to twenty-four (24) hour, seven (7) days per week, vehicular and pedestrian access to the Premises; provided, however, that Lessee will attempt to limit its activities to the hours between 7:00 a.m. and 7:00 p.m. to the extent reasonably possible and except in the case of emergencies. Lessee agrees to take, at its own expense, all measures and precautions which it believes reasonably necessary to render its equipment inaccessible to unauthorized persons. Lessor shall not unreasonably interfere in any way with Lessee's access to the Premises. Lessee shall have the right to modify the Real Property to the extent reasonably necessary or convenient for Lessee to exercise and enjoy this access right, subject to Lessor's prior written approval obtained in accordance with Paragraph 13; provided, that such modification shall not interfere with Lessor's use or violate the terms of Lessor's deed to the Real Property.

16. Interference with Communications. Lessee's facilities shall not disturb the communications configurations, equipment and frequencies which currently exist on the Premises at the Lease Commencement Date or future facilities or frequencies which may be installed as part of Lessor's operations, and Lessee shall comply with all noninterference rules of the Federal Communications Commission (FCC).

(a) Lessee's facilities shall not disturb instrumentation equipment, which exists on Lessor's Premises on the Lease Commencement Date or future equipment which may be installed as part of Lessor's operations. Such interference with Lessor's equipment or operations shall be deemed a material breach by Lessee, and Lessee shall have the responsibility to promptly terminate said interference. Lessee shall, within fifteen (15) business days after receipt of written notice from Lessor of such prohibited interference either: (a) resolve such

interference; or (b) cease operations or activities which are causing such interference, provided that, such fifteen (15) day cure period may be extended for an additional thirty (30) days so long as Lessee initiates substantial efforts towards resolving the interference in the initial fifteen (15) day period and continues to diligently pursue resolution of the interference throughout the additional thirty (30) day period. In the event Lessee fails to begin action to remedy such interference in good faith reasonable efforts within fifteen (15) business days, or fails to complete the same during any extension thereof, after written notice from Lessor setting forth a description of the interference, Lessor shall have the option to terminate this Lease immediately upon notice to Lessee or request Lessee to relocate its facilities at Lessee's expense, to another location mutually agreeable to Lessor and Lessee which will not cause such interference.

(b) Lessor shall not permit its lessees, licensees, or invitees ("Lessor Parties") to use any portion of the Real Property to install or operate equipment on or about the Real Property or otherwise conduct any operations or activities on or about the Real Property which cause signal interference with signals for operation of Lessee's Telecommunication Facilities; to the extent that such operations activities first occur after the date of the execution of this Lease. This subparagraph does not prohibit the Lessor from exercising its rights to carry out its business, as provided in Subparagraph 2.(d). Pursuant to (a) of this paragraph, such business may require the installation of equipment that could interfere with Lessee's equipment. Lessor will attempt to avoid such situations, but reserves the right to do so without any recourse by the Lessee except as provided under (a) of this paragraph. Lessor shall, within fifteen (15) business days after receipt of written notice from Lessee of such prohibited interference either: (a) cause such Lessor Parties to cease the operations or activities which are causing such interference; or (b) cause such Lessor Parties to cease operations or activities which are causing such interference, provided that, such fifteen (15) day cure period may be extended for an additional thirty (30) days so long as Lessor initiates substantial efforts towards resolving the interference in the initial fifteen (15) day period and continues to diligently pursue resolution of the interference throughout the additional thirty (30) day period.

17. Condition of Premises. Lessor furnishes the Premises to Lessee in an "AS IS" condition. Lessee shall be responsible for maintenance of the Premises, and upon termination of this Lease, Lessee shall surrender the Premises in substantially the same condition in which it was received, except for ordinary wear and tear, or damages to the Premises due to causes beyond Lessee's control.

18. Damage or Destruction.

(a) In the event of any material damage to or destruction of any part of the Telecommunications Facilities, by fire, earthquake, act of God, the elements or other casualty, Lessee shall, subject to the provisions of this Paragraph 18, promptly repair the damage, if such repairs can, in Lessee's opinion, be completed within ninety (90) days. If Lessee determines that repairs can be completed within ninety (90) days, this Lease shall remain in full force and effect, except that the Rent shall be abated to the extent Lessee's use of the Premises is impaired, commencing with the date of damage and continuing until completion of the required repairs. If Lessee determines that such repairs cannot be completed within ninety (90) days, then this Lease

shall terminate, effective the date of such damage or destruction, unless Lessor and Lessee agree in writing to continue this Lease.

(b) Notwithstanding Subparagraph 18(a) above, in the event that the Telecommunications Facilities, are damaged or destroyed to the extent of more than one-third (1/3) of their replacement cost and by a casualty not covered by insurance, Lessee may elect, by written notice to Lessor given within thirty (30) days after the occurrence of the casualty, not to repair, restore and/or reconstruct the Telecommunications Facilities, in which event this Lease shall terminate, effective as of the date of such damage or destruction.

(c) Notwithstanding Subparagraphs 18 (a) and (b) above, if the damage or destruction occurs within six (6) months of the expiration of a Term of this Lease, then this Lease may be terminated by either party upon written notice to the other, effective as of the date of the damage or destruction.

19. Condemnation.

(a) In the event that any public or quasi-public authority under a power of condemnation or eminent domain takes any part of the Premises or any access or utility area on the Real Property required by Lessee for its use of the Premises, this Lease shall terminate as of the date title to the Premises or any such area vests in the condemning authority. Sale of all or part of the Premises to a purchaser with the power of eminent domain under threat of the exercise of that power shall be deemed a taking by condemnation. Lessor waives any right it may have per the power of condemnation or eminent domain, to take any part of the Premises, or any access or utility area on the Real Property required by Lessee for its use of the Premises.

(b) Lessee may claim and recover from the condemning authority, any part of the award relating to Lessee's use of the Premises including but not limited to, Lessee's moving expenses, business dislocation damages, personal property and fixtures, lost income, and the unamortized costs of any leasehold improvements paid for by Lessee, and all other awards shall be the sole property of Lessor.

20. Governmental Ban. If at any time during this Lease or any extension thereof, and through no fault of Lessee, any governmental agency or court having jurisdiction bans or materially restricts Lessee's use of the Premises then Lessee shall, upon the giving of thirty (30) days written notice to Lessor, have the option to terminate this Lease, which termination shall be effective upon the expiration of such thirty (30) day notice period.

21. Hazardous Substances. For purposes of this Lease, the term "Hazardous Substances" means: (a) any substance, product, waste or other material of any nature whatsoever which is or becomes listed, regulated, or addressed pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 United States Code Section 9601 et seq.; the Resources Conservation and Recovery Act, 42 United States Code Section 6901 et seq.; the Hazardous Material Transportation Conservation and Recovery Act, 42 United States Code Section 1801 et seq.; the Clean Water Act, 33 United States Code Section 1251 et seq.; the Toxic Substances Control Act, 15 United States Code Section 2601 et seq.; all

California state statutes, collectively referred to as the State Toxic Substances Laws; or any other federal, state or local statute, law, ordinance, resolution, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any Hazardous Substance, now or at any time hereinafter in effect; (b) any substance, product, waste or other material of any nature whatsoever which may give rise to liability under any of the above statutes or under any statutory or common law theory based on negligence, trespass, intentional tort, nuisance or strict liability or under any reported decisions of a state or federal court; (c) petroleum or crude oil, other than petroleum and petroleum products which are contained within regularly operated motor vehicles; and (d) asbestos.

(a) Lessor warrants and represents that, to the best of knowledge of Lessor's Director of Water Operations, Carl Ballard, as of the date hereof there are no Hazardous Substances in or about the Premises and that Premises and improvements thereon do not violate any applicable Federal, State or local statutes, ordinances regulations, rules or other requirements, and that there is not pending any proceeding before any Federal, State or local tribunal or agency, the outcome of which would diminish or preclude Lessee's use of Premises as permitted under the terms of this Lease. Except as so provided, Lessor makes no warranty or representation whatsoever concerning Premises, including without limitation, the condition, fitness or utility for any purpose thereof, any improvements thereto or personal property located therein, or compliance thereof with applicable laws, ordinances or governmental regulations; and the Lessee's right to use Premises is strictly on an "as is" basis with all faults; and Lessor hereby disclaims all other warranties whatsoever, express or implied, the condition of the soil (or water), geology, and any warranty of merchantability or habitability or fitness for a particular purpose.

(b) Except as otherwise specifically permitted under the terms of this Lease, Lessee shall not use, create, store or allow any Hazardous Substances on Premises. Fuel and other Hazardous Substances stored in a motor vehicle for the exclusive operation of such vehicle and storage batteries used for emergency power are excepted.

(c) In no case shall Lessee cause or allow the deposit or disposal of any such Hazardous Substances on Premises.

(d) Lessee shall disclose to Lessor the specific information regarding Lessee's disposal of any Hazardous Substances placed on Premises by Lessee and provide written documentation of its safe and legal disposal.

(e) Breach of any of these covenants, terms, and conditions shall give Lessor the authority to immediately terminate this Lease and/or to shut down Lessee's operations thereon, pending rectification of the breach, in which case, Lessee will continue to be liable under this Lease to remove, and mitigate all Hazardous Substances placed by Lessee on Premises. Lessee shall be responsible for, and bear the entire cost of removal disposal of all Hazardous Substances introduced to the Premises by Lessee during Lessee's period of use and possession of Premises. Lessor may pass through to Lessee any and all costs of removal and mitigation of Hazardous Substances incurred by Lessor as a result of Lessee's activities on Premises. Notwithstanding the foregoing, Lessee shall be responsible for any removal mitigation or decontamination, on or off Premises necessitated by the presence of such Hazardous

Substances placed on Premises by Lessee. Upon termination of this Lease, Lessee is required, in accordance with all laws, to remove from Premises any equipment or improvements placed on Premises by Lessee that could be contaminated by Hazardous Substances.

(f) Lessee shall defend, indemnify and hold harmless from any claims, liability, injury, damage, costs or expenses (including, without limitation, the cost of reasonable attorney's fees) arising as a result of the presence or use of any Hazardous Substances caused to be placed by the Lessee on Premises during the term of this Lease. The foregoing indemnity is intended to operate as an agreement pursuant to Section 107, subdivision (e) of CERCLA, 42 United States Code Section 9607, subdivision (e), and to California Health and Safety Code Section 25364, to insure, protect, hold harmless and indemnify Lessor from any liability created by the Lessee pursuant to such sections.

(g) Failure of Lessee to comply with any of the provisions of this Paragraph 21 shall be deemed breach of this Lease and give Lessor the right to terminate under Paragraph 26.

22. Liability and Indemnification.

(a) Lessee shall indemnify and hold Lessor harmless from and against any loss, liability, cost or expense, including without limitation, Lessor's reasonable attorneys fees and other costs of defense in any judicial or administrative proceeding, for any claim which may be incurred or sustained by Lessor as a result of Lessee's use of the Property, to the extent such loss, liability, cost, or expense is caused by the acts or omissions of Lessee or its agents and is not caused by the active negligence of Lessor or its agents.

(b) Lessor shall indemnify and hold Lessee harmless from and against any loss, liability, cost or expense, including without limitation, Lessee's reasonable attorneys fees and other costs of defense in any judicial or administrative proceeding, for any claim which may be incurred or sustained by Lessee as a result of Lessor's use of the Property, to the extent such loss, liability, cost, or expense is caused by the active negligence of Lessor or its agents and is not caused by the negligence of Lessee or its agents.

23. Insurance.

(a) Lessee shall maintain the following insurance throughout the term of the agreement:

- (i) general liability insurance for claims for bodily injury or death and property damage with combined single limits of not less than three million dollars (\$3,000,000) per occurrence;
- (ii) worker's compensation insurance insuring against and satisfying Lessee's obligations and liabilities under the workers' compensation law of the State of California; and
- (iii) if Lessee operates owned, hired, or non-owned vehicles on or about the Property, comprehensive automobile liability insurance with a

limit of not less than one million dollars (\$1,000,000) combined bodily injury and property damage.

(b) Each such policy (except worker's compensation) shall list Lessor as an additional insured and shall provide that it will not be terminated during the term of the Lease or modified during the term of the Lease to affect the coverage required except after thirty (30) days prior notice thereof to Lessor. Lessee shall have the right to fulfill its insurance obligations under paragraph 23(a) above by obtaining an appropriate endorsement to any master policy of insurance Lessee may maintain.

(c) Lessee shall, within thirty (30) days following Lessee's occupancy and annually thereafter, furnish to Lessor certificates of insurance, in a form acceptable to Lessor, listing Lessor as an additional insured.

(d) At all times during the term of the agreement, Lessee will carry and maintain fire and extended coverage insurance covering the Premises, the Telecommunications Facilities and any common area furnishings in amounts not less than their full replacement cost. Lessee shall also carry commercial general liability insurance on the Premises and Telecommunications Facilities, including any common area, in amounts reasonably determined by Lessee.

(e) Lessee waives any and all rights to recover against the Lessor, or against the officers, directors, shareholders, partners, joint venturers, employees, agent, customers, invitees, or business visitors of the Lessor for any loss or damage to such waiving party arising from any cause covered or required to be covered by any property insurance described in this paragraph or any other property insurance actually carried by the Lessee. Furthermore, Lessee, from time to time, will cause its insurers to issue waiver of subrogation rights endorsements to all property insurance policies carried in connection with the Premises or the contents thereof.

24. Quiet Enjoyment. Subject to the rights of Lessor under Paragraphs 2(d), 3(c) and 15, Lessee shall be entitled to quiet enjoyment of the Premises and the access and utility areas on the Property, and Lessor shall not, nor shall Lessor permit its lessees, licensees, invitees or agents or anyone claiming a right to the Premises or said areas under Lessor to interfere in any way with Lessee's enjoyment of the same. During the term of this Lease and any extension thereof, Lessor agrees that Lessee will have the exclusive right to lease the Premises from Lessor in order to operate Telecommunications Facilities providing transmission and receive facilities for wireless providers, and that Lessor will not grant a lease, sublease or other license or right to use the Premises to any other party for operation of Telecommunication Facilities.

25. Waiver of Subrogation. Lessee hereby agrees not to assign to any insurance company the right to any cause of action for damage to the property of Lessee located on the Premises and the access and utility areas on the Property, which Lessee now has or may have in the future against Lessor, and expressly waives all right of subrogation for such damage. Lessor hereby agrees not to assign to any insurance company the right to any cause of action for damage to the property of Lessor located on the Premises and/or the Real Property, which Lessor now has or may have in the future against Lessee, and expressly waives all right of subrogation for

such damage. It is specifically understood that this Paragraph 25 shall apply only where such insurance allows the insured to enter into an agreement waiving subrogation rights and this Paragraph 25 shall apply only with respect to the insured loss for the property covered by such insurance policies.

26. Termination.

(a) In addition to other events permitting termination hereunder, this Lease may be terminated, without any penalty or further liability, as follows:

- (i) Except as otherwise provided in Paragraph 16, by either party, upon a breach or default of any covenant or term hereof, either express or implied, by the other party, other than a failure to make any payment of Rent or an installment of Rent as and when due, which breach or default is not cured within thirty (30) days from receipt of written notice; provided, that if efforts to cure are commenced within said thirty (30) day period and thereafter diligently prosecuted to completion, such period shall be extended for a period of time not to exceed six (6) months;
- (ii) By Lessor, upon thirty (30) days prior written notice to Lessee in the event of a Default (as defined in Paragraph 27 (a) or (b)) by Lessee;
- (iii) By Lessee, upon thirty (30) days prior written notice to Lessor, in the event that the Premises become technologically unsuitable, in Lessee's opinion, for Lessee's Telecommunications Facilities, including but not limited to incurable radio signal interference and any addition, alteration or new construction on, adjacent to or in the vicinity of the Premises and/or the Real Property that blocks, either partially or totally, transmission or receiving paths;
- (iv) By Lessee, upon thirty (30) days prior written notice to Lessor, in the event that any license, permit, consent, authorization or approval, Lessee considers to be necessary or convenient for the construction, operation, maintenance, reconstruction, modification, addition to or removal of the Telecommunications Facilities is not, in Lessee's sole discretion, reasonably obtainable or maintainable in the future; and
- (v) Lessor may terminate subsequent Renewal Terms, for convenience, upon written notification at least one year in advance of commencement of the subject Renewal Term. Notwithstanding the above, Lessor shall use good faith efforts to locate a Substitute Premises as provided in Paragraph 3(c) of this Lease, within the Lessor's Real Property.

(b) Effective as of the date of termination, whether pursuant to this or other Paragraphs of this Lease, this Lease shall be of no further force or effect and each party shall, be

released from all future obligations hereunder. However, all liabilities or obligations incurred prior to the date of termination shall continue to remain in effect.

27. Default. The occurrence of any one or more of the events set forth in this Paragraph 27 shall constitute a material default and breach of this Lease by Lessee:

(a) The failure of Lessee to make any payment of Rent as and when due, where such failure continues for a period of ten (10) days after written notice from Lessor;

(b) The abandonment or vacation of the Premises by Lessee.

(c) Breach by Lessee of any covenant or term hereof, express or implied, except as described in (a) or (b) of the paragraph.

28. Assignment. Lessee shall not assign this Lease without the prior written consent of Lessor, which consent shall not be unreasonably withheld or delayed; provided, however, that Lessee shall have the right to assign this Lease without the consent of Lessor to any parent, subsidiary, associate or affiliate of Lessee, or to any person or entity which is controlled by or under common control with Lessee, or any corporation into which Lessee may be merged or consolidated or which purchases all or substantially all of the assets of Lessee. Lessee shall have the right, without the consent of Lessor, to grant to its supplier of the Telecommunications Facilities ("Lender"), a security interest in this Lease and all of Lessee's rights hereunder and, upon default of Lessee's obligations to Lender, Lender shall be entitled to exercise all of Lender's rights and remedies as a secured party with respect to this Lease and the rights of Lessee hereunder, which may include, without limitation the right to foreclose upon, and the right to transfer to a third party, this Lease and all of such rights.

29. Lessee's Customers and Subleasing. Lessor understands and acknowledges that Lessee's telecommunications business entails allowing Lessee's customers to construct, operate, maintain, reconstruct, modify, add to and remove their telecommunication facilities on the Premises, and to that end, Lessor agrees that Lessee, in the conduct of its telecommunications business, shall have the right, without the consent of Lessor, to sublease or license all or any portion of the Telecommunications Facilities for such use by Lessee's customers as well as Lessee; provided, however, that no such subleasing or licensing shall in any way relieve Lessee of any of its obligations, express or implied, under this Lease. Lessee shall also have the right, without the consent of Lessor, to sublease or license all or any portion of the Premises not used by Lessee in connection with its Telecommunications Facilities; provided, however, that no such subleasing or licensing shall in any way relieve Lessee of any of its obligations, express or implied, under this Lease.

30. Notices. Any and all notices, demands, consents, approvals or authorizations required or permitted under this Lease shall be in writing. They shall be served on the other party hereto personally, by nationally recognized delivery service, by facsimile or by registered mail, return receipt requested. If served by registered mail, service shall be deemed made three (3) business days after deposit in the United States mail, first class postage prepaid, addressed to the party to whom such notice is to be given as provided below. Otherwise, service shall be

deemed made at the time it is received by the individual to whom the notice is addressed. Either party may change the name and/or address to which notice is to be given, in accordance with the provisions of this Paragraph 30. Rejection or other refusal to accept notice, or the inability to deliver due to a change in address of which no notice was given shall be deemed to be receipt of notice. Notices shall be addressed as follows:

If to Lessee:

Mountain Union Telecom
27134B Paseo Espada, Suite 222
San Juan Capistrano, California 92675
Facsimile: (949) 493-7254

If to Lessor:

General Manager
Irvine Ranch Water District
Post Office Box 57000
Irvine, California 92619-7000
Facsimile: (949) 453-1228

31. Brokers Commissions. Lessor and Lessee hereby acknowledge that no broker has been involved in this transaction.

32. Attorneys Fees. If any action, suit or proceeding is brought by any party with respect to any matter arising out of this Lease, the prevailing party shall be entitled to reasonable attorneys fees and court costs in addition to such other relief as such party may be entitled.

33. Entire Agreement. This Lease constitutes the entire understanding of the parties with respect to the matters set forth herein and supersedes all prior or contemporaneous understandings or agreements, whether written or oral, between the parties with respect to the subject matter hereof.

34. Severability. If any provision of this Lease shall be invalid or unenforceable with respect to any party, the remainder of this Lease shall not be affected and each provision shall be valid and enforceable to the fullest extent permitted by law.

35. Amendment. Neither this Lease nor any provision hereof may be waived, modified, amended, discharged or terminated except by an instrument in writing signed by both parties. The terms of lease of any premises for other telecommunications facilities added to this Lease by amendment are subject to negotiation. During the first sixty (60) months following completion of the Telecommunications Facilities on the Premises, if Lessee enters into any telecommunications lease or equivalent agreement for land on which the Lessee will construct and operate a telecommunications tower with a party in Southern California (Counties of Orange, Los Angeles, Ventura, Riverside, San Bernardino, and San Diego) having a reasonably comparable site suitable for communication facilities to be built by Lessee, with regard to ground elevation, radio frequency propagation, and tower height and gross capacity, which lease has economic terms which are more favorable to the lessor thereunder than those provided for the Lessor under the terms of this Lease, then Lessee shall so notify Lessor and Lessor and Lessee shall enter into an amendment hereof to include in this Lease any terms in such other lease or agreement that are more favorable to the Lessor than the terms of this Lease.

36. Counterparts. This Lease may be executed in counterparts, all of which together shall constitute an original.

37. Successors. The covenants and conditions contained in this Lease shall, subject to the provisions regarding assignment, subleasing and licensing set forth herein, inure to the benefit of and be binding upon the heirs, successors, executors, administrators, Sublessees, licensees and assigns of the parties.

38. Applicable Law. This Lease shall be governed by and construed in accordance with the laws of the state where the Premises are located.

39. Recordation of Lease. Lessee shall have the right to record a Memorandum of Lease in the office of the County Recorder in the County in which the Premises are located and Lessor agrees to execute a Memorandum of Lease (in substantially the form attached hereto as Exhibit "D") for such purpose.

40. Right to Lease. Lessor represents and warrants that Lessor owns the Real Property; that subject to Paragraph 2(b), Lessor has the right to lease the Premises to Lessee pursuant to the terms of this Lease; that the consummation of this Lease will not violate or cause a breach of any document, agreement or instrument to which Lessor is a party and by which, it or any part of the Real Property or the Premises is or may be bound; and that Lessor will not dispose of any hazardous waste upon the Real Property.

41. Lease Binding. In the event that Lessor and/or Lessee is a partnership, corporation, limited liability company or other entity, each undersigned represents and warrants that he or she is a partner, officer, agent or other representative of the Lessor and/or Lessee, as the case may be, and is duly authorized to execute this Lease, and does hereby bind the Lessor and/or Lessee, as the case may be, to this Lease.

42. Estoppel Certificate. Either party shall, at any time and from time to time upon not less than ten (10) days prior written notice from the other party (the "requesting party"), execute, acknowledge and deliver to the requesting party a statement in writing: (a) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified, is in full force and effect) and the date to which the Rent is paid in advance, and (b) acknowledging that there are not, to certifying party's knowledge, any uncured defaults hereunder on the part of the requesting party or specifying such defaults if any are claimed. Any such statement may be relied upon by any prospective purchaser or any party intending to place an encumbrance upon all or any portion of the Real Property.

43. Subordination and Attornment.

(a) Except as otherwise provided herein, this Lease is hereby made subordinate to the lien of any mortgage or deed of trust to any bank, insurance company or other lending institution, now or hereafter in force against the Real Property, and to all advances made or hereafter made upon the security thereof. Any mortgagee of any mortgage or beneficiary of

any deed of trust at any time existing or encumbering the estate of Lessor in the Property may, at its option, subordinate its mortgage or deed of trust to this Lease. As a condition to be satisfied prior to the subordination of this Lease to any mortgage or deed of trust, now or hereafter in force against the Real Property, Lessee shall receive a non-disturbance agreement reasonably acceptable to Lessee in form and content from such mortgagee or deed of trust beneficiary.

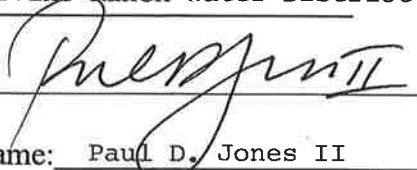
(b) In the event of the sale or assignment of Lessor's interest in the Premises, or in the event any proceedings are brought for foreclosure, or in the event of the exercise of the power of sale under any mortgage or deed of trust made by Lessor covering the Premises, Lessee shall attorn to the purchaser or assignee upon any such foreclosure or sale or assignment and recognize such purchaser or assignee as Lessor under this Lease; provided, that a non-disturbance agreement is executed by such purchaser or assignee which is reasonably acceptable to Lessee in form and content.

(c) Lessor and Lessee, within fifteen (15) days after the date of receipt of a written request by the other, shall execute and deliver such instruments and certificates to carry out the intent of this Paragraph 43.

IN WITNESS WHEREOF, Lessor and Lessee have executed this Lease as of the date first hereinabove written.

Lessor: Irvine Ranch Water District

Lessee: Mountain View Reclamation of California LLC

By: 

By: 

Printed Name: Paul D. Jones II

Printed Name: R.E. Douglas

Printed Title: General Manager

Printed Title: Managing Member

Exhibit A
Legal Description of the Real Property

That portion of lot 242, Block 121 of Irvine's Subdivision in the county of Orange, state of California, as per map recorded in Book 1, Page 88 of Miscellaneous Record

Maps in the office of the County Recorder of said county described as follows:

Parcel 1

Commencing at the most westerly corner of said Lot 242 as shown on a map recorded in Book 24, page 48 of Records of Surveys in the office of said County Recorder, said corner also being the centerline intersection of Trabuco Road and Sand Canyon Avenue; thence N 40° 37' 16" E 650.00 feet along said centerline of Sand Canyon Avenue; thence S 49° 22' 44" E 60.00 feet to the Point of Beginning; thence continuing S 49° 22' 44" E 530.00 feet; thence N 40° 37' 16" E 560.00 feet; thence N 49° 22' 44" W 530.00 feet to a point in a line that is parallel with and distant southeasterly 60.00 feet from the centerline of said Sand Canyon Avenue; thence S 40° 37' 16" W 560.00 feet along said parallel line to Point of Beginning.

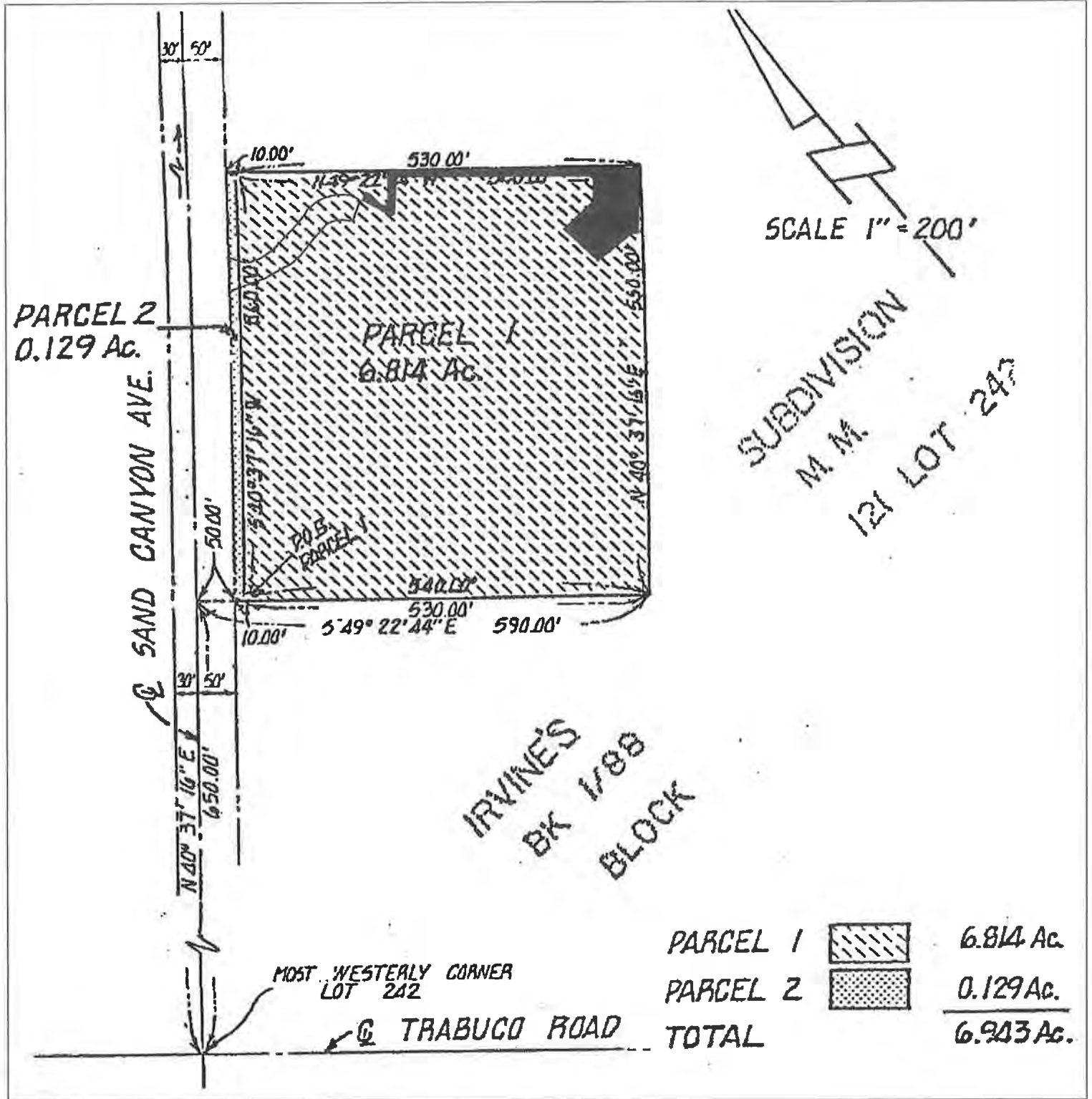
Parcel 2

A strip of land 10.00 feet in width, the northwesterly line of which is parallel with and distant southeasterly 50.00 feet at right angles from the following described line:

Beginning at a point in the northwesterly line of said Lot 242, said line is also being the centerline of Sand Canyon Avenue, distant thereon N 40° 37' 16" E 650.00 feet from the most westerly corner of said Lot 242 as shown on map recorded in Book 24, page 48 of Records of Surveys in the office of said County Recorder; thence N 40° 37' 16" E 560.00 feet.

EXHIBIT "B"

Leased Premises within Real Property

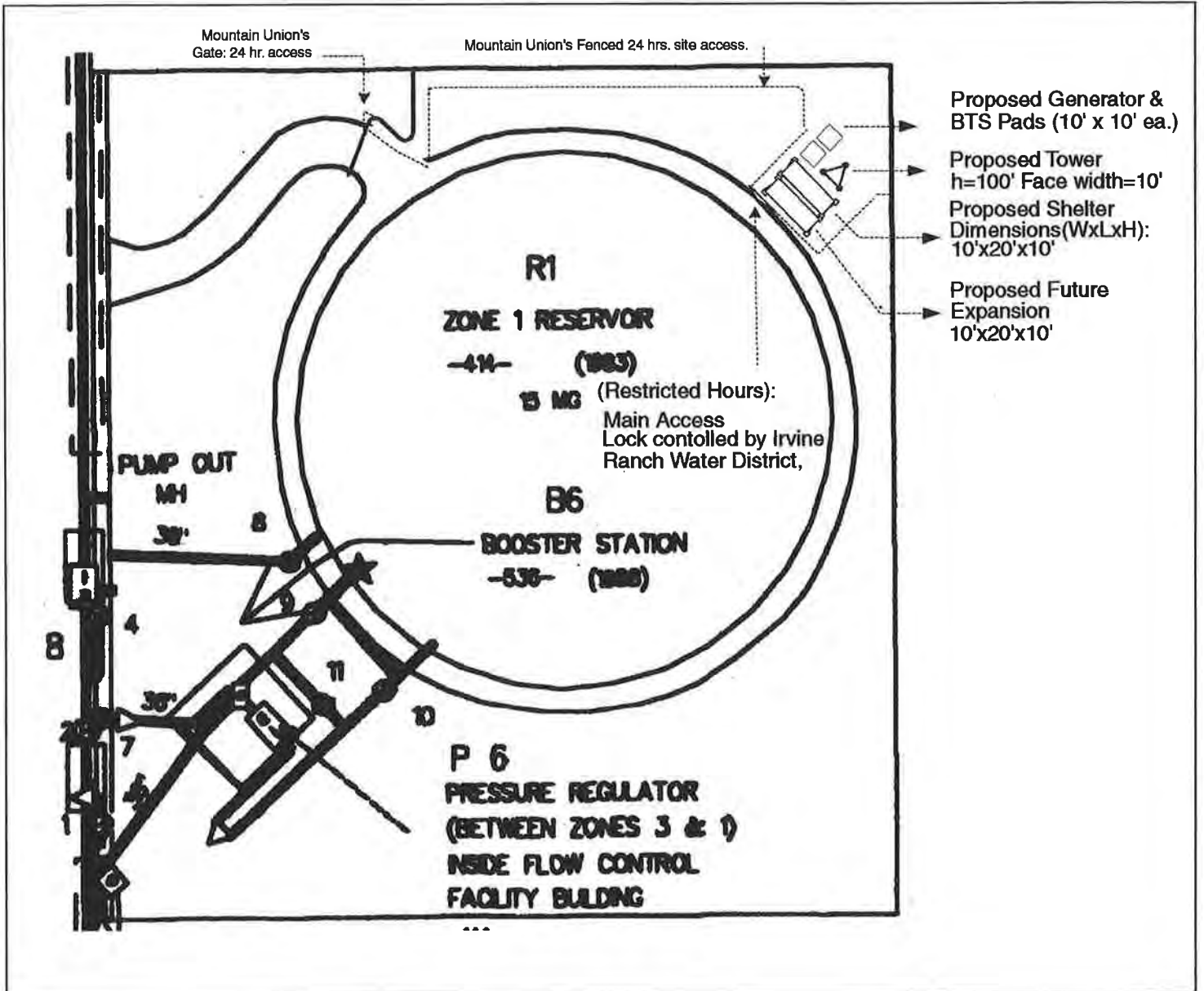


The parties agree that this Exhibit "B" will be replaced with a new Exhibit "B" which shall more particularly describe the location and dimensions of the "Leased Premises within Real Property," when the survey has been completed.



EXHIBIT "C"

Site Plan



The parties agree that this "Exhibit "C" will be replaced with a new Exhibit "C" which shall more particularly describe the location and demensions of the tower, shelter (s) and other fixtures, when the as built drawing has been completed.

Exhibit D

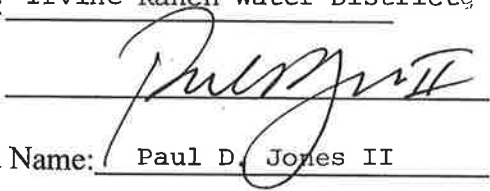
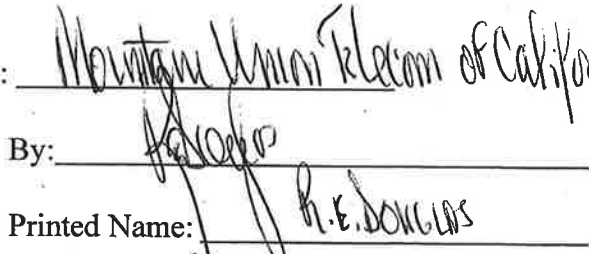
Recording requested by and
when recorded, return to:

MEMORANDUM OF LEASE AGREEMENT

THIS MEMORANDUM OF LEASE AGREEMENT, made and entered into on this 22 day of November, 1999 by and between IRVINE RANCH WATER DISTRICT ("Lessor") and MOUNTAIN UNION TELECOM ("Lessee"), is a record of that certain Telecommunications Premises Master Lease Agreement ("Lease") between Lessor and Lessee dated November 22, 1999 ("Lease Commencement Date"), which Lease contains, among other things, the following terms:

1. Leased Premises. This Lease pertains to that certain real property and improvements thereon, commonly known as Zone 1 Reservoir, and more particularly described in Exhibit "A" attached hereto ("Property"). Lessee has leased from Lessor a portion of the Property shown in the diagram in Exhibit "B" attached hereto ("Premises").
2. Term of Agreement and Options to Extend. The initial term of the Lease is no less than fifteen (15) years, commencing on the Lease Commencement Date. Lessee has the right to extend the Lease term for up to three (3) consecutive periods of five (5) years, each.
3. Lessee's Customers. Lessee, in the conduct of its telecommunications business, has the right, without the consent of Lessor, to sublease or license the Premises and Lessee's Telecommunications Facilities located thereon.
4. Ratification of Lease. By this Memorandum, the parties intend to record a reference to the Lease and do hereby ratify and confirm all of the terms and conditions of the Lease and do hereby declare that the Premises and the Property are in all respects subject to all of the applicable provisions of the Lease.

IN WITNESS WHEREOF, Lessor and Lessee have executed this Memorandum as of the date first hereinabove written.

Lessor: Irvine Ranch Water District Lessee: Mountain Union Telecom of California LLC
By:  By: 
Printed Name: Paul D. Jones II Printed Name: R.E. Douglas
Printed Title: General Manager Printed Title: Managing Member

STATE OF California)
COUNTY OF Orange) SS:



On Nov. 17, 1998^{9ac} before me, a Notary Public, personally appeared RE. Douglas personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that she/he executed the same in her/his authorized capacity, and that by her/his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

My County of Residence:

April Adams
Printed Name: April Adams

Orange

My Commission Expires:

5-8-03

STATE OF)
) SS:
COUNTY OF)

On 11/22, 1998⁹ before me, a Notary Public, personally appeared Paul D. Jones, II personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that she/he executed the same in her/his authorized capacity, and that by her/his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

My County of Residence:

Leslie Flesse
Printed Name: Leslie Flesse

Orange

My Commission Expires:

June 19, 2002



This Instrument Prepared By: _____

**AMENDMENT TO TELECOMMUNICATIONS
PREMISES MASTER LEASE AGREEMENT**

THIS AMENDMENT TO TELECOMMUNICATIONS PREMISES MASTER LEASE AGREEMENT (this "Amendment") is made and entered into this 14 day of January, 2002, by and between **IRVINE RANCH WATER DISTRICT**, a California water district organized pursuant to California water district law ("Lessor"), and **MOUNTAIN UNION TELECOM OF CALIFORNIA, LLC**, a California limited liability company ("Lessee").

WHEREAS, on or about November 16, 1999, Lessor and Lessee entered into that certain Telecommunications Premises Master Lease Agreement (the "Lease") for portion of the land and/or water works, buildings or facilities lying and being situated at Zone 1 Reservoir located within Lessor's jurisdictional boundaries (the "Premises"), said Premises being more specifically described in the Lease; and

WHEREAS, it is the intention of the parties to amend the Lease in accordance with the terms and conditions more specifically set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lessor and Lessee hereby agree as follows:

1. **Minimum Rent.** The language of Paragraph 4 of the Lease (captioned "Minimum Rent") shall be deleted in its entirety, and the following language shall be substituted in its place and stead:

"(a) Lessee shall initially pay Lessor, without set off or deduction, a basic annual minimum rent in the amount of \$12,000.00 (the initial "Minimum Rent"). The initial Minimum Rent shall be payable in advance in monthly installments of \$1,000.00 on the first day after the Rent Commencement Date (defined below) and on the first day of each calendar month thereafter during the Term of this Lease, subject to such increases as are more specifically described herein. If the Rent Commencement Date or end of the Term of this Lease falls on other than the first day of a given calendar month, Minimum Rent shall be prorated for the resulting partial calendar month(s) according to the number of days in such partial month.

"(b) The payment of monthly Minimum Rent installments by Lessee to Lessor under the terms of this Lease shall commence November 22, 2000 (the "Rent Commencement Date").

(c) Beginning on July 1, 2002, and continuing through June 30, 2003, the Minimum Rent payable by Lessee to Lessor hereunder shall be increased to an amount equal to an annual rate of \$18,000.00, payable in advance in monthly installments of \$1,500.00.

(d) Effective on July 1, 2003 and continuing on the first day of July during each remaining year of the Initial Term and any Renewal Term(s), the then current annual Minimum Rent payable by Lessee to Lessor hereunder shall be increased by three percent (3%) over the annual Minimum Rent payable by Lessee for the preceding twelve (12) month period.”

2. **Percentage Rent.** The first grammatical paragraph of Paragraph 5 of the Lease (captioned “Percentage Rent”) shall be deleted in its entirety, and the following language shall be substituted in its place and stead:

“In addition to Minimum Rent provided for in Paragraph 4, Lessee shall be obligated to pay to Lessor, as “Percentage Rent,” an amount equal to the difference (not less than zero) between the Minimum Rent and forty percent (40%) of the Gross Income (as defined below). Percentage Rent shall be paid on a calendar year basis due at the times specified in Paragraph 6.”

3. **Amendment.** The language of Paragraph 35 of the Lease (captioned “Amendment”) shall be deleted in its entirety, and the following language shall be substituted in its place and stead:

“Neither this Lease nor any provision hereof may be waived, modified, amended, discharged or terminated except by an instrument in writing signed by both parties. The terms of lease of any premises for other telecommunications facilities added to this Lease by amendment are subject to negotiation. During the first sixty (60) months following completion of the Telecommunications Facilities on the Premises, if Lessee enters into any telecommunications lease or equivalent agreement for land on which the Lessee will construct and operate a telecommunications tower with a party in Orange County, California having the same effective lease term for a reasonably comparable site suitable for communication facilities to be built by Lessee, with regard to ground elevation, radio frequency propagation, and tower height and gross capacity, which lease has economic terms applied over the same effective lease terms which are more favorable to the lessor thereunder than those provided for the Lessor under the terms of this Lease, then Lessee shall so notify Lessor, and Lessor and Lessee shall enter into an amendment hereof to include in this Lease any terms in such other lease or agreement that are more favorable to the Lessor than the terms of this Lease.”


4. **Ratification of Tower Site Agreement.** All other terms and conditions of the original Telecommunications Premises Master Lease Agreement which are not expressly modified by and are not inconsistent with the terms of this Amendment are hereby ratified and affirmed, and the same shall remain in full force and effect.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties have duly executed and affixed their seals as of the dates set forth below.

Lessor:

IRVINE RANCH WATER DISTRICT


By: 
Printed Name: Paul D. Jones II

Printed Title: General Manager

Date: January 14, 2002

Lessee:

**MOUNTAIN UNION TELECOM
OF CALIFORNIA, LLC**

By: 
Printed Name: DAVID E. WILLIAMS

Printed Title: President

Date: 3-6-02

**SECOND AMENDMENT TO
TELECOMMUNICATIONS PREMISES MASTER LEASE AGREEMENT**

THIS SECOND AMENDMENT TO TELECOMMUNICATIONS PREMISES MASTER LEASE AGREEMENT (this "Second Amendment") is entered into this ____ day of _____, 20 ____, by and between IRVINE RANCH WATER DISTRICT, a California water district organized pursuant to California water district law, with a mailing address of P.O. Box 57000, Irvine, California 92619-7000 ("Lessor") and CROWN CASTLE MU LLC, a Delaware limited liability company, with a mailing address of 2000 Corporate Drive, Canonsburg, Pennsylvania 15317 ("Lessee"). Lessor and Lessee are collectively referred to as the "Parties".

RECITALS

A. Lessor and Mountain Union Telecom of California, LLC, a California limited liability company ("Original Lessee") entered into a Telecommunications Premises Master Lease Agreement dated November 22, 1999 (the "Original Lease"), a memorandum of which was recorded in the Official Records of Orange County, California on October 23, 2001 at Instrument No. 20010748447, whereby Original Lessee leased certain real property, together with access and utility easements, located in Orange County, California from Lessor (the "Premises"), all located within certain real property owned by Lessor.

B. The Original Lease was amended by an Amendment to Telecommunications Premises Master Lease Agreement, dated January 14, 2002. The Original Lease and all subsequent amendments are collectively referred to as the "Lease". All terms not defined in this Second Amendment have the meanings set forth in the Lease.

C. Original Lessee assigned, and Lessee assumed, all right, title, and interest of Original Lessee in and to the Lease, as well as Original Lessee's obligations under the Lease by merger with Original Lessee, which is evidenced by a Certificate of Merger dated July 25, 2006 filed with the Delaware Secretary of State, and therefore, pursuant to Section 28 of the Original Lease, the consent of Lessor to such assignment was not required.

D. The Initial Term commenced on November 22, 1999, and expired on November 21, 2014. The Initial Term was subject to renewal for three (3) additional periods of five (5) year each. The Lease was renewed for the first Renewal Term, and therefore, the current expiration date of the Lease is November 21, 2019. The Lease may be renewed for two (2) additional Renewal Terms of five (5) years each, subject to the terms and conditions set forth in the Lease. If the Lease is renewed for the additional two (2) remaining Renewal Terms, the expiration date of the Lease will be November 21, 2029.

E. Lessor and Lessee desire to amend the Lease by memorializing certain agreements between them, as more particularly described below.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are acknowledged, Lessor and Lessee agree as follows:

1. Recitals. The Parties acknowledge and confirm the accuracy of the foregoing recitals.

2. Term.

a. The first sentence of Section 3(b) of the Original Lease, and only that sentence, is hereby deleted and the following is inserted in its place:

As long as Lessee is not in default of any provision of this Lease, Lessee shall have the right, to be exercised in Lessee's sole discretion, except as provided in Paragraph 26(a)(v), to extend this Lease at the expiration of the Initial Term for up to five (5) additional successive terms of five (5) years each (each a "Renewal Term").

b. Lessor and Lessee hereby acknowledge that the Lease has been renewed for its first Renewal Term, leaving a balance of four (4) Renewal Terms. If the Lease is renewed pursuant to the terms and conditions set forth in the Lease for each of the four (4) remaining Renewal Terms, the final expiration date of the Lease will be November 21, 2039.

3. Consideration for Additional Renewal Terms; Increase in Minimum Rent.

a. As consideration for Lessor's agreement to increase the number of Renewal Terms from three (3) to five (5) (as provided in Section 2 above), Lessee shall pay to Lessor the sum of Thirty Thousand and 00/100 Dollars (\$30,000.00) within sixty (60) days

following full execution of this Second Amendment. In the event that this Second Amendment is not fully executed by both Lessor and Lessee for any reason, Lessee shall have no obligation to pay the \$30,000.00 to Lessor as set forth in this Section and the lease term shall not be extended pursuant to Section 2 of this Second Amendment. In no event shall the Memorandum of Second Amendment to Telecommunications Premises Master Lease Agreement be recorded in the Official Records of Orange County, California until Lessee pays the \$30,000.00 to Lessor as set forth in this Section.

b. Commencing on November 22, 2024 and continuing on November 22nd of each year thereafter (including during any and all Renewal Terms), the Minimum Rent will increase annually by four percent (4%) over the Minimum Rent paid in the immediately preceding lease year. Such rent escalations shall replace and be in lieu of any rent escalations scheduled to occur pursuant to the Lease on or after November 22, 2024.

4. Contract Change Order Reimbursement. Lessee shall pay to Lessor a one-time amount of Twenty-Six Thousand Four Hundred Eighty-Five and 85/100 Dollars (\$26,485.85) concurrently upon full execution of this Second Amendment as reimbursement for Lessor's Contract Change Order dated December 11, 2018, Purchase Order No. 608426, Project No. 06401. Lessor acknowledges and agrees that this payment constitutes full and final satisfaction of any amounts arising from Lessor's claims regarding construction delays related to Lessor's installation of reservoir tanks at the Premises prior to the full execution of this Second Amendment. All amounts required to be paid by Lessee to Lessor under the Lease, including this Second Amendment are deemed to be "Rent".

5. Lessor's Cooperation. If requested by Lessee, Lessor will execute, at Lessee's sole cost and expense, all documents required by any governmental authority in connection with any development of, or construction on, the Premises, including documents necessary to petition the appropriate public bodies for certificates, permits, licenses and other approvals deemed reasonably necessary by Lessee to utilize the Premises for the purpose of construction, maintaining and operating communications facilities, including without limitation, tower structures, antenna support structures, cabinets, meter boards, buildings, antennas, cables, equipment and uses incidental thereto (collectively, the "Governmental Authority Documents").

Notwithstanding the foregoing, Lessor's cooperation as provided in this Section 5 will be at no cost or liability to Lessor. Lessor agrees to be a named applicant, in its proprietary capacity as the property owner only, if required by the governmental authority. Lessor shall be entitled to no further consideration with respect to any of the matters set forth in this Section 5; provided, however, Lessee agrees to reimburse Lessor for, within sixty (60) days after Lessor's written demand, all reasonable fees and costs (including attorneys' fees) incurred by Lessor in connection with Lessor's review and execution of any Governmental Authority Documents, and Lessor's written demand shall include documentation reasonably evidencing such fees and costs.

6. Representations and Warranties.

a. Lessee represents and warrants for the benefit and reliance of Lessor as follows: (i) it is the current tenant under the Lease and has not sublet, assigned or hypothecated or otherwise transferred all or any portion of Lessee's interest, except Lessee has subleased portions of the Premises to AT&T, T-Mobile and Sprint; (ii) it merged with Original Lessee; (iii) the Lease, as amended, is in full force and effect and contains the entire agreement between Lessor and Lessee with respect to the Premises; and (iv) it is duly authorized and has the full power, right and authority to enter into this Second Amendment and to perform all of its obligations under the Lease as amended.

b. Lessor represents and warrants for the benefit and reliance of Lessee as follows: (i) the Lease, as amended, is in full force and effect and contains the entire agreement between Lessor and Lessee with respect to the Premises; and (ii) it is duly authorized and has the full power, right and authority to enter into this Second Amendment and to perform all of its obligations under the Lease as amended.

c. Each Party represents to the other Party that to such Party's actual knowledge, no breaches or defaults exist as of the date of this Second Amendment.

7. After Hours Charges. Effective upon the full execution of this Second Amendment, Lessee shall pay the sum of \$180 per hour to Lessor ("After Hours Charges") if, at Lessee's request, Lessor must take any action to access the Premises (including, without limitation, opening gates or moving equipment) on a Saturday, Sunday, legal holiday, or between

the hours of 4 p.m. and 7 a.m. Pacific time Monday through Friday. Lessee agrees to pay the After Hours Charges to Lessor within thirty (30) days after written request by Lessor.

8. IRS Form W-9. Lessor agrees to provide Lessee with a completed IRS Form W-9, or its equivalent, upon execution of this Second Amendment and at such other times as may be reasonably requested by Lessee. In the event the Premises is transferred, the succeeding lessor shall have a duty at the time of such transfer to provide Lessee with a completed IRS Form W-9, or its equivalent, and other related paper work to effect a transfer in the rent to the new lessor.

9. Notices. Lessee's notice address as stated in Section 30 of the Original Lease is amended as follows:

If to Lessee: Crown Castle MU LLC
Attn: Legal – Real Estate Dept.
2000 Corporate Drive
Canonsburg, PA 15317

10. Remainder of Lease Unaffected. The Parties acknowledge that except as expressly modified by this Second Amendment, the Lease remains unmodified and in full force and effect. In the event of any conflict or inconsistency between the terms of this Second Amendment and the Lease, the terms of this Second Amendment shall control. The terms, covenants and provisions of this Second Amendment shall extend to and be binding upon the respective executors, administrators, heirs, successors and permitted assigns of Lessor and Lessee. This Second Amendment may be executed simultaneously or in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement.

11. Survey. Lessee reserves the right, at its discretion and at its sole cost, to obtain a survey ("Survey") specifically describing the Premises and any access and utility easements associated therewith. Lessee shall promptly provide a true, correct and complete copy of any Survey to Lessor. Lessor and Lessee agree to discuss in good faith attaching the Survey as an exhibit to the Lease and any related memorandum for recording which Survey would update and replace the existing description of the Premises under the Lease.

[Execution Pages Follow]

This Second Amendment is executed by Lessor as of the date first written above.

LESSOR:
IRVINE RANCH WATER DISTRICT,
a California water district organized pursuant
to California water district law

By: _____
Print Name: _____
Print Title: _____

[Lessee Execution Page Follows]

This Second Amendment is executed by Lessee as of the date first written above.

LESSEE:
CROWN CASTLE MU LLC,
a Delaware limited liability company

By: _____
Print Name: _____
Print Title: _____

**THIS PAGE WAS
INTENTIONALLY
LEFT BLANK**

July 8, 2019

Prepared by: T. Bonkowski / M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook



CONSENT CALENDAR

MICHELSON FORCE MAIN IMPROVEMENTS BUDGET INCREASE, CONTRACT CHANGE ORDER, AND VARIANCE

SUMMARY:

Rehabilitation of the existing 12-inch force main in Michelson Drive with cured-in-place pipe (CIPP) has been underway for many months and has encountered several challenges due to utility conflict, work hour changes, loss of production, and equipment stand-by charges. Staff recommends that the Board:

- Authorize a budget increase in the amount of \$750,000, from \$2,217,300 to \$2,967,300;
- Authorize the General Manager to execute Contract Change Order (CCO) No. 7 in the amount of \$113,314.72 with Insituform Technologies; and
- Authorize the General Manager to execute Variance No. 4 in the amount of \$46,370 with Kleinfelder for the Michelson Force Main Improvements.

BACKGROUND:

The Michelson sewer force main, located in Michelson Drive between Jamboree Road and Riparian View, is a 12-inch ductile iron force main that conveys sewage from the Michelson Lift Station to either the Orange County Sanitation District or the Michelson Water Recycling Plant (MWRP). In summer 2015, staff repaired a corrosion-induced leak on the sewer force main in Michelson Drive, between the Michelson Lift Station and Riparian View. Video inspection of both force main segments revealed significant corrosion at most pipe joints. Kleinfelder completed the engineering design to rehabilitate both sewer force main segments with CIPP lining and a construction contract was awarded to Insituform Technologies.

Contract Change Order No. 7:

During the course of construction, an existing electrical duct bank within Michelson Drive was discovered that conflicted with the locations of proposed vaults on the force main, requiring changes to the civil and traffic control plan sheets. Insituform performed additional potholing and the plans were revised. Due to the conflicts, Vault No. 7, located east of Riparian View, was changed to a manhole, and changes to the traffic control plans were required by the City of Irvine. The traffic control scheme for construction activities within the street intersection of Michelson Drive and Riparian View will cause significant additional work including the daily covering and uncovering of the left turn pavement arrows with tape to prohibit westbound vehicles on Michelson Drive to turn left onto Riparian View. This additional work will cause a loss of production in installing the new sewer pipeline beyond the new Manhole No. 7, extending the construction schedule. Additionally, trench excavation and pipe installation are also affected by the proximity of the existing electrical duct bank. CCO No. 7 also includes additional hydrostatic pressure testing of the force main as a completed unit to ensure no leaks within the

new vaults. CCO No. 7, in the negotiated amount of \$113,317.72, is attached as Exhibit “A”. A construction change order summary is attached as Exhibit “B”.

Variance No. 4:

Kleinfelder has completed additional work during the construction phase of this project including multiple revisions to the traffic control plans and coordination of the plans with the City of Irvine, a revision to the design of two vaults housing tee fittings due to conflicts with existing underground utilities, additional site visits and responses to Requests for Information, and plan revisions to reflect field conditions. Variance No. 4 in the amount of \$46,370 is attached as Exhibit “C”.

FISCAL IMPACTS:

Project 07097 is included in the FY 2019-20 Capital Budget. Staff requests a budget increase in the amount of \$750,000 to fund construction of the project as shown in the following table:

Project No.	Current Budget	Addition <Reduction>	Total Budget
07097	\$2,217,300	\$750,000	\$2,967,300

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, 15301. Section 15301 provides exemption for minor alterations of existing structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. Additionally, State Guideline 15282 provides exemptions for projects that involve the installation of new pipeline or maintenance, repair, restoration, removal, or demolition of an existing pipeline as set forth in Section 21080.21 of the Public Resources Code, as long as the project does not exceed one mile (or 5,280 feet) in length. A Notice of Exemption for the project was filed with the County of Orange on May 18, 2017.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on June 26, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE A BUDGET INCREASE IN THE AMOUNT OF \$750,000, FROM \$2,217,300 TO \$2,967,300, AUTHORIZE THE GENERAL MANAGER TO EXECUTE CONTRACT CHANGE ORDER NO. 7 IN THE AMOUNT OF \$113,317.72 WITH INSITUFORM TECHNOLOGIES, AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 4 IN THE AMOUNT OF \$46,370 WITH KLEINFELDER FOR THE MICHELSON FORCE MAIN IMPROVEMENTS, PROJECT 07097.

Consent Calendar: Michelson Force Main Improvements Budget Increase, Contract Change
Order and Variance

July 8, 2019

Page 3

LIST OF EXHIBITS:

Exhibit "A" – Contract Change Order No. 7

Exhibit "B" – Construction Change Order Summary

Exhibit "C" – Variance No. 4

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CONTRACT CHANGE ORDER

EXHIBIT "A"



Irvine Ranch Water District

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

C.O. No. 7

Final

Project No. 07097

Michelson Sewer Force Main Improvements

Project Title

Date: 6/20/2019

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
Addition costs for traffic control, time, lost production, change in scope & equipment at Vaults 4, 5, 6 & 7 Insituform & MPS (Phase 2 work)	\$ 113,314.72	\$ -	4
The contract completion date is extended from August 23, 2019 to August 27, 2019			
TOTAL	\$ 113,314.72	\$ -	4

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	= \$	113,314.72	4
2. ORIGINAL CONTRACT AMOUNT	= \$	1,787,045.00	110
3. TOTAL PREVIOUS CHANGE ORDER(S)	= \$	322,980.57	355
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	= \$	2,110,025.57	465
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	= \$	2,223,340.29	469

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

----- One Hundred Thirteen Thousand Three Hundred Fourteen and 72/100 Dollars -----

6/20/2019 Insituform David Bibayan
Date Contractor By:

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
	<u>6/20/19</u>	Department Director Approval Required <input type="checkbox"/>
IRWD Engineer or Consulting Engineer <u>Malcolm A. Cortez</u>	Date <u>6/20/19</u>	Executive Director Approval Required <input type="checkbox"/>
Principal Engineer	Date	General Manager Approval Required <input type="checkbox"/>
	<u>6/20/19</u>	Board Approval Required <input checked="" type="checkbox"/>
Executive Director of Engineering & Water Quality	Date	
General Manager	Date	
		607825
		Purchase Order No.

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

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

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Michelson Forcemain Improvements
PR 07097
Construction Change Order Summary

EXHIBIT "B"

Contractor: Insituform Technologies, Inc
Design Engineer: Kleinfelder

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$1,787,045.00						Original Days: 110				9/2/2018
Change Order	Description	Category	Initiated by (IRWD or Insituform)	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
1	Approved by Exe. Director of Engineering and Water Quality Approved on November 29, 2018 1.1 Additional potholing due to unmarked AT&T duct bank and revisions to Vault 2	B	IRWD	\$ 37,079.59	\$37,079.59	\$0.00	\$37,079.59	2.07%	\$1,824,124.59	21	0	21	131	9/23/2018
2	Approved by Executive Director of Engineering and Water Quality Approved on February 4, 2019 2.1 Additional costs for tools, equipment and lost production at Vaults 1, 2 and 3 for traffic control revisions due to mismarking of IRWD's existing pipelines, inadquate clearance (less than 5 feet) between construction zone and traffic.	B, C	Insituform	\$ 86,347.84	\$86,347.84	\$37,079.59	\$123,427.43	6.91%	\$1,910,472.43	60	21	81	191	11/22/2018
3	Approved by Executive Director of Engineering and Water Quality Approved on March 19, 2019 3.1 Non-compensatory contract time extension for additional traffic control changes on Phase 1 segment	B, C	IRWD	\$ -	\$0.00	\$123,427.43	\$123,427.43	6.91%	\$1,910,472.43	161	81	242	352	5/2/2019
4	Approved by Executive Director of Engineering and Water Quality Approved on May 2, 2019 4.1 Additional costs (set up time and equipment) associated with traffic control plan changes for Phase 1 lining work at vaults 1, 2 and 3 4.2 Cost for K-Rail required by City for traffic control during rain days.	B, C A	Insituform IRWD	\$ 38,303.21 \$ 3,795.00	\$42,098.21	\$123,427.43	\$165,525.64	9.26%	\$1,952,570.64	0	242	242	352	5/2/2019
5	Approved by General Manager Approved on May 30, 2019 5.1 Additional cost due to change of CIPP lining installation from weekdays to weekends. 5.2 Hydrostatic pressure testing of entire length of OCSD segment (Phase 1).	A A	IRWD IRWD	\$ 26,777.52 \$ 31,124.27	\$57,901.79	\$165,525.64	\$223,427.43	12.50%	\$2,010,472.43	25 21 4	242	267	377	5/27/2019
6	Approved by General Manager Approved on June 12, 2019 6.1 Additional costs for tools, equipment and lost production at Vaults 4, 5 and 6 for traffic control revisions due to inadquate clearance (less than 5 feet) between construction zone and traffic. 6.2 Non-compensatory contract time extension to process change orders	B, C A	Insituform IRWD	\$ 99,553.14 \$ -	\$99,553.14	\$223,427.43	\$322,980.57	18.07%	\$2,110,025.57	88	267	355	465	8/23/2019
7	Pending Board Approval 6.1 Additional costs for tools, equipment and lost production at Vaults 4, 5, 6, and 7 for traffic control revisions due to inadquate clearance (less than 5 feet) 6.2 Non-compensatory contract time extension to process change orders	B, C A	Insituform IRWD	\$ 113,314.72 \$ -	\$113,314.72	\$322,980.57	\$436,295.29	24.41%	\$2,223,340.29	4	355	359	469	8/27/2019

**Michelson Forcemain Improvements
PR 07097
Construction Change Order Summary**

Contractor: Insituform Technologies, Inc
Design Engineer: Kleinfelder

				Contract Amount						Contract Days				Original Completion Date:
				Original Contract Amount: \$1,787,045.00						Original Days: 110				9/2/2018
Change Order	Description	Category	Initiated by (IRWD or Insituform)	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Revised Completion Date
Category				Total Amount	% of Original Contract									
A - District Convenience/Initiation - Project Related				\$ 61,696.79	3.45%									
B - Differing Site Conditions				\$ 186,687.44	10.45%									
C - Design Oversight				\$ 187,911.06	10.52%									
D - Contractor Convenience/Initiation				\$ -	0.00%									
TOTAL (A + B + C + D)				\$ 436,295.29	24.41%									

EXHIBIT "C"

IRVINE RANCH WATER DISTRICT PROFESSIONAL SERVICES VARIANCE

Project Title: Michelson Force Main Improvements

Project No.: 7097

Date: April 4, 2019

Purchase Order No.: 533893

Variance No.: 4

Originator: IRWD ENGINEER/CONSULTANT Other (Explain) _____

Description of Variance (*attach any back-up material*):

This variance is for providing additional engineering service during the construction of the Michelson Force Main Improvements project

Engineering & Management Cost Impact:

Classification	Man hours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
Task 11.1 Project Meetings	24		3,780			3,780
Task 11.2 Contractor Request for Information	105		15,575			15,575
Task 11.3 Minor Plan Revisions	36		5,320			5,320
Task 11.4 Site Visits	30		4,600			4,600
Task 11.5 Shop Drawing Review	56		8,235			8,235
Task 11.6 Record Drawings	26		3,790			3,790
Task 11.7 Expensable Items	14		2,130			2,130
Task 11.8 TCPs for Bend Replacement (if necessary)	22		2,940			2,940
Total \$ =						46,370

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
11	Engineering Services During Construction	November 15, 2017	562 calendar days	May 31, 2019

Required Approval Determination:

Total Original Contract \$ <u>98,255</u>	<input type="checkbox"/> Director: Cumulative total of Variances less than or equal to \$50,000. <input type="checkbox"/> Executive Director: Cumulative total of Variances less than or equal to \$75,000. <input type="checkbox"/> General Manager: Cumulative total of Variances less than or equal to \$100,000. <input checked="" type="checkbox"/> Board: Cumulative total of Variances greater than \$100,000.
Previous Variances \$ <u>98,554</u> This Variance \$ <u>46,370</u>	
Total Sum of Variances \$ <u>144,924</u> New Contract Amount \$ <u>243,179</u>	
Percentage of Total Variances to Original Contract <u>147</u> %	

ENGINEER/CONSULTANT: Kleinfelder

IRVINE RANCH WATER DISTRICT

Mike Wendt Company Name
 _____ 4/4/2019
 Project Engineer/Manager Date

[Signature] 6/20/19
 _____ Date
 Department Director

[Signature] 4/4/2019
 _____ Date
 Engineer's/Consultant's Management

_____ Date
 General Manager/Board

IRVINE RANCH WATER DISTRICT

PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: Michelson Force Main Improvements

Project No.: 7097 Project Manager: Tom Bonkowski

Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	Additional work to pothole the Michelson Force Main and incorporate design changes	4/16/17	5/11/17	\$37,011
2	Additional Potholing	10/11/17	10/18/2017	\$24,218
3	Engineering Services During Construction	5/14/18	5/24/2018	\$37,325
4	Additional Engineering Services During Construction	11/19/18		\$46,370



April 4, 2019
 IRWD Reference No. 7097
 Kleinfelder Project No. 20173802.001A

Mr. Tom Bonkowski
Irvine Ranch Water District
 3512 Michelson Drive
 Irvine, California 92618

SUBJECT: Revised Professional Services Variance No. 4: Request for Engineering Services During Construction of IRWD Michelson Force Main Improvements Project

Dear Mr. Bonkowski:

Irvine Ranch Water District has requested that Kleinfelder prepare a variance including the scope and fee for providing engineering services during the construction of the Michelson Force Main Improvements Project. This revised variance would be the fourth variance on the existing Michelson Force Main Improvements Design contract.

The additional work includes multiple revisions to the traffic control plans, coordination with the City of Irvine traffic department, revised design of Vault 2, additional shop drawing reviews, additional RFIs, additional project meetings, modifications to Vault 7, additional site visits and minor plan revisions. Additionally, IRWD has requested a stand-alone additional cost for potential traffic control plans for the dig and replacement of bends with unacceptable wrinkles, if deemed necessary. This item will only be executed on approval from IRWD.

Attachment A identifies in detail the additional scope of service for the final design tasks.

Attachment B provides the detailed level of effort fee estimate for the additional work. The table below provides a summary of the fee estimate for the requested variance related to the tasks that are currently authorized.

Task	Current Fee, \$	Variance 4, \$	Revised Fee, \$
Task 1 Project Management	\$ 6,356	\$ 0	\$ 6,356
Task 2 Topographic Survey	\$ 25,740	\$ 0	\$ 25,740
Task 3 Utility Review	\$ 1,250	\$ 0	\$ 1,250
Task 4 Pothole Investigations	\$ 8,679	\$ 0	\$ 8,679
Task 5 Geotechnical Eng.	\$ 16,315	\$ 0	\$ 16,315
Task 6 Improvement P & S	\$ 34,305	\$ 0	\$ 34,305
Task 7 Permits	\$ 2,700	\$ 0	\$ 2,700
Task 8 Bid Period Assistance	\$ 2,910	\$ 0	\$ 2,910
Task 9 Additional Potholing	\$ 37,011	\$ 0	\$ 37,011
Task 9A Additional Potholing	\$ 24,218	\$ 0	\$ 24,218
Task 10 Engineering Services	\$ 37,325	\$ 0	\$ 37,325

Task	Current Fee, \$	Variance 4, \$	Revised Fee, \$
Task 11 Additional Engineering Services	\$ 0	\$ 46,370	\$ 46,370
Totals	\$ 196,809	\$ 46,370	\$ 243,179

Our current authorized budget for Tasks 1 through 10, is \$196,809. As indicated above, the total design variance amount is \$46,370 for Task 11. The **total requested amount for Variance No. 4** is **\$46,370**. The new total authorized budget for Tasks 1 through 11 would be \$243,179. A budget summary is provided below:

Current Authorized Budget (Tasks 1 - 10)	\$ 196,809
<u>Design Variance from Table</u>	<u>\$ 46,370</u>
Total Revised Authorized Budget	<u>\$ 243,179</u>

SCHEDULE IMPACTS

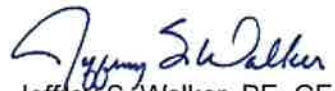
The additional efforts described herein have no impact to the project schedule and shall fall within the contractor's construction schedule. It is anticipated that project substantial completion shall be complete by May 31, 2019.

Thank you for your consideration of this request. If you have any questions about our scope, assumptions or level of effort, please do not hesitate to contact me at 619.831.4537 or Jeff Walker at 949.585.3116. Upon your review of this variance request, we will prepare the Professional Services Variance form pertaining to Project Number 30496 (5407).

Sincerely,

KLEINFELDER


 Marc Weinberger, PE, BCEE
 Project Manager


 Jeffrey S. Walker, PE, GE
 Client Account Manager

Attachments: A – Variance 4 Additional Engineering Services
 B – Variance 4 Fee Estimate
 C – IRWD Professional Services Variance

**Irvine Ranch Water District
Michelson Force Main Improvements
Engineering Services During Construction
Variance 4
November 9, 2018
Revised January 9, 2019
Revised April 4, 2019**

INTRODUCTION AND BACKGROUND

Irvine Ranch Water District has requested that Kleinfelder prepare a variance including the scope and fee for providing additional engineering service during the construction of the Michelson Force Main Improvements project. This variance would be the fourth variance on the existing Michelson Force Main Improvements Design contract.

SCOPE OF WORK

1. Project Meetings

- a. Kleinfelder will attend a total of six (6) construction progress meetings during the construction period. Each meeting is assumed to be two hours.
- b. Total Fee Included Herein (Item 1): \$3,780

2. Contractor's Request for Information (RFI)

- a. Kleinfelder will review and respond to the Contractor's RFIs, up to a maximum of thirty-five (35) RFIs.
- b. Total Fee Included Herein (Item 2): \$15,575

3. Minor Plan Revisions

- a. Kleinfelder will perform minor plan revisions during construction. This task includes a maximum of 36 hours of staff time for minor plan revisions and 4 additional hours for Project Manager review of the construction drawings, as needed.
- b. Total Fee Included Herein (Item 3): \$5,320

4. Site Visits

- a. Kleinfelder will perform up to four (4) visits to the site to observe the progress and quality of the executed work of the Contractor. Site visits will be scheduled to coincide with project meetings to maximize team efficiencies. One night visit will be required.

- b. Kleinfelder will conduct one (1) site visit of three hours, with two hours for travel time during the construction period for the purpose of assisting IRWD in preparing a final “punch list” for the Contractor and to confirm that the “punch list” is complete.
- c. Total Fee Included Herein (Item 4): \$4,600

5. Shop Drawing Reviews

- a. Kleinfelder will provide an initial review of up to fifteen (15) shop drawing submittals. It is anticipated that a second review will be performed for 11 shop drawings to verify comments from the initial submittal are addressed. Approximately three hours (3) per initial shop drawing review, and one hour for subsequent reviews is included. The list of anticipated submittals to be determined
- b. Total Fee Included Herein (Item 5): \$8,235

6. Record Drawings

- a. Kleinfelder will prepare record drawings on 24-inch by 36-inch mylars at the completion of construction using IRWD-approved Contractor’s and IRWD Inspector’s redlines. Final record drawing mylars, reissued signed mylars (as needed), AutoCAD electronic files, and a single color PDF of the final as-built mylars will be submitted to IRWD on CD at the completion of construction. Record drawings are anticipated to require twenty-four (24) hours of drafting and contractor coordination along with 2 additional hours of record drawing review.
- b. Total Fee Included Herein (Item 6): \$3,790

7. Expense Items

- a. Kleinfelder will include budget for expense items necessary to produce the aforementioned scope. This scope and budget includes anticipated travel mileage, printing, and mailing costs.
- b. Total Fee Included Herein (Item 7): \$2,130

8. TCPs for Bend Replacement (if necessary)

- a. Kleinfelder will include budget for Traffic Control Plans required for the replacement of the 30-degree bends, with liner wrinkles. This task may not be necessary until field testing can confirm the impact of the wrinkles. This task will only be executed with explicit IRWD approval. The fee for this task included 12 hours for TCP design, 4 hours for City coordination, and two hours for senior / technical review.
- b. Total Fee Included Herein (Item 8): \$2,940

IRWD-Michelson Force Main Improvements Project

Variance 4

Fee Estimate

#	Variance and Activities							Design Variance	
		Proj. Mgr.	Asst. Proj. Mgr.	QA/QC	Admin.	Labor Hours	Labor, \$	Sub Fee	Fee w/Subs, \$
		\$ 170.00	\$ 145.00	\$ 205.00	\$ 70.00				
11	Additional Construction Phase Services								
	Task 11.1 Project Meetings (6)	12	12			24	\$ 3,780		\$ 3,780
	Task 11.2 Contractor Request for Information (RFI) (35)	14	91			105	\$ 15,575		\$ 15,575
	Task 11.3 Minor Plan Revisions (36 Hours)	4	32			36	\$ 5,320		\$ 5,320
	Task 11.4 Site Visits (5)	10	20			30	\$ 4,600		\$ 4,600
	Task 11.5 Shop Drawing Review (15)	8	48			56	\$ 8,235		\$ 8,235
	Task 11.6 Record Drawings (26 hours)	2	20	2	2	26	\$ 3,790	-	\$ 3,790
	Task 11.7 Expensable Items (mileage, printing etc.) (14 hour	4	10			14	\$ 2,130	-	\$ 2,130
	Task 11.8 TCPs for Bend Replacement	2	16		4	22	\$ 2,940	-	\$ 2,940
	Total Fee for Project Management	56	249	2	6	313	\$ 46,370	-	\$ 46,370
						Total Fee for Variance 4			\$ 46,370

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July 8, 2019
Prepared by: T. Mossbarger
Submitted by: C. Clary
Approved by: Paul A. Cook



ACTION CALENDAR

INFORMATION SERVICES PROFESSIONAL SERVICES SUPPORT CONTRACT RENEWALS

SUMMARY:

IRWD requires additional resources to supplement existing staff to support and operate the Oracle Financial and Customer Care and Billing (CC&B) systems. In 2018, the Board authorized various outside service providers to assist in providing information technology services through June 2019. The providers included Infosys, who was the CC&B systems integrator, to provide managed support services; Outsource Technical to provide on-call programming, analysis, project management, and networking services; and Skoruz Technologies, experienced in providing on-call programming, analysis and project management services.

Staff has identified the need to continue these support services through Fiscal Year (FY) 2019-20. In addition, staff has identified specific one-time CC&B-related projects for completion by Infosys. Staff recommends the Board authorize the General Manager to execute Professional Services Agreements for the period July 1, 2019 to June 30, 2020 as follows:

- Infosys, Ltd. for \$350,000 for support services and one-time special projects;
- Outsource Technical for \$225,000 for on-call programming, analysis, project management, and networking services; and
- Skoruz Technologies for \$225,000 for on-call programming, analysis, and project management services.

BACKGROUND:

Utility Billing Support Services:

A utility billing software support services contract was awarded to Infosys in June 2018 for \$300,000. The contract provided managed support services for FY 2018-19, and included one-time projects which staff did not have adequate resources to complete.

Infosys has provided IRWD with managed support services for the Oracle CC&B system since August 2014. It provides highly skilled, experienced, and reliable resources who are knowledgeable with IRWD's systems, standards, and staff. Infosys has the proven ability to provide additional resources to handle urgent projects with tight deadlines, as was done with the programming changes for the Utility Bill Redesign Project during FY 2018-19.

Staff has identified the need to continue the software support services agreement for the period July 1, 2019 through June 30, 2020. Under the proposed scope, Infosys will continue to provide support for issues involving a high degree of complexity, while District staff will handle routine and less complex requests. The proposed software support services contract will be in effect

from July 1, 2019 through June 30, 2020, and is needed due to internal staffing and resource availability. The proposed support request is for \$26,880 per month for 12 months totaling \$322,560.

In addition to the software support services, staff has identified certain additional one-time projects which staff does not have sufficient resources to complete. These projects include:

- Modifications in CC&B required for the implementation of Maximo functionality for meter maintenance;
- Implementation of rates and charges for Fats Oils and Greases (FOG); and
- Modifications in CC&B required for new functions in the GIS Field Mapplet application.

The cost of the additional one-time projects totals \$27,440. The scope for the software managed support services is included in Exhibit "A".

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Infosys Ltd for \$350,000.

On-Call Programming and Analysis Services:

Staff currently utilizes on-call programming and analysis resources to provide support to regular positions. There is an ongoing need for programming, analysis, project management, and network assistance related to IRWD's software systems and networks as a result of several major capital projects the District has recently undertaken, including the Maximo Enterprise Asset Management software implementation project, as well as smaller scale software and networking projects. Additionally, consultants with the required skills can be retained to backfill staff vacancies due to special projects or leaves of absence. Staff proposes to retain the on-call services of programmers, analysts, project managers, and network consultants.

Outsource Technical:

Outsource Technical has provided IRWD with on-call programming and analysis services for the District's Oracle systems since November 2012. It provides highly skilled, experienced, and reliable resources that are very familiar with IRWD's systems, standards, and staff. Outsource Technical has consistently provided quality resources to handle urgent projects, as it did with the Oracle Financial System Software Upgrade and Project Management implementation project. The pricing for on-call programming and analysis services remains the same for this year's proposed contract. Outsource Technical's proposal with related fee schedule is attached as Exhibit "B".

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Outsource Technical for \$225,000.

Skoruz Technologies:

Skoruz Technologies will provide IRWD with on-call programming and analysis services for the District's Oracle systems. It provides highly skilled, experienced, and reliable resources that are very familiar with IRWD's systems, standards, and staff. Skoruz Technologies will provide IRWD with an alternative source to Outsource Technical for quality resources to handle urgent projects. The pricing for on-call programming and analysis services remains the same for this year's proposed contract. Skoruz Technologies' proposal with related fee schedule is attached as Exhibit "C".

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Skoruz Technologies for \$225,000.

FISCAL IMPACTS:

These amounts are budgeted in the FY 2019-20 budget or in the current expense authorizations of affected projects or will be utilized to offset regular labor until the vacant position is filled. These professional services will be charged to the appropriate projects or expense account.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 2, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE PROFESSIONAL SERVICES AGREEMENTS FOR THE PERIOD JULY 1, 2019 TO JUNE 30, 2020 WITH INFOSYS LTD FOR \$350,000 FOR MANAGED SUPPORT SERVICES AND ONE-TIME PROJECTS; OUTSOURCE TECHNICAL FOR \$225,000 FOR ON-CALL PROGRAMMING, ANALYSIS, PROJECT MANAGEMENT, AND NETWORKING SERVICES; AND SKORUZ TECHNOLOGIES FOR \$225,000 FOR ON-CALL PROGRAMMING, ANALYSIS, AND PROJECT MANAGEMENT SERVICES.

LIST OF EXHIBITS:

Exhibit "A" – Infosys Scope for Managed Support Services and Change Request

Exhibit "B" – Outsource Technical Proposal for On-Call Programing, Analysis, Project Management, and Networking Services

Exhibit "C" – Skoruz Technologies Proposal for On-Call Programing, Analysis, and Project Management Services

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ICE: Application Support and Maintenance



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Proposed Support Model

Proposed Scope

Extended Application Support (12 months)

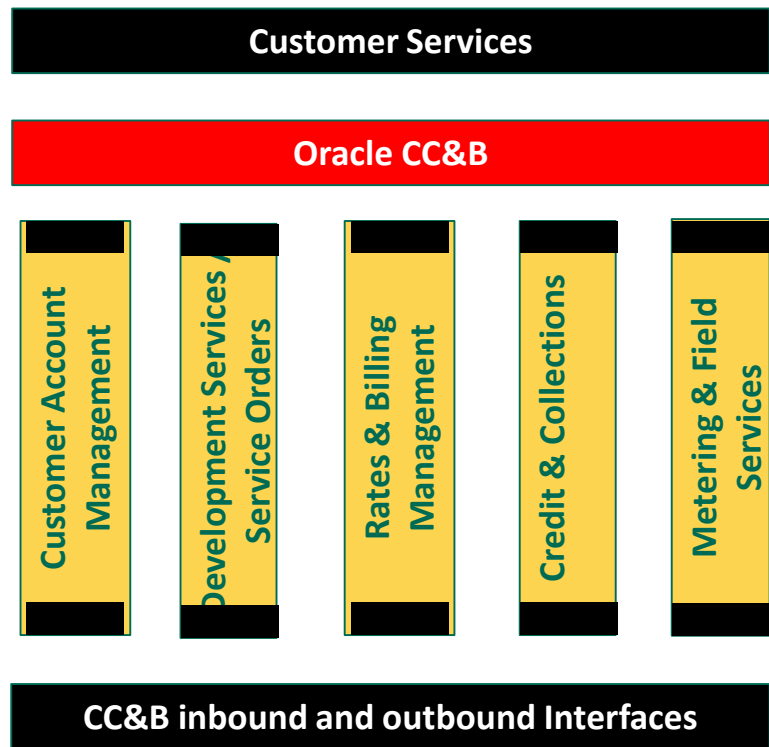
Infosys

- L2 & L3 Support
- Oracle Support Co-ordination

IRWD

- Work with Infosys resources in L2 & L3 Support, and to pickup Job Monitoring
- Take Lead in resolving some of the support tickets

In-scope application portfolio



In Scope / Out of Scope

In Scope

Level 2 Support Activities:

- Incident investigation, diagnosis and the delivery of workarounds and resolutions without code changes.
- Escalation/closure of unresolved issues to Level 3 support.
- Providing quick fixes for any data issues.
- Escalation of key product issues with Oracle and manage the lifecycle of the particular Service Request for the same.
- Incident notification (send email to stakeholders, etc.),
- Incident Follow up, Incident Closure.

Level 3 Support Activities:

- Problem analysis and provide resolution by way of code fixes.
- Root cause analysis for recurring issues for preventive maintenance.
- Configuration changes related to bug fixes.
- Support for application-specific data issues which impacts the database.
- BIP support activities for reporting requirements with minor changes.

Out of Scope

Level 1 Support Activities:

- Batch Jobs monitoring and quick fixes for Batch job failures
- Handling direct calls from customers or Help desk support activities
- Infrastructure support and related testing activities
- Desktop and client connectivity support
- Major Enhancements and Product Upgrades
- Core DBA and App DBA support for CC&B, OBIU and BIP admin activities.
- Accuzip support activities
- Weekend/ On-Call Support (Beeper support)
- Minor Enhancements
- OUBI
- Bills, Letters (like Invoice, Master agreement, Mater Bond, Cross connection letters etc.) and report formatting

Solution Assumptions

- Additional staffing required for sudden surge in number of tickets per month will be mutually agreed and staffed
- IRWD IS team to drive the business interactions to follow-up on the tickets which include incidents and service request for user verification and closure.
- Support will be provided in the normal office hours for onsite and offshore locations
 - Onsite Office hours : 9:00 AM PST/PDT – 5:30 PM PST/PDT
 - Offshore Office hours : 8:30 PM PST/PDT – 5:00 AM PST/PDT
- Any request to provide production support out of the above office hours at onsite will be considered as additional scope as this involves overtime charges.

Service Level Agreement

- Total fixed price for **12 months of L2/L3 support** is **322,560 USD**
- Ticket scope and resource loading details are provided below
- In addition to tickets, 40 hours per month considered for adhoc requests
- No Enhancements hours
- Only CC&B Technical Resources are considered for the support. OUBI applications are not considered in the scope.
- Tickets per month count includes service requests, Incidents, adhoc requests and impact assessment for the change requests before they convert to approved CR's.

	Jul'18	Aug'18	Sep'18	Oct'18	Nov'18	Dec'18	Jan'19	Feb'19	Mar'19	Apr'19	May'19	June'19
Tickets Per Month	13	13	13	13	13	13	13	13	13	13	13	13
Onsite Resource	1	1	1	1	1	1	1	1	1	1	1	1
Offshore Resource	1	1	1	1	1	1	1	1	1	1	1	1

Timelines and Milestones

- This New Support extension is for a period of **12 months starting 01 July, 2019 to 30 June, 2020** and below are the monthly milestones during this support period.
- Monthly milestone amounts would be distributed as 25%, 50%, 25% across STP, HYDSEZ, BBSRSEZ respectively as we have resource loading across locations in the new extension opportunity.

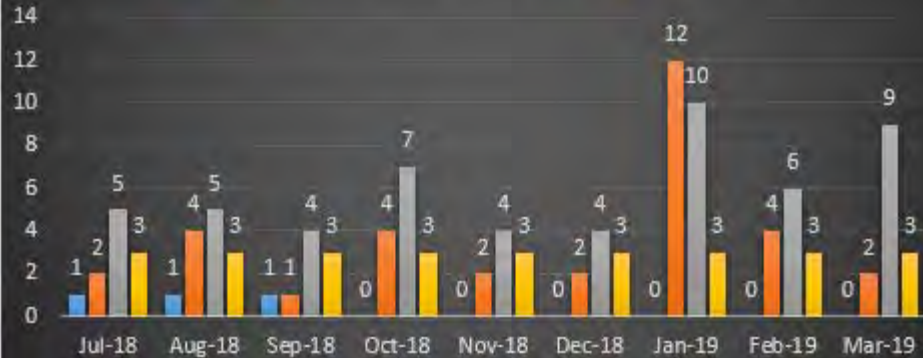
M#	Description	Milestone Date	Services Amount
M1	July Milestone	1-Aug-19	\$26,880.00
M2	August Milestone	1-Sep-19	\$26,880.00
M3	September Milestone	1-Oct-19	\$26,880.00
M4	October Milestone	1-Nov-19	\$26,880.00
M5	November Milestone	1-Dec-19	\$26,880.00
M6	December Milestone	1-Jan-20	\$26,880.00
M7	January Milestone	1-Feb-20	\$26,880.00
M8	February Milestone	1-Mar-20	\$26,880.00
M9	March Milestone	1-Apr-20	\$26,880.00
M10	April Milestone	1-May-20	\$26,880.00
M11	May Milestone	1-Jun-20	\$26,880.00
M12	June Milestone	28-Jun-20	\$26,880.00
		TOTAL	\$322,560.00

Note : Our resources will be working from multiple locations, and they would be using the client provided software's with maximum connections not exceeding 5 in total across locations.

Application Support & Maintenance Ticket Trend

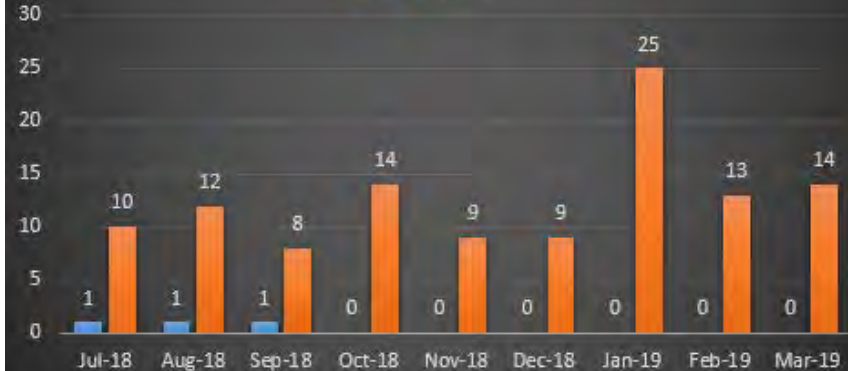
Ticket Type by Month

CR Incidents Service Requests Adhoc Requests



Ticket Volume Vs CRs# by Month

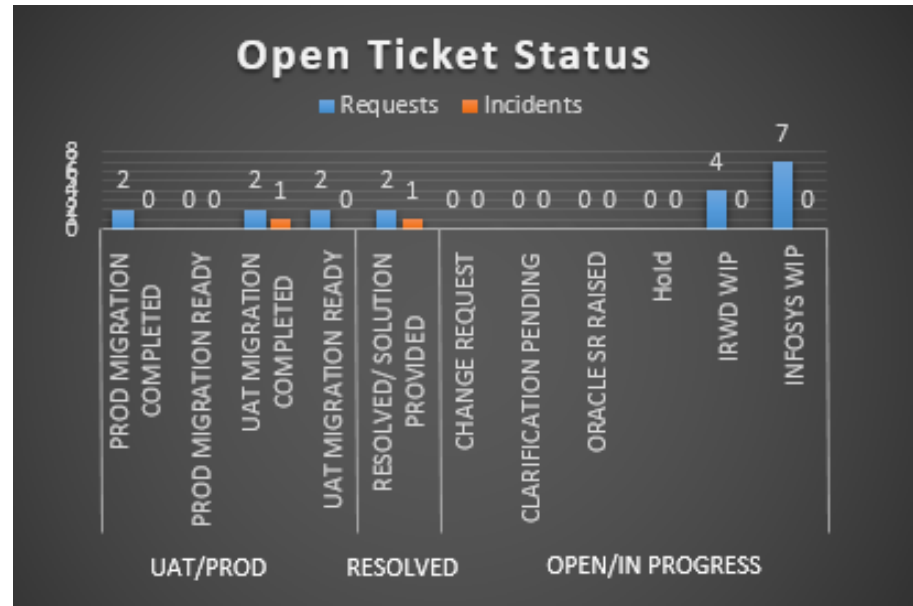
CR Tickets



- ❑ Based on the inflow of tickets (Incident and Service requests), 13 tickets per month have been considered in scope for the support extension. This is same as in the current contract.
- ❑ Average time spent by team is considered 23 Hours per ticket.
- ❑ In addition, team has also worked on few adhoc requests. An average effort of 40~ Hrs. per month has been considered in scope for such adhoc requests.
- ❑ Ticket volumes captured as WSR reporting till March 2019, more tickets to be added to the list by end of June.

Application Support & Maintenance Open Ticket Trend

Status Type	Status Description	Requests	Incidents
UAT / PROD	PROD MIGRATION COMPLETED	2	0
	PROD MIGRATION READY	0	0
	UAT MIGRATION COMPLETED	2	1
	UAT MIGRATION READY	2	0
RESOLVED	RESOLVED/ SOLUTION PROVIDED	2	1
OPEN/ INPROGRESS	CHANGE REQUEST	0	0
	CLARIFICATION PENDING	0	0
	ORACLE SR RAISED	0	0
	Hold	0	0
	IRWD WIP	4	0
	INFOSYS WIP	7	0
Totals		19	2



- ❑ Open ticket status is based on the WSR reporting till March 2019
- ❑ We would have around 21~ open tickets with following status (In-Progress, Change Control Board, Clarification Pending, Oracle SR Raised), which would be carry forward to the next support Jul'19 to Jun'20. Team would continue to support these tickets for successful production deployment as per business priorities.

Thank You



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May 20, 2019

Irvine Ranch Water District
Attn: Tony Mossbarger, Director of Information Technology
15600 Sand Canyon Avenue
Irvine, CA 92619-7000

Dear Mr. Mossbarger,

Proposal for Information Technology (IT) Professional Services and Consulting

OS Technical (OST) is pleased to submit this proposal to provide Information Technology Professional Services and Consulting in response to your request.

OST is an IT consulting firm providing professional services to both public and private sector clientele. Our emphasis is providing experienced technical consultants on an on-demand basis to support enterprise software projects. OST has been in business for over 19 years and is headquartered in Newport Beach, CA. We have extensive experience providing IT professional services and consultants to numerous clients who continue to do business with us year over year. A few of our clients are Edwards Lifesciences, Pacific Dental Services, Newport Corporation, County of Orange, Irvine Company, PIMCO, Pacific Life and CareMore among many others.

OST has been providing IT professional services and consulting for Irvine Ranch Water District (the District) since February 2013 with an emphasis on Oracle R-12 E-Business Suite. During this time, we have provided subject matter expertise to support enterprise software implementations, customizations and quality assurance. Services include:

- Attending project meetings as requested by the District
- Producing monthly billings in a form acceptable to the District
- Participating in weekly project status phone calls with Mohit Saini, the Project Lead for the District
- Providing IT Professional Services and Consulting as requested by the District

Our staff executing the delivery of IT professional services and consulting will consist of:

Mr. Steven Shwam, Senior Account Executive - Mr. Shwam has been with OST for 11 years. He has provided IT professional services and consultants for enterprise software projects for clientele including CareMore, Molina Healthcare, Pacific Dental Services, Forever 21, and ICU Medical among others. Steven will be the primary point of contact for the District, providing delivery of IT professional services and consulting per the direction of the District.

Ms. Yasmine Kavandi, Recruiting Manager - Ms. Kavandi has been working with OST for 4 and a half years. Yasmine has over 13 years of experience sourcing and screening technical professionals for deployment on enterprise software projects. Her competencies include Oracle EBS, .Net and Java.



Work will be billed at the following rates:

Hourly Rates

Project Management	\$128.00-\$150.00
Oracle DBA	\$120.00-\$135.00
Oracle Analyst	\$115.00-\$125.00
Oracle Developer	\$105.00-\$150.00
Software QA	\$95.00-\$105.00
IT Network & Systems Support	\$65.00-\$90.00

Our project delivery teams are paid current prevailing wage rates and we have insurance coverage that meets or exceeds the minimum District requirements.

If you have any questions, or I can be of further assistance, please call.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Shwam'.

Steven Shwam
Sr. Account Executive
OS Technical



Skoruz : Oracle Practice Proposal for IRWD

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About Skoruz

Skoruz Technologies Inc, is a global IT solutions and services provider and a technology partner with 450+ professionals and 10 delivery centers across 6 countries. We emphasize on enabling our customers to achieve competitive advantage through our flexible global delivery models and frameworks.

Our thought leadership envisions in providing Turn-key solutions by combining far-reach and local presence to deliver optimal value for wide range of businesses.



Oracle Consulting Pricing

		Experience in Years	Rate Per Hour	Discounted Rate
Engagement	Skillset/Expertise			
Staffing	Technical Consultant	4+	\$80	\$72
		8+	\$90	\$81
	Functional Consultant/ Business Analyst	4+	\$90	\$81
		8+	\$120	\$108
	Techno-functional Consultant	4+	\$90	\$81
		8+	\$120	\$108
	DBA	4+	\$90	\$81
		8+	\$110	\$99
	Project Manager	10+	\$120	\$108
	Implementation/ Rollout	Technical Consultant	4+	\$75
		8+	\$85	\$77
Functional Consultant/ Business Analyst		4+	\$85	\$77
		8+	\$100	\$90
Techno-functional Consultant		4+	\$85	\$77
		8+	\$95	\$86
DBA		4+	\$90	\$81
		8+	\$100	\$90
Project Manager		10+	\$110	\$99

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July 8, 2019
Prepared by: T. Mossbarger
Submitted by: C. Clary
Approved by: Paul A. Cook



ACTION CALENDAR

EMAIL MIGRATION PROJECT CONSULTANT SERVICES

SUMMARY:

IRWD performed a comprehensive review of the requirements for email, contacts, and calendaring functions for the District along with advantages and disadvantages of different service providers. Staff recommends the District transition from Micro Focus GroupWise to Microsoft Exchange. Staff issued a Request for Proposal (RFP) for consulting services to implement this transition. Based on a thorough evaluation of the proposals, staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Novacoast in the amount of \$180,000 and approve a budget increase in the amount of \$117,000.

BACKGROUND:

In 2016, IRWD hired NexLevel Information Technology, Inc. to perform an Information Technology Assessment for the District. One of the recommendations from this assessment was that the District should implement Microsoft Exchange in lieu of GroupWise to better align with industry direction and improve user experience. The transition from GroupWise to Microsoft Exchange will allow the District to take advantage of cloud computing benefits. Existing email, contacts, and calendar items in GroupWise will be preserved as part of the transition. The browser-based version of Outlook as well as the Outlook Mobile App will also be utilized on remote and mobile devices.

After a thorough analysis and consideration of alternatives, staff concurred with NexLevel's recommendation, and has begun the process to transition the District's email, contacts, and calendaring from GroupWise to Microsoft Exchange. To complete this transition, staff has determined that consultant services are required to provide the needed resources and expertise to complete the transition efficiently while preserving existing data.

Consultant Selection Process:

An RFP was issued in March 2019 to four consultants with experience performing GroupWise email migration to Microsoft Exchange: Agile IT, Novacoast, Planet Technologies, and Quest. Three of four consultants submitted proposals. Staff reviewed and ranked the proposals and selected the top two: Novacoast and Planet Technologies for interviews. After conducting interviews, staff updated the rankings as shown in the Consultant Selection Matrix, which is attached as Exhibit "A".

Staff determined that Novacoast has the best understanding of the Email Migration Project. Novacoast included a phased migration, as requested in the RFP, but Agile IT and Planet Technologies did not. The phased migration is reflected in the scope and fee. Novacoast has performed a number of successful phased email migrations of GroupWise to Microsoft Exchange. IRWD staff, having worked with Novacoast on past projects, found that Novacoast

proposed the most experienced project team, submitted an optimal project schedule, and is the most capable of performing a successful phased email migration from GroupWise to Microsoft Exchange.

Staff recommends awarding a Professional Service Agreement to Novacoast in the amount of \$180,000. Novacoast's proposal is attached as Exhibit "B".

FISCAL IMPACTS:

The Migrate Email to MS Cloud, Projects 10543 and 10544, are included in the FY 2019-20 Capital Budget. A budget increase of \$117,000 is needed to fund the professional services contract, support services, and staff labor.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10543	\$ 93,500	\$58,500	\$152,000
10544	\$ 93,500	\$58,500	\$152,000
Total	\$187,000	\$117,000	\$304,000

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 2, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH NOVACOAST TO IMPLEMENT THE EMAIL MIGRATION PROJECT IN THE AMOUNT OF \$180,000 AND APPROVE A BUDGET INCREASE IN THE AMOUNT OF \$58,500 EACH TO PROJECTS 10543 AND 10544 FOR A TOTAL AMOUNT OF \$117,000.

LIST OF EXHIBITS:

Exhibit "A" – Consultant Evaluation Matrix

Exhibit "B" – Novacoast Statement of Work and Fee Proposal

EXHIBIT "A"
CONSULTANT EVALUATION MATRIX

GROUPWISE EMAIL TO OFFICE 365 MIGRATION								
Item	Description	Weights	Agile IT		Novacoast, Inc.		Planet Technologies, Inc.	
A	<u>TECHNICAL APPROACH</u>	40%						
1	Overall Project Understanding / Approach	40%	3.0		1.0		2.0	
2	Scope of Proposal	60%	3.0		1.0		2.0	
	<u>Weighted Score (Technical Approach)</u>		3.0		1.0		2.0	
B	<u>QUALIFICATION AND EXPERIENCE</u>	60%						
1	Project Manager	40%	3.0		1.5		2.5	
2	Project Team	20%	3.0		1.5		2.5	
3	Sub Consultants	20%	0.0		0.0		0.0	
4	Firm's Experience	20%	3.0		1.0		2.5	
	<u>Weighted Score (Experience)</u>		2.4		1.1		2.0	
	<u>COMBINED WEIGHTED SCORE</u>		2.6		1.1		2.0	
	Ranking of Consultants							
C	<u>SCOPE OF WORK</u>							
TASK			Task Hours	FEE	Task Hours	FEE	Task Hours	FEE
1	Planning and Discovery			\$10,000	128	\$24,400	60	\$11,620
2	Design and Migration			\$15,000	144	\$28,200	48	\$8,400
3	Setup and Testing				96	\$18,800	104	\$17,800
4	Phased Migration of Mail			\$18,750	277	\$54,575	48	\$8,400
5	Documentation and Support			\$1,875	56	\$10,900	40	\$6,920
	Software Expense			\$13,000		\$23,096		\$21,300
	Travel Expense					\$20,000		
	TOTAL HOURS AND FEE		0	\$58,625	701	\$179,971	300	\$74,440
D	<u>OTHER</u>							
	Joint Venture			None		None		None
	Sub Consultants							
	Exceptions taken to IRWD Std. Contract			None		None		None
	Insurance (Professional & General Liability)			Yes		Yes		Yes
	RANKINGS:							
	1 - Best							
	2 - 2nd Best							
	3 - 3rd Best							

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RFP Response

GroupWise to Microsoft Office 365 Migration

Prepared For:

Irvine Ranch Water District

04.12.2019

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Cover Letter

April 12, 2019

Irvine Ranch Water District
Attn: Tony Mossbarger
Irvine Ranch Water District
15600 Sand Canyon Ave.
Irvine, CA 92618
(949) 453-5300
mossbarg@irwd.com

RE: GroupWise to Microsoft Office 365 Migration

Dear Mr. Mossbarger,

Novacoast, Inc., is pleased to have this opportunity to respond to the Irvine Ranch Water District RFP for GroupWise to Microsoft Office 365 Migration. In response to the RFP requirements, we have provided company information, technical information / solution details, and pricing estimates. Based upon Irvine Ranch Water District's RFP, we are confident that the numerous years of engineering and advisory experience Michael Howden's team has in Groupwise, Microsoft, Office 365, and cloud migrations will exceed your expectations. We strongly believe that the match between the needs of Irvine Ranch Water District and our expertise will be mutually beneficial.

We look forward to working with the Irvine Ranch Water District IT team in its review of our information, to address any questions, and to demonstrate the value of the Novacoast security team. Please feel free to contact our Client Executive, Michael Cassidy at (949) 315-6163 or at mcassidy@novacoast.com to coordinate any discussions or solution reviews.

If you require additional information or have questions, please contact me, as listed below.

Sincerely,

Janice Newlon
Chief Operations Officer & Authorized Representative
rfp@novacoast.com
800-949-9933 x4156

Executive Summary

Irvine Ranch Water District is migrating from GroupWise 2018.02 to Office 365. The migration must preserve access to calendars, emails, and shared resources throughout the migration for over 636 users, 65 groups, and 49 resource accounts. IRWD's GroupWise environment is key to their departments daily operations and is utilized 24/7. Novacoast brings highly skilled and certified engineers with more than a decade of experience, who are familiar with both GroupWise and Office 365 so that IRWD can enjoy a successful and efficient project by partnering with Novacoast.

Novacoast proposes the following summary approach to the migration to Office 365.

Current Environment Summary

The current GroupWise environment contains the following: Roughly 750 mailboxes with a total data size of approximately 3 TB. IRWD currently utilizes Micro Focus Retain for GroupWise backup and archive.

Proposed Migration Plan

In order to ensure a successful migration Novacoast proposes the following migration structure:

■ Planning Phase

During the planning phase the project team will conduct the project kickoff meetings and develop the migration timeline and high level project plan, document the communication plan, define the key project elements, UAT processes and success criteria. At the close of the planning phase the initial project documentation will be produced, reviewed, and updated as needed.

■ Discovery and Health Check

During the discovery and health check Novacoast will review the current GroupWise and Active directory environments. A health check will be performed on the GroupWise environment to determine any system updates or changes that will be required to facilitate a successful migration. The current Active Directory environment will be reviewed to ensure appropriate understanding of the deployed is taken into account for facilitating the Office 365 solution. At the conclusion of this phase a findings and recommendations document will be produced for remediation tasks that need to be performed.

■ Design and Migration Architecture

During the design and migration architecture phase Novacoast will work with the IRWD team to develop the architecture to facilitate the migration plan to meet the IRWD's business and technical requirements. Novacoast will utilize the output from the first phases, industry best practices, and experience to develop the migration architecture.

■ Deployment and Configuration of Services

Novacoast will work with IRWD's staff to deploy the Active Directory components contained in the architecture documents and synchronize to the existing Office 365 tenant as needed. Novacoast will deploy the Quest Migrator and Coexistence Manager components, assist IRWD with the development of the Outlook deployment script/package (if needed), and review firewall requirements pertaining to connecting to Office 365 for coexistence and migration of GroupWise data, as well as Skype. At the conclusion of this phase a test migration of data will be performed to ensure a properly configured and documented migration configuration solution.

■ Testing and Pilot Migrations

The testing and pilot migration phase is one of the most crucial phases to ensure success in the entire migration process. During this phase the users will be provisioned to Office 365, pilot migration groups will be identified and migrated in pilot mode, UAT will be completed, Outlook & Skype deployment application package will be tested (with Retain archive plugin if required), mobile client settings are tested and documented, and migration speed will be analyzed and tuned as needed. At the conclusion of this phase the migration process documentation will be completed, UAT completed, and any end user communications to prepare for the cutover will be defined.

■ Mailbox Coexistence and Migrations

During the mailbox coexistence and migration phase, the main focus is on copying mailbox data and updating users to Office 365 in appropriate batches. Utilizing the Quest Migrator, mailbox data will be copied in groups for specific date periods until up to 2 years of determined mailbox data is copied to Office 365. Based on migration timetables incremental data copies will be completed as needed. Ongoing synchronizations will be completed of user accounts to include updated mailboxes data. During this phase the Outlook & Skype deployment will take place to stage the client for the cutover phase.

■ Production Migration Cutover, Documentation and Knowledge Transfer

The final process for completion of the mailbox migrations is the cutover to Office 365. During this phase Novacoast will assist the IRWD staff in creating the communication messages for the end users to prepare for the email cutover, delta sync of mailbox data, mobile device cutover and Novacoast to assist with email connected systems such as SMTP Relays and Gateways, spam and virus protection etc. Provide initial as-built draft documentation and knowledge transfer. At the end of this phase, coordination and change of inbound MX record to point to Office 365 for all new inbound email to be received directly by Office 365. Users will have access to non-migrated data older than 2 years via Micro Focus Retain.

■ Post Production Support and Documentation

The final phase of the project will be to provide post cutover support for issues that may be identified after the production cutover. Post production support may include tasks such as the resyncing of data from GroupWise to Office 365, comparison of data that has already been migrated and support around end user experience. During this phase we will also finalize any as-built documentation.

Experience

Founded in 1996, Novacoast is a profitable, privately held, self-funded corporation. We are financially responsible with growing revenues. We have steadily grown our expertise and footprint in the US market with offices and resources in over thirty states. Our business focus is providing IT managed services and cyber security solutions to our customers. We are subject matter experts in cyber security, identity and access management, applications, networking, infrastructure, remote managed services, custom software development, and IT staffing services for contract or direct hire.

Novacoast employs over 200 technical resources. All Novacoast staff are located within the Contiguous United States, Canada, Mexico, and the United Kingdom. Our facilities include a NOC/SOC (Network

Operations Center/Security Operations Center) in Santa Barbara, California, Ann Arbor, Michigan, and in the United Kingdom.

Novacoast has been providing cyber security assessments and information technology management services to multiple industries for over 20 years. We provide onsite support as well as remote support with the desired solution, and have the proven ability to adapt to whatever need or situation that may arise. We have performed many GroupWise to Office 365 email migrations, and we have extensive experience in this work area.

Headquartered in Santa Barbara, CA, Novacoast delivers services nationally and internationally. We have offices throughout the United States, Canada, Mexico, and the United Kingdom. Any customer data, if stored by Novacoast, is stored within the USA.

Team

Project Management – 20%

Technical Oversight: Geoff Gilbert, VP Engineering (non-billable)

Technical Account Manager: Michael Howden, Director Security Services (5%)

Project Manager: Max Walker, Director Project Management (15%)

Migration Engineering / Implementation – 80%

Howard Hyten, Engineer*

John Walls, Engineer*

*This project will require the equivalent of 1 full-time engineer

Service Capacity

Novacoast Inc. has the technical resources and bench strength to complete this project on its own, and will not be requiring assistance from an industry partner. Novacoast does not outsource.

Project Staff Resumes

Please see attached resumes representative of Novacoast staff expected to perform the work described in this proposal.

Project Approach and Timeline

Phase 1 – Planning

Novacoast will work with IRWD to develop a high-level project plan and project task checklist. This will detail the work steps and timing for the implementation and migration. This will also include the determination of which customer resources will be required to complete the migration project. Tasks included in this phase:

- Kick off meeting
 - Review scope of work
 - Review existing network, server, workstation and email environment documentation
 - Review IRWD processes, identify key stakeholders, outline operational procedures, etc.
 - Identify IRWD project resources and availability
 - Review initial timetable and specific work blackouts, holidays, etc.

- Define key project elements
- Create initial high-level project plan
- Create initial communication plan
- Review and schedule onsite visits
- Determine production migration groups and notification process
- Determine UAT and success criteria
- Deliver, update and review project plan as required

Novacoast anticipates that the Planning phase will require a minimum of six (6) 60-minute meetings (more may be required if all participants are not available during each meeting time) to review/discuss IRWD's business and technical requirements.

Novacoast will have in attendance for these meetings the following resources: Novacoast project manager, Novacoast lead engineers and additional engineer/developer resources as needed.

It is requested that IRWD be represented by IRWD Project Sponsor, IRWD Project Team Lead, IRWD Project Manager, IRWD representative with knowledge of existing email environment, Active Directory environment, and network environment.

Phase 1 Assumptions

- IRWD will provide key project personnel with contact information
- IRWD will provide Novacoast engineers access credentials
- IRWD will provide Novacoast engineers with migration servers and/or workstations for any script development and production migrations (specifications to be provided by Novacoast)
- Multiple Novacoast resources will be required concurrently during this phase

Phase 1 Deliverables

- Draft Project Schedule
- Key Milestones by Phase
- High Level Project Plan
- Project team communication list
- RACI Matrix

Phase 1 Duration

Phase 1 will take approximately 1 week

Phase 2 – Discovery and Health Check

During this phase, Novacoast will review the Active Directory, GroupWise, Office 365 and network environments to determine its health and readiness for migration. As part of this process, Novacoast may run data gathering scripts and/or tools developed by Microsoft, Novacoast and/or industry leaders.

- Verify current Active Directory infrastructure, including
 - Discover Forests, Domains, Sites and Functional Levels
 - Discover Domain Trusts and Federation
 - Discover Office 365 user synchronization roadblocks
 - Discover authentication mechanisms
 - Discover directory OU design
 - Discover user account provisioning process

- Verify current network infrastructure (specific to project scope), including
 - Discover Network (WAN) and LAN connectivity in between sites
 - Discover infrastructure security (firewalls, IDS/IPS, identity and access management)
- Verify current GroupWise infrastructure, including
 - Discover mail flow
 - Discover DNS records related to GroupWise
 - Discover client versions
 - Discover Public Folders
 - Discover POA Scheduled Maintenance Content statistics logs
- Documentation development
 - Create remediation process documentation (if necessary)
- Communication
 - Send initial communication drafts to executive team for approval

Novacoast anticipates Phase 2 will require a minimum of four (4), 60-minute meetings (more may be required if all participants are not available during each meeting time) to review/discuss IRWD's environment.

Novacoast will have in attendance for these meetings the following resources: Novacoast project manager, Novacoast lead engineer and additional engineer/developer resources as needed.

It is requested that IRWD be represented by IRWD Project Sponsor, IRWD Project Team Lead, IRWD Project Manager, and IRWD representative with knowledge of existing email environment, Active Directory environment, and network environment.

Phase 2 Assumptions

- IRWD will provide Novacoast with all data and documentation for items listed in above bullet points
- Office 365 licenses are purchased, and tenant is active
- Multiple Novacoast resources will be required concurrently during this phase
- Discovery and Health Check will be limited to the GroupWise and Active Directory domains specific to project scope

Phase 2 Deliverables

- Discover and Health Check Documentation

Phase 2 Duration

Phase 2 will take approximately 1 week

Phase 3 – Design and Migration Architecture

Based on data presented and validated in phases 1 and 2, and using experience and industry best practices, Novacoast will architect the migration plan to meet IRWD's business and technical requirements. Novacoast's strategy for the migration will be to capture all current, relevant data (including user mailboxes, resource mailboxes, client applications), current methods for accessing email, and infrastructure services as defined during the project. For the end user, the goal for the migration team is to be undisruptive and will depend on planning, communication, and testing. Novacoast will work with IRWD staff to define success criteria for project and Novacoast will validate any data that is being migrated. It will be necessary for IRWD staff to be involved in the validation process.

- Review migration methodology

- Document migration process
- Document email client migration via deployment application
- Document migration fall back procedure
- Document User Acceptance Testing and Success Criteria plan
 - Login
 - Send/Receive Email
 - Calendar Items
 - Address Books
 - Proxies / Delegates
- Update communication plan
 - Send approved initial communications to end users

Novacoast will provide a review of the recommended migration plan as it relates to the business and technical requirements. This is anticipated to be a 2-hour discussion.

Novacoast will have present: Novacoast project manager, Novacoast lead engineer and any additional resources as needed.

It is requested that IRWD be represented by IRWD Project Sponsor, IRWD Project Team Lead, IRWD Project Manager, and any other managerial or technical representatives IRWD determines should be present.

Phase 3 Assumptions

- IRWD's configuration management environment is updated and functional, and configuration management client agents are fully deployed
- Multiple Novacoast resources will be required concurrently during this phase

Phase 3 Deliverables

- Migration methodology and process document
- User Acceptance Testing plan
- Migration Success Criteria document

Phase 3 Duration

Phase 3 will take approximately 1 week

Phase 4 – Deployment and Configuration of Services

Novacoast will work with IRWD to determine a proper schedule for production service cutover. Novacoast will not be responsible for modifying any applications but will need to work with IRWD to ensure applications dependent on migrated services are working correctly. Novacoast can bring in additional resources at additional cost, if required, to directly assist with application migration support. Novacoast is not including physically visiting workstations within the IRWD environment as a part of the migration process. If it is determined that the desktop/laptop system will require physical visits, a change order will be issued or IRWD staff will be responsible for visiting desktop/laptops.

Active Directory

- Update Active Directory per design
 - Extend OU structure as needed (client task)
- Modify users and security groups
 - Identify users and distribution groups to migrate to Office 365 (client task)

- Run Microsoft's IdFix to identify errors
 - Modify accounts to prepare for synchronization (UPN & Email attribute match)

GroupWise

- Post office maintenance
 - Content fix with statistics, attachment option and MISC options
 - Validate all domain and post office databases
- Retain Archive
 - Validate archive health

Office 365

- Deploy Windows server to host Office 365 directory synchronization
 - Configure virtual/physical computer resources
 - Install/license/update supported Windows OS
 - Configure virtual/physical storage and attach to Windows servers
 - Install/configure Azure AD Connect in root domain
 - Register Azure AD Connect Health (If Azure AD Premium is licensed)
- Deploy Office 365/provisioning
 - Configure Office 365 tenant as needed
 - Apply licensing groups as needed
- Configure Internet connectivity
 - Configure firewall connections as needed for GroupWise coexistence (client assisted task)
 - Verify/configure Internet access from each location per Microsoft requirements (client assisted task)
 - Validate Azure AD Connect can synchronize

Migration Tools (Quest)

- Deploy migration tool workstations as needed
- Obtain licensing for Quest tools
- Install/Configure Quest Migrator and Coexistence Manager tools
- Complete prerequisites for Office 365 connection
- Prepare the seed migration to begin populating Office 365
- Create migration groups (test, pilot, VIP and normal users to reside in separate groups)

Office Software Deployment

- Download and configure Office Desktop Software (Click-to-Run or C2R version) deployment point
- Review licensing requirements and activation for Office Desktop Software
- Configure Office C2R XML
- Configure Group Policy for user/computer settings as needed
- Configure configuration management application package(s) to remove GroupWise, and install Retain Archive plugin, Skype and Office 365

Network Infrastructure Configuration

- Review best practice for network planning and migration performance
- Review Office 365 URLs and IP Address ranges
- Create/Validate DNS records for Office 365

- Reduce existing MX DNS record TTL, when appropriate

Communication

- Review documentation and FAQ for end user communication
- Build curriculum for end user training sessions to be delivered by IRWD
- Send communications to end users (client task)

Phase 4 Assumptions

- IRWD responsible for visiting workstations
- IRWD responsible for application functionality
- IRWD responsible for delivering end user communication and training sessions
- IRWD will provide a local technical support contact for each site's migration
- Every Office software user will have a provisioned E1 or higher Office 365 license
- Office desktop software to be 32-bit version with no custom settings (out-of-box experience)
- Office desktop software deployment not to include Visio or Project
- If required, IRWD resources to manually install Visio and/or Project desktop software
- 1 forest to provide a unified UPN namespace (required for Office 365 synchronized accounts)
- UPN suffix will match the user's primary email address.
- Sufficient bandwidth and routing to support mailbox migration to Office 365
- 3TB of mailbox data to be migrated to Office 365
- Network infrastructure admin access is remotely available
- Multiple Novacoast resources will be required concurrently during this phase

Phase 4 Deliverables

- Staged Migration Plan/Schedule
- GroupWise preparation reports
- Azure AD Connect process documentation
- Administration documentation

Phase 4 Out Of Scope

- Office 365 services other than Exchange Online and Skype
- PKI services
- GPOs, DNS, DHCP or other services not relating to this project
- Active Directory Federation Services

Phase 4 Duration

Phase 4 will take approximately 2 weeks

Phase 5 – Testing and Pilot Migrations

Novacoast will work with IRWD to determine proper users for testing and pilot migrations. Novacoast and IRWD will perform user migration testing using up to 5 resource accounts, and up to 15 pilot users' accounts. Results to be captured using acceptance testing document. Any issues determined to block migration efforts will be remediated before going to Production phase.

- Provision/configure pilot user and resource accounts in Office 365
- Test configuration management application package(s) to remove GroupWise, and install Retain Archive plugin and Office on test workstations
- Validate and update migration process documentation

- Identify pilot users with secondary workstations (if exist)
- Communicate change to live pilot users (client task)
- Deploy Office desktop software to pilot user workstations (client task if remote installation not possible)
- Copy migration pilot user mailboxes to Office 365 (up to 30 days of live data only)
- Messaging problem management and remediation for pilot users
- Redirect test clients (Outlook for Windows) to Office 365 environment (client task if remote configuration not possible)
- Create secondary connectors on mobile devices to Office 365 (client task if remote configuration not possible). Alternatively, configure a secondary mobile device to connect to Office 365.
- Validate UAT and Success Criteria with pilot users

Phase 5 Assumptions

- IRWD responsible for all internal change management requests
- IRWD responsible for visiting workstations
- IRWD will provide a local technical support contact for each site's migration
- IRWD will provide a local test workstation for each site's migration
- Mobile device testing to be performed by client if remote assistance unavailable
- IRWD to test resource availability and user experience regarding messaging applications, mail integrations, etc.
- Clients can be easily identified using domain and/or network boundaries
- Every Office software user will have a provisioned E3 or higher Office 365 license
- Office desktop software to be 32-bit version with no custom settings (out-of-box experience)
- Office desktop software deployment not to include Visio or Project
- If required, IRWD resources to manually install Visio and/or Project desktop software
- UPN suffix will match the user's primary email address.
- Sufficient bandwidth and routing to support mailbox migration to Office 365
- Pilot migration is continuous and to be performed as a single event.
- Workstations and pilot user accounts could be secondary to the users' primary workstation. The credentials on the test workstation will be from the existing domain.
- IRWD team will provide first line of support and delegate pilot user messaging problems to Novacoast
- IRWD will perform end user communication and assist with software deployment tasks
- Some remediation steps may require technical support from Microsoft which may impact the phase timeline. IRWD agrees to provide Novacoast with their support contract or reimburse Novacoast for any fees incurred
- Multiple Novacoast resources will be required concurrently during this phase

Phase 5 Deliverables

- UAT success reports
- Updated migration process documentation

Phase 5 Out Of Scope

- Office 365 services other than Exchange Online and Skype
- PKI services
- GPOs, DNS, DHCP or other services not relating to this project
- Active Directory Federation Services

Phase 5 Duration

Phase 5 will take approximately 2 weeks

Phase 6a – Mailbox Coexistence and Migrations

Novacoast will work with IRWD to begin prepopulating all user mailbox data in preparation of production cutover. Any issues determined to block migration efforts will be remediated before Go/No Go meeting.

- Continue synchronizing user accounts in Office 365
- Communicate migration plans and dates to all user groups for staged migrations (client task)
- Copy all user mailboxes to Office 365 (up to 2 years of live data only)
- Messaging problem management and remediation within 3rd party toolset
- Launch software deployment package(s) with configuration management to ensure GroupWise client removal, Retain Archive plugin, Skype and Office installation (client task if remote installation not possible)
- Configure Outlook clients with new profile to connect to Office 365 via 3rd party utility as needed

Phase 6a Assumptions

- IRWD responsible for all internal change management requests
- Every Office software user will have a provisioned E1 or higher Office 365 license
- UPN suffix will match the user's primary email address.
- Sufficient bandwidth and routing to support mailbox migration to Office 365
- Mailbox migrations are continuous and will be performed until final production cutover
- IRWD will perform end user communication
- Some remediation steps may require technical support from Microsoft which may impact the phase timeline. IRWD agrees to provide Novacoast with their support contract or reimburse Novacoast for any fees incurred
- Multiple Novacoast resources will be required concurrently during this phase

Phase 6a Deliverables

- Migration success reports
- Updated migration process documentation

Phase 6a Out Of Scope

- Office 365 services other than Exchange Online and Skype
- PKI services
- GPOs, DNS, DHCP or other services not relating to this project
- Active Directory Federation Services

Phase 6a Duration

Phase 6a will take approximately 8 weeks

Phase 6b – Documentation and Knowledge Transfer

Novacoast will provide as-built documentation and knowledge transfer to IRWD team.

Active Directory

- Review Active Directory environment

Office 365

- Review Office 365 environment

Network Infrastructure

- Review Network Infrastructure environment

Communication

- Assist with end user training sessions as needed

Phase 6b Assumptions

- IRWD team available for review and end user training sessions
- IRWD to approve as-built documentation before production cutover
- IRWD responsible for delivering end user communication and training sessions
- Multiple Novacoast resources will be required concurrently during this phase
- IRWD responsible for all internal change management requests
- IRWD responsible for visiting workstations
- IRWD to provide per site lists of workstations
- IRWD will provide a local technical support contact for each site's migration
- IRWD to provide per site lists of VIP and regular mailboxes
- Mobile device testing to be performed by client
- IRWD to test resource availability and user experience regarding messaging applications, mail integrations, etc.
- UPN suffix will match the user's primary email address.
- Sufficient bandwidth and routing to support Office 365
- IRWD team will provide first line of support and escalate user messaging problems to Novacoast
- IRWD will perform end user communication and assist with software deployment tasks
- Some remediation steps may require technical support from Microsoft which may impact the phase timeline. IRWD agrees to provide Novacoast with their support contract or reimburse Novacoast for any fees incurred
- 3rd party software or scripts may be deployed to each workstation to configure Outlook Profiles
- Office has been upgraded to supported versions
- IRWD to migrate applications and core services as needed
- IRWD to update devices (multifunction scanners, monitoring applications, etc.) to relay using Office 365 or client deployed local mail systems.

Phase 6b Deliverables

- High level Design documentation (from previous phase)
- Project Plan documentation (from previous phase)
- Requirements documentation (hardware, software, licenses, network, etc.) (from previous phase)
- Acceptance Test documentation (from previous phase)
- Migration Run Book documentation to assist help desk
- Active Directory as-built document (if needed)
- Office 365 as-built document
- Network Infrastructure as-built documentation
- High level administration document specific to the client environment
- End User Training Curriculum

Phase 6b Out Of Scope

- Detailed, Formal or End User training on Active Directory, Azure AD or Office 365
- Documentation of tasks not performed by Novacoast

Phase 6b Duration

Phase 6b will run concurrent with Phase 6a

Phase 7 – Production Migration Cutover

Novacoast will work with IRWD to determine proper timing of final migration cutover. Any issues will be remediated by IRWD with escalation support provided by Novacoast.

- Communication to all users of coexistence termination (client task)
- Final delta sync of remaining data to Office 365 (if needed)
- Update MX record (client task)
- Reconfigure Spam Management (client task)

Phase 7 Assumptions

- IRWD responsible for all internal change management requests
- Sufficient bandwidth and routing to support Office 365
- IRWD team will provide first line of support and escalate user messaging problems to Novacoast
- Some remediation steps may require technical support from Microsoft which may impact the phase timeline. IRWD agrees to provide Novacoast with their support contract or reimburse Novacoast for any fees incurred

Phase 7 Deliverables

- MX Record and Spam Management successfully changed and supported

Phase 7 Out Of Scope

- Office 365 services other than Exchange Online and Skype
- GPOs, DNS, DHCP or other services not relating to this project
- Issue remediation escalation impacting less than 5 users with the same problem
- Server and application migration

Phase 7 Duration

Phase 7 will take approximately ½ day

Phase 8 – Post Cutover Support

Novacoast will work with IRWD to provide Tier 2 support for migration

- Review help desk tickets to ensure completion
- Assist with any outstanding issues

Phase 8 Duration

Phase 8 will take approximately 1 week

Phase 9 – Project close out

Novacoast will meet with key stakeholders to review project documentation and goals

- Review key project elements to ensure completion
- Close out any outstanding issues or open items
- Review lessons learned
- Complete project sign-off documentation

Phase 9 Duration

Phase 9 will take approximately ½ day

Schedule

Irvine Ranch Water District - GroupWise to O365 Migration	Weeks																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Phase 1 - Planning (1 week)	█																
Phase 2 - Discovery & Health Check (1 week)		█															
Phase 3 - Design and Migration Architecture (1 week)			█														
Phase 4 - Deployment and Configuration of Services (2 weeks)				█	█												
Phase 5 - Testing and Pilot Migrations (2 weeks)						█	█										
Phase 6a - Mailbox Coexistence and Migrations (8 weeks)								█	█	█	█	█	█	█	█	█	█
Phase 6b - Documentation and Knowledge Transfer (8 weeks)								█	█	█	█	█	█	█	█	█	█
Phase 7 - Production Migration Cutover (1/2 day)																	█
Phase 8 - Post Cutover Support (1 week)																	█
Phase 9 - Project close out (1/2 day)																	█

References

Novacoast has over ten years of experience in migrating Micro Focus GroupWise email systems to Microsoft Office 365, as evidenced by the references listed below.

Reference 1

Business / Government: Boston Symphony
 Contact Information: Tim James, Director of IT, 617-638-9237, TJames@bso.org
 Project Description: GroupWise Migration to O365
 Role of Key Project Team Members: Project management, migration design, deployment, configuration and test

Reference 2

Business / Government: City of Thousand Oaks
 Contact Information: Gerard Fontes, Sr Analyst, gfontes@toaks.org
 Project Description: GroupWise Migration to O365
 Role of Key Project Team Members: Project management, migration design, deployment, configuration and test

Reference 3

Business / Government: Port of Corpus Christi
 Contact Information: Bland Chamberlain, Sr Network Systems Analyst, 361-658-3845, bland@pocca.com
 Project Description: GroupWise Migration to O365
 Role of Key Project Team Members: Project management, migration design, deployment, configuration and test

Cost Proposal

See Appendix A, Cost Matrix.

Joint Venture

Novacoast Inc. has the technical resources and bench strength to complete this project on its own, and will not be requiring assistance from an industry partner. Novacoast does not outsource services.

Conflict of Interest

There are no known potential conflicts of interest between any current Novacoast employee and any current employee of the Irvine Ranch Water District. No employee of Novacoast, Inc., is related by blood or marriage to an IRWD employee, or resides with an IRWD employee.

Insurance

Novacoast confirms that we comply with IRWD insurance requirements.

Attachments

Appendix A – Cost Matrix

Appendix A Cost Matrix

Task	Estimated Hours by Classification	Cost by Classification	Total Cost by Task
Phase 1 – Planning	Project Manager 40 hrs Lead Engineer 40 hrs	\$175 / hour \$200 / hour	\$7,000 \$8,000 \$15,000
Phase 2 – Discovery and Health Check	Project Manager 8 hrs Lead Engineer 40 hrs	\$175 / hour \$200 / hour	\$1,400 \$8,000 \$9,400
Phase 3 – Design and Migration Architecture	Project Manager 8 hrs Lead Engineer 40 hrs	\$175 / hour \$200 / hour	\$1,400 \$8,000 \$9,400
Phase 4 – Discovery and Health Check	Project Manager 16 hrs Lead Engineer 80 hrs	\$175 / hour \$200 / hour	\$2,800 \$16,000 \$18,800
Phase 5 – Testing and Pilot Migrations	Project Manager 16 hrs Lead Engineer 80 hrs	\$175 / hour \$200 / hour	\$2,800 \$16,000 \$18,800
Phase 6a – Mailbox Coexistence and Migrations Phase 6b – Documentation & Knowledge Transfer	Project Manager 32 hrs Lead Engineer 240 hrs	\$175 / hour \$200 / hour	\$5,600 \$48,000 \$53,600
Phase 7 – Production Migration Cutover	Project Manager 1 hrs Lead Engineer 4 hrs	\$175 / hour \$200 / hour	\$175 \$800 \$975
Phase 8 – Post Cutover Support	Project Manager 8 hrs Lead Engineer 40 hrs	\$175 / hour \$200 / hour	\$1,400 \$8,000 \$9,400
Phase 9 – Project close out	Project Manager 4 hrs Lead Engineer 4 hrs	\$175 / hour \$200 / hour	\$700 \$800 \$1,500
Labor Totals	Project Manager 133 hrs Lead Engineer 568 hrs	\$175 / hour \$200 / hour	\$23,275 <u>\$113,600</u> \$136,875
Travel Estimate <i>(Labor billed as actuals in accordance with IRWD travel policies)</i>	Project Manager 2 weeks Lead Engineer 8 weeks	\$2,000 / week \$2,000 / week	\$4,000 \$16,000 \$20,000

Appendix A
Cost Matrix (continued)

Software Product	Quantity	MSRP	Price	Extended Price
Quest Coexistence Manager for GroupWise per managed Mailbox License with 24x7 Maintenance	800	\$16.21	\$14.36	\$11,448.00
Quest Migrator for GroupWise per Mailbox License with 24x7 Maintenance	800	\$16.37	\$14.51	\$11,608.00
Software Total				\$23,096.00

Total estimated cost of the project (not to exceed):

Labor:	\$136,875
Est. Travel:	\$20,000
Software:	\$23,096
Total:	\$179,971

Appendix B – IRWD Professional Services Agreement

Please see following Novacoast's requested provision to IRWD's Professional Services Agreement.

novacoast

To: Irvine Ranch Water District
From: Novacoast, Inc.
Re: Exceptions to GroupWise to Microsoft 365 RFP Terms and Conditions
Date: March 20, 2019

Novacoast respectfully requests that the following provision be added to the Irvine Ranch Water District Agreement for Professional Services, as set forth in Appendix B of the GroupWise to Microsoft 365 RFP document:

Additional Clause

Non-Solicitation. Without prior written consent, neither Consultant nor IRWD nor any of its affiliates will, for a period of one (1) year following the termination of this Agreement, solicit for employment or employ any employee of the other Party. In the event of a violation, the hiring Party will pay within ten (10) days of retention of said employee a lump sum fee equal to 50% of the previous year's earnings, including commission and bonus payments, of the employee at the time of separation. This section shall not be construed as prohibiting either party from engaging in any general or public solicitation for positions (ie., through newspaper advertisements, job posting boards etc.) or from hiring the other parties personnel who independently respond to such general and public solicitation.

Justification

Novacoast invests significant time, money and resources into training our technical talent. The addition of the proposed non-solicitation provision protects Novacoast from the unpermitted solicitation of our employees, and further compensates Novacoast in the event the customer successfully ultimately hires an employee without Novacoast's consent.

Novacoast Staff Resumes

Engineering Bio

Geoff Gilbert Vice President, Engineering

With over 25 years of leadership/management, superior problem solving and communication skills, I am a practiced professional with experience leading and supporting various industry's organizational improvement implementations.

Proven ability to lead seamless implementations across varying industries and deliver quality technological and/or business process solutions improving revenues, workplace productivity and customer satisfaction.



Recent Projects

International Media Production Company – Windows Client Migration (7 Month Project)

- Responsible for project management activities
 - Meeting Facilitation
 - Resource Management (People, Materials, Facility)
 - Manage, document and track all areas of the project management methodologies to ensure success (budget, issues, risks etc.)
 - Develop project phases and Project Schedule
 - Manage Go-Live Activities
 - Manage Project Closure
- Develop and present weekly status reports to internal & external stakeholders
- Responsible for Vendor Management
- Responsible to create Migration Schedule

Medical Facility - Luminet Product (12 Month Project)

- Responsible for project management activities
- Meeting Facilitation
- Resource Management (People, Materials, Facility)
- Manage, document and track all areas of the project management methodologies to ensure success (budget, issues, risks etc.)
- Develop project phases and Project Schedule
- Manage Go-Live Activities
- Manage Project Closure
- Develop and present weekly status reports to internal & external stakeholders

National Financial Institution - Windows Client Migration (6 Month Project)

- Responsible for project management activities
 - Meeting Facilitation
 - Manage, document and track all areas of the project management methodologies to ensure success (budget, resources, issues, risks etc.)
- Develop and present weekly status reports to internal & external stakeholders
- Facilitate Migration Scheduling
- Manage Vendor Scheduling

International Aerospace Company - Identity Management (6 Month Project)

- Responsible for project management activities
- Responsible for Vendor Management
- Responsible to create Migration Schedule
- Responsible for Milestone creation
- Following SDLC Process

- Responsible to facilitate JAD sessions
- Develop and present weekly status reports to internal & external stakeholders
- Manage, document and track all areas of the project management methodologies to ensure success (budget, resources, issues, risks etc.)

Foreign Security Force - Identity Management (8 Month Project)

- Responsible for project management activities
- Responsible for Vendor Management
- Responsible to create Migration Schedule
- Develop and present weekly status reports to internal & external stakeholders
- Manage, document and track all areas of the project management methodologies to ensure success (budget, resources, issues, risks etc.)

National Financial Institution – AD Upgrade, Citrix Implementation (3 Month Project)

- Responsible for project management activities
- Responsible for establishing, with the customer, the project scope of work (SOW)
- Develop and present weekly status reports to internal & external stakeholders
- Ensure the application, as developed, meets the customer-defined business requirements, prior to implementing
- Manage, document and track all areas of the project management methodologies to ensure success (budget, resources, issues, risks etc.)

National Retailer – PeopleSoft Upgrade (3 Month Project)

- Responsible for project management activities in new processes and software development & implementations
- Responsible for establishing, with the customer, the project scope of work (SOW)
- Responsible to recommend practices and procedures to promote successful, consistent, productive, and efficient testing
- Develop weekly status reports and present status of the project to leadership
- Ensure the application, as developed, meets the customer-defined business requirements, prior to implementing
- Manage, document and track all areas of the project management methodologies to ensure success (budget, resources, issues, risks etc.)

National Wireless Phone Carrier – Identity Management (3 Month Project)

- Responsible for project management activities in new processes and software development & implementations
- Responsible for managing both Novacoast, US Cellular and 3rd party vendor resources
- Responsible for establishing, with the customer, the project scope of work (SOW)
- Responsible to recommend practices and procedures to promote successful, consistent, productive, and efficient testing
- Develop weekly status reports and present status of the project to leadership
- Ensure the application, as developed, meets the customer-defined business requirements, prior to implementing
- Manage, document and track all areas of the project management methodologies to ensure success (budget, resources, issues, risks etc)

Technology Experience

Proficient in SharePoint, Microsoft Office Suite, Access, PowerPoint, MS Project and Excel.

Familiar with and practice the methods of Six Sigma, Lean Sigma, and the Balanced Scorecard, through Six Sigma Green Belt Training, knowledge of SPSS and SAS programs.

Familiar with SQL and SQL Report creation, Familiar with RIS and PACS systems. Proficient in creating RIM and RBAC diagrams and documents. Experience with SOX, CMMi, TQM and ISO standards.

Certifications

- Masters Certificate in Change Management
- Masters Certificate in Business Management
- Masters Certificate in Database Management
- Master Certificate in Networking & Telecommunications
- PMI - PMP Certification
- SCRUM Certified Project Manager

Education

- Colorado Technical University, Colorado Springs, CO
 - MS, Information Technology Management (2008)
- Colorado Technical University, Colorado Springs, CO
 - MS, Management/Project Management (2007)
- University of Phoenix, Fresno, CA
 - BS, Health and Human Services (2001)

Engineering Bio

Michael Howden Director, Data Security Services



Michael has worked in the IT industry for about 21 years. He was a technical consultant for the first 8 years then worked as a senior infrastructure specialist in K12 education for the 7 years prior to joining Novacoast in 2012. Michael's major focus areas include architecting and maintaining Active Directory environments, Inter-Forest Domain Consolidations, Novell to Windows migrations, Microsoft Exchange upgrades and Office 365 migrations, Zenworks and SCCM migrations, as well as operating system and application deployment in Netware and Windows environments. His other focus areas are scripted automated efficiency, data classification, endpoint protection, network security, permissions remediation and virtualization.

Recent Engineering Projects

National Bank

- Reviewed corporate data classification policy
- Provided recommendations around categorizations and access controls
- Assisted with Azure RMS template creation and management
- Deployed Secure Islands IQP Enterprise Suite for automated classification and encryption of sensitive data

National Healthcare Company

- Provide detailed reporting on global access and overexposure of sensitive information on 750TB of data
- Develop custom PowerShell scripts to remediate broken file permissions for all NetApp file shares
- Replaced global group access with restrictive groups to follow least privilege model
- Migrated PKI certificate services from SHA1 to SHA2

Multinational Advertising and Public Relations Firm

- Consolidate all 30+ extraneous Windows 2003 domains into a global master Windows 2008 R2 domain
- Utilize custom scripting as well as out of the box tools like ADMT for user and group migrations
- Develop custom PowerShell scripts to analyze and translate file permissions for all CIFS shares
- Provide detailed logs and reporting on all migrations

Multiple State Universities

- Implemented workstation and profile migrations from one Microsoft domain to another Microsoft domain
- Built supporting PowerShell scripts for user and group migrations to the new Microsoft Active Directory
- Assisted with GPO validation on 100's of Group Policy objects for 20,000+ workstations

International Motion Picture Company

- Led the planning and implementation of a global file migration from Novell to Microsoft
- Built supporting scripts for user and group migration from Novell eDirectory to Microsoft Active Directory
- Led the migration of 100TB+ of data on over 40 servers globally, and 2 major datacenters in US and Europe

Local Government Agency

- Planned, implemented a migration of File, Print, and Configuration Mgmt from Novell to Microsoft
- Deployed centralized File and Print services on Windows Server 2012 R2
- Migrated all data and corresponding permissions to the new environment
- Migrated all printers and print drivers to the new environment
- Translated Novell login scripts to Microsoft GPOs
- Deployed and configured SCCM 2012 R2 with OS and Application Deployment
- Built custom application to remove all Novell related software and install new Microsoft software

Local Government Agency

- Planned and implemented an Exchange 2003 to Exchange 2010 migration.
- Upgraded the Active Directory environment from Windows 2000 to Windows 2008 R2
- Built Windows Deployment Services infrastructure with Key Management Services for volume activation
- Built Windows Server Update Services infrastructure
- Built Hyper-V 2012R2 environment with VM replication
- Implemented Active Directory PKI Certificate Services for use with Imprivata Single Sign-On services and VPN

National Bank

- Performed Active Directory health check and gave best practice recommendations
- Built custom program to join workstations to their Active Directory domain and migrate all user profiles
- Assisted with migration of 5000+ workstation migrations

Large K-12 Education Agency

- Planned and implemented a migration of File, Print, and Configuration Management from Novell to Microsoft
- Migrated configuration management from Zenworks for Desktops 7 to Zenworks Configuration Management 11
- Built custom PowerShell program to automate the provisioning of over 35,000 student accounts
- Planned and implemented Office 365 for Education with Single Sign-On utilizing Active Directory Federation Services and Directory Syncing, and Active Directory PKI certificate services
- Planned and implemented Symantec Endpoint Protection 11 on 10,000+ devices

Technology Experience

- Microsoft: All desktop and server operating systems up to and including Windows 10 and Server 2012 R2, Active Directory, Office 365, Exchange (2003,2007,2010, 2013), SQL Server, SCVMM, Hyper-V, Windows Deployment Services, Microsoft Deployment Toolkit, Windows Update Services, DFS, DNS, DHCP, PKI, AD Certificate Services, Group Policy and PowerShell
- Novell: Netware 6.5, DNS, DHCP, eDirectory and Zenworks 7, 10 and 11
- Symantec: AntiVirus 8, 9, 10 and Endpoint Protection 11 and 12
- Varonis: DatAdvantage 5.x, 6.x
- Secure Islands: IQP 5.x

Certifications

- MCSE – Microsoft Certified Systems Engineer 2000-2008
- MCTS – Microsoft Certified Technology Specialist: Windows 7, Configuration
- CCNA – Cisco Certified Network Associate: Routing and Switching

Engineering Bio

Howard Hyten Network Engineer IV



Howard has served in various capacities in Information Technology, from systems analyst and developer, to project leader, to Director of I.T. For 25 years he has deployed and integrated systems to address continually evolving business needs.

With a thorough background in networks, storage, and server systems, Howard has assisted clients in deploying sophisticated systems that use recent SAN technologies, virtualization, and multi-tiered application servers.

Recent Projects

Identity Manager Applications deployment for Telecommunications company

Deployed NetIQ IDM 4.5 applications in clusters in 2 datacenters. These applications include User Application and Self-Service Password Reset. Wrote workflows for unique email address generation.

SOAP Driver deployment for Tire company

Deployed NetIQ IDM SOAP driver for connecting to HR system in the cloud. This changed the previous authoritative source from JDBC driver to SOAP so outputs from SOAP driver had to match old JDBC driver so that remainder of IDM system worked mostly unchanged.

Office365 Driver for Aeronautics company

Deployed NetIQ IDM driver of Office365 for company to manage Azure AD and Exchange Online accounts from IDM. Wrote UserApp workflows for email address generation.

Technology Experience/Certifications

- NetIQ Identity Manager, drivers and User Application version 3.0 to 4.6
- NetWare 3.1 to OES Linux
- GroupWise 5.5 to version 2014 R2
- GWAVA Retain and Reload
- Zenworks, from Novell Application Launcher "NAL" to ZCM 11
- Windows desktops and servers from LAN Manager to Windows Server 2012 R2
- VMware ESX 2.5 to vSphere 6.0
- 20 years of TCP/IP, switched networks (Cisco, HP)
- SAN solutions, including Fibre Channel and iSCSI, and storage arrays, such as EMC, Compellent, EqualLogic, and Xiotech
- Firewalls, from Checkpoint, Cisco PIX, to Sonicwall

Education

École Supérieure de Commerce
Clermont-Ferrand, France

Bachelors of Science, Business Administration
University of Kansas

Engineering Bio

John Walls Engineer IV



John has extensive experience with Novell OES-Linux and OES-Netware, SUSE Linux, eDirectory, GroupWise, ZENworks/ZCM, Vibe/Teaming, and Cluster Services, as well as various products from other vendors. His strengths lie in implementing technologies such as Linux, ZENworks, GroupWise, Vibe/Teaming, and Netware in both large and small environments.

Recent Projects

K-12 School District – Design and implementation of ZCM 11 for a large school district in Southern California.

Regional Hospital – ZCM Upgrade from 10.3 to 11.2.

Novell to Windows Migration – Design and testing of migration scenarios for a large global media and entertainment organization. Services included building a test lab to test migration scenarios from Novell Netware servers to CIFS/SMB shares. Also provided migration support during the production migration process. Target platform included EMC NAS shares/devices in a pure Windows and Active directory environment.

Novell OES-Linux – Design, Installation, and Configuration of a multi-site OES2/SLES10SP3 installation for a large government/law enforcement organization. Novell Services/Components included in this project and deployment included eDirectory, NSS, print services via iPrint, SLP Services, DNS Services, and DHCP Services. Additional project activities and services included migration assistance, and training.

GroupWise Upgrade - Complete upgrade, redesign and engineering of 1,000+ user GroupWise system in a fairly large K-12 educational environment. Completed system utilized GroupWise 8.x running on OES2-Linux.

Technology Experience/Certifications:

- Novell: OES-Linux and OES-NetWare (and included services), GroupWise, eDirectory, Vibe/Teaming, ZENworks (ZCM), Cluster Services.
- Microsoft: Windows Server and desktop operating systems, Active Directory, Internet Information Services
- Protocols: TCP/IP Services including; DNS, DHCP, SNMP, LDAP, SLP and WINS; IPX/SPX
- Linux: SUSE Linux Enterprise Server 10/11, SUSE Linux Enterprise Desktop 10/11
- Certified on Novell ZENworks and ZCM (1.1– 11.1a)
- Certified on Novell GroupWise (5.2 - 7.0)
- Certified on Novell Netware (4.1 - 6.5)
- Certified on Novell OES-Linux
- Certified on Novell eDirectory
- Certified on Novell Cluster Services (OES-Linux, Netware 5, 6 and 6.5)
- Certified ZENworks Administrator
- Certified Novell Salesperson

Project Management Bio

Max Walker
MBA, PMP, CSM
Director of Project Management



Max has expertise in project management and services operations management, including Account Management, Agile (Scrum) Project Management, Business Process Improvement, Quality Certification Programs for continuous improvement, and Support

CRM deployment. His core strengths include building strong, collaborative, cross-functional teams, and coaching and mentoring self-organizing project teams who drive successful business improvement.

Recent Project and Leadership Experience

Identity and Authentication Project Management

Managed high-level deliverables for Identity Management projects, including hardware specifications, procurement, and configuration, workflow conversions, installation, and testing.

Global Services Operations Management at a Leading Technology Vendor

Managed Services diverse business functions, including CRM Configuration and Setup of Support Entitlements, Customer Training Registration, Business Intelligence, Customer Loyalty Program, and Services Development Team. Sponsored and drove a variety of development, automation, and business process projects. Revitalized Support Center operational key performance indicators and increased focus by simplifying metrics and reporting. Provided new interactive data tools for leadership to review performance. Led Customer Satisfaction team to design new closed-loop processes for customer feedback. Managed on-site technical support crises for one of Novell's largest French government customers. Increased project effectiveness by sponsoring and mentoring employees toward PMP certification.

Project Management Leading Technology Vendor

Successfully delivered on strategic projects and programs, including CRM migration to Siebel Call Center 7.5 and global departmental certification in the SCP Quality Management program. Recognized for tenacity, strong organizational skills, cross-functional team management, and effective communication with all stakeholders. Led Case Management project work stream to implement improved case management processes in the Siebel Call Center application version 7.5. Built virtual team of CRM "power users" from global support centers and field support. Increased CRM efficacy by negotiating shared component usage across multiple departments. Developed, negotiated, established, documented new business process for global support organization. Created and managed all end-user CRM training events, on-line reference material, and recorded demos. Led Technical Support organization to successful SCP and FSP certifications on first attempt, including selecting program and vendor, leading virtual project organization, and streamlining business process.

Services Management at a Leading Technology Vendor

Managed remote Canadian field technical support and account management team. Directly managed both government and enterprise-level accounts. Achieved consistently high customer satisfaction as reflected in strong contract renewal rates (>85%). Attracted, hired, inspired, and developed new members of high-performing technology support team.

Achieved turnaround of under-performing technical field support team into a cohesive, high-performing support delivery team. Repaired the Support team relationship with the Sales team. Managed customer

crises and escalated situations to resolution remotely and on site (international). Managed strategic accounts for renewal, services growth, and customer satisfaction. Managed customer escalations and critical situations to resolution..

Project Management Practice Contributions

- “Waterfall to Agile,” 2014, Contributing Author for AtTask. <http://unbouncepages.com/agile-53187/>.
- Service Strategies' Field Support Performance (FSP) Program, 2005, Development Council Member.
- TSIA Certified Technology Service & Support (CTSS) Program, 2006, Development Council Member.

Certifications

- Certified Project Management Professional (PMP), 2009, Project Management Institute (PMI). PMP No.: 1272164.
- Certified ScrumMaster (CSM), 2012, Scrum Alliance, Inc.
- Certified Knowledge Management Foundations: KCS Principles, 2011, Help Desk Institute (HDI).

Education

- MBA, NTU High-Tech MBA, 2008, Walden University, Minneapolis, MN.
- B.S., Business Management—International Marketing, 1991, Brigham Young University, Provo, UT
- Leadership Process: Motivating Achievement (LPMA) Training (Spencer, Shenk, and Capers)

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July 8, 2019

Prepared by: C. Smithson

Submitted by: C. Clary

Approved by: Paul A. Cook



ACTION CALENDAR

IRVINE LAKE NATIVE WATER YIELD AGREEMENT AND IRVINE LAKE PIPELINE SETTLEMENT AGREEMENT

SUMMARY:

In June 2018, staff presented to the Finance and Personnel Committee proposed key terms and conditions relating to how revenues from the sale of native water from Irvine Lake impact connection fees. With input from the Committee, staff continued to work with IRWD's legal counsel and the Irvine Company to develop an updated agreement relating to the sale of native water. The proposed Yield Agreement will replace the terms of the 1974 Irvine Lake Agreement and the 2002 and 2006 Amended and Restated Sub-Basin Agreements.

The proposed Irvine Lake Native Water Yield Agreement establishes future usage of and related revenue from the sale of native water from Irvine Lake, which is applied to connection fees for the developing Improvement Districts (ID) 153/253. The Yield Agreement preserves many of the obligations from the previous agreements and removes obligations that have been fulfilled. District staff and legal counsel have worked closely with Irvine Company staff and counsel to develop an agreement that ensures the Irvine Company pays its fair share of capital infrastructure (without overpaying), recognizing that future sales of native water will reduce the amount of connection fees for ID 153/253.

In addition, staff is proposing an Irvine Lake Pipeline (ILP) Settlement Agreement which provides payment to the Irvine Company of \$50,000 to replace booster pumps relating to lower pressure of water delivered to the Irvine Company's orchard properties as a result of converting to recycled water from the new ILP project. All other key terms and conditions related to providing water to the Irvine Company's orchard properties are included in the Irvine Lake Native Water Yield Agreement.

BACKGROUND:

IRWD's Long-term Capital Funding Plan (LTFP), completed in November 2013, established connection fees and formed new IDs for funding capital requirements and setting tax rates. A fundamental concept in IRWD's LTFP is that the costs of new capital facilities are shared equally between the connection fees paid by a developer and property taxes paid by property owners (also known as "The 50/50 Rule"). IRWD uses a comprehensive financial model to incorporate regional capital costs, future development, growth rates, inflation, and other variables to determine connection fees. Connection fee increases are modeled for both residential and commercial development along with a consolidated tax rate for all IRWD IDs. Connection fees are set with a consistent methodology across all IDs.

Irvine Lake Native Water Yield Agreement:

Connection fees for ID 153/253, in which the Irvine Company is currently the sole developer, are determined by applying the approach outlined in the IRWD LTFP. ID 153/253 is unique in that it has two other sources of revenue: receipts from the Strawberry Farms Golf Club and the sale of native water from Irvine Lake. Native water is stormwater captured in Irvine Lake and served to customers of IRWD's non-potable / recycled water system; native water is also used as a source of water for the Baker Water Treatment Plant. These revenues are applied to ID 153/253 to reduce connection fees and property taxes within that ID.

In addition to the factors and approach described in the LTFP, IRWD sets connection fees in anticipation of when each ID will be fully developed. Based on information from the Irvine Company, ID 153/253 is expected to be fully developed within 10 years. To set connection fees appropriately for this ID, the calculation factors other revenue sources (i.e., native water and Strawberry Farms) beyond the period during which the Irvine Company will pay connection fees for this ID. Because future projections of native water sales are subject to several variables such as weather, water demands, etc., staff met with the Irvine Company to discuss assumptions regarding future sales of native water. Discussions focused on two areas – future annual yield and native water rate – both of which were reviewed at the April 2018 and June 2018 Finance and Personnel Committee meetings.

Because the above-mentioned variables impact the sale of native water, staff recommends that IRWD and the Irvine Company enter into an agreement to ensure that connection fees for ID 153/253 are not overpaid or underpaid. The proposed agreement sets assumptions for the application of revenue from native water sales to ID 153/253. The agreement also provides for a reconciliation every five years between the assumed and the actual native water usage and revenue. The final reconciliation would occur at the end of 20 years, which is how overpayment or underpayment of connection fees will be avoided.

Staff is proposing a new agreement which replaces the Irvine Lake 1974 agreement and the 2002 and 2006 Amended and Restated Sub-Basin Agreements. The key terms and conditions in the agreement include:

- Replacing ID 105 eliminated in the LTFP process with ID 153/253;
- Providing for the use of native water outside of ID 153/253 previously limited to use within ID 105;
- Standardizing assumptions of 3,800 acre-feet (AF) per year of native water sales at a rate of \$291 per AF in FY 2018-19, \$312 per AF in FY 2019-20, and \$327 per AF in FY 2020-21, increasing the rate by 3% annually thereafter;
- Providing for a reconciliation every five years in years 1 through 20 based on the difference between the assumed water yield of 3,800 AF and the actual water yield, plus annual interest at 3%;
- Providing for a final reconciliation in year 21 covering years 21 thru 40 based on the average annual yield of the first 20 years;

Action Calendar: Irvine Lake Native Water Yield Agreement and Irvine Lake Pipeline Settlement Agreement

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- Terminating the Sub-Basin agreements with restatement of the remaining duties including quality and quantity of water supply for the Irvine Company's properties and the related rate tied to the low volume recycled rate;
- Agreeing to annex identified parcels into ID 153/253 with the Irvine Company agreeing to pay all third-party costs. No other annexations will occur within this ID;
- Agreeing to continue to include at least 12,000 acre-feet per year (AFY) (10,000 of potable and 2,000 of non-potable) for the Irvine Sub-basin in perpetuity. The Irvine Company acknowledges that IRWD has previously met this obligation; and
- Applying condemnation proceeds based on a partial or complete acquisition of Irvine Lake through eminent domain.

The new proposed Irvine Lake Native Water Yield Agreement is attached as Exhibit "A".

Irvine Lake Pipeline Settlement Agreement:

IRWD has worked with the Irvine Company to convert the irrigation of its agricultural operations along the ILP to recycled water. The pressure of the recycled water being served to these sites is less than the pressure of the non-potable (Irvine Lake water) water currently provided to these sites. On-site booster pumps are needed to provide recycled water to the sites at an adequate pressure. Staff is proposing a Settlement Agreement which provides a one-time payment to the Irvine Company of \$50,000 to install booster pumps relating to reduced pressure of water delivered to the Irvine Company's orchard properties as a result of converting to recycled water from the ILP Project. The Irvine Company will be responsible for future capital costs as well as operation and maintenance costs including electricity. The ILP Settlement Agreement is attached as Exhibit "B".

FISCAL IMPACTS:

Fiscal impacts are described above and will be included in IRWD's connection fee / tax rate setting process.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations Title 14, Chapter 3, Section 15004, the appropriate environmental document will be prepared by the appropriate agency (likely the County of Orange) when meaningful information becomes available.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 2, 2019.

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RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE IRVINE LAKE NATIVE WATER YIELD AGREEMENT AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE IRVINE LAKE PIPELINE SETTLEMENT AGREEMENT.

LIST OF EXHIBITS:

Exhibit "A" – Irvine Lake Native Water Yield Agreement
Exhibit "B" – Irvine Lake Pipeline Settlement Agreement

**RECORDING REQUESTED BY
AND WHEN RECORDED, MAIL TO:**

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
Attn: General Counsel

WITH A CONFORMED COPY TO:

The Irvine Company LLC
550 Newport Center Drive
Irvine, CA 92660
Attn: General Counsel's Office

(Space Above for Recorder's Use)

EXEMPT FROM RECORDING FEES PER
GOVERNMENT CODE SECTION 6103

IRVINE LAKE NATIVE WATER YIELD AGREEMENT

This Irvine Lake Native Water Yield Agreement ("**Agreement**") is effective as of July 1, 2018 ("**Effective Date**") and is between The Irvine Company LLC, a Delaware limited liability company ("**TIC**") and the Irvine Ranch Water District, a California water district organized under Division 13 of the California Water Code ("**IRWD**"). TIC and IRWD are sometimes referred to herein individually as a "**Party**" and collectively as the "**Parties**."

A. IRWD and The Irvine Company, a West Virginia corporation, previously entered into an "Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, as well as Additional Storage Capacity in Irvine Lake" dated as of May 31, 1974 (the "**1974 Agreement**"). The 1974 Agreement was recorded on July 1, 1974 in Book 1185, Pages 1287 – 1325 in the Official Records of Orange County, California ("**Official Records**").

B. TIC is the successor in interest of The Irvine Company, a West Virginia corporation, and has succeeded to all rights and obligations of The Irvine Company, a West Virginia corporation, under the 1974 Agreement.

C. The 1974 Agreement provided for the financing and construction of the Irvine Lake Pipeline ("**ILP**"). The 1974 Agreement also provided for TIC's conveyance to IRWD of TIC's rights to the waters of Santiago Creek ("**native water**"), conveyance of a pipeline and existing and future easements for the ILP, and assignment of other rights relating to the Agreement among TIC, Carpenter Irrigation District and Serrano Irrigation District dated February 6, 1928 (as amended and supplemented from time to time, the "**1928 Agreement**") regarding the creation of the Santiago Reservoir, which is now known as "Irvine Lake", in exchange for IRWD's future service of native water to certain TIC land holdings and IRWD's other obligations as more fully set forth therein. Many of the respective duties of IRWD and TIC under the 1974 Agreement have been fulfilled by the Parties.

D. A portion of TIC's undeveloped (including agricultural) land holdings were previously located within Improvement District No. 105, as described in the 1974 Agreement. In 2013, IRWD reorganized a majority of TIC-affiliate undeveloped lands into Improvement Districts Nos. 153 (for water) and 253 (for sewer) ("***District 153/253***"). A majority of developed lands that are, or were previously, owned and developed by TIC (or its affiliates) are within Improvement District Nos. 125 (for water) and 225 (for sewer) (together "***District 125/225***"). District 153/253 (as it exists as of the date this Agreement is executed) and District 125/225 are depicted on **Exhibit 1** attached hereto. For the purpose of this Agreement, and for the avoidance of doubt, the areas identified as Improvement Districts Nos. 112 (for water) and 212 (for sewer) (the former Marine Corps Air Station El Toro lands) and Improvement Districts Nos. 113 (for water) and 213 (for sewer) (the former Marine Corps Air Station Tustin lands), will at no time be considered a part of District 125/225 or District 153/253. The area shown on Exhibit 1 as PA30 will also not be considered a part of District 125/225 or District 153/253 for the purpose of receiving credits or application of revenues under this Agreement. The Parties also intend by this Agreement to provide for the annexation of additional undeveloped TIC parcels into District 153/253.

E. Under the 1974 Agreement, IRWD applied the native water value to the Capital Fund for Improvement District No. 105, and since the reorganization described in Recital D, the native water value is credited 50% to connection fees within District 153/253, and 50% to property taxes within District 153/253.

F. The Parties are also parties to a *First Amended and Restated Agreement – Irvine Sub-Basin*, dated July 26, 2002 (the "**Sub-Basin Agreement**") as amended by the *Conveyance Agreement (Amendment No. 1 to Amended and Restated Agreement, Irvine Sub-Basin)* dated June 14, 2006 ("**Amendment No. 1**", and together with the Sub-Basin Agreement the "**Amended Sub-Basin Agreement**"), which provided for TIC's conveyance of certain groundwater well infrastructure and water rights to IRWD in exchange for IRWD (a) providing certain water supply assessments, (b) ensuring a sufficient quality and quantity of water supply for agricultural irrigation purposes, and (c) establishing a mutually approved contract rate for the cost of water. The Parties have fulfilled their duties relating to conveyance of well infrastructure and water rights.

G. The Parties intend by this Agreement to (a) terminate the 1974 Agreement and the Amended Sub-Basin Agreement, (b) restate their remaining obligations under the 1974 Agreement and the Amended Sub-Basin Agreement, including, without limitation, providing for the transfer of IRWD's duties related to District No. 105 to District 153/253, (c) establish new assumptions regarding future usage of native water and the use of revenue derived from the sale of native water, which revenue shall be used to determine applicable credits to be applied by IRWD equally to connection fees and to property taxes for properties in District 153/253; (d) confirm the use of the ILP for recycled water or other types of water in addition to native water, as determined by IRWD; and (e) address other matters as set forth herein.

NOW, THEREFORE, in consideration of the above recitals and for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Recitals. The above Recitals are true and correct and incorporated into this Agreement by reference.

2. Termination of 1974 Agreement; Term.

(a) The Parties hereby terminate the 1974 Agreement and the Amended Sub-Basin Agreement (the “**Prior Agreements**”) and restate in this Agreement any remaining duties under the Prior Agreements to reflect current conditions, but in no event shall such termination and restatement impact any other agreement that references the Prior Agreements or incorporates by reference any portion of the Prior Agreements (*e.g.*, pipeline easements from TIC to IRWD).

(b) This Agreement is effective as of the Effective Date and terminates June 30, 2058 (the “**Termination Date**”).

3. Restated Obligations under 1974 Agreement and the Sub-Basin Agreement. The Parties agree to the following restatement of certain obligations contained in the Prior Agreements:

(a) Pipeline Connections. With respect to any connections between the ILP and TIC agricultural irrigation facilities existing as of the Effective Date of this Agreement, IRWD shall continue to be responsible for all costs and expenses to maintain any such connections up to and including the applicable water meters, which costs and expenses shall be borne by IRWD.

(b) Sale of ILP Capacity. If IRWD sells a permanent and irrevocable capacity ownership right in the ILP to any third party, the contract between IRWD and that third party shall include an amount determined by IRWD and TIC to be a pro rata amount of the value of the easements conveyed by TIC to IRWD for the ILP pursuant to Section 3 of the 1974 Agreement, which amount shall be paid into IRWD’s District 153/253 Capital Fund (as defined below) or utilized in another manner mutually approved by IRWD and TIC.

(c) Consent to Use of Native Water. TIC hereby consents to IRWD’s use of native water (as defined in Recital C above) for the benefit of property other than District 153/253 subject to IRWD’s compliance with the terms and conditions of this Agreement including, without limitation that IRWD shall ensure that a like quantity and reasonably similar quality of water will be available to District 153/253 during any such use to meet the reasonable irrigation needs of the permanent plantings (as defined below). IRWD agrees, to the extent permitted by law, to establish a priority allocation of non-potable native or other water stored in Irvine Lake, reclaimed water and/or other local sources of non-potable water that will meet the needs of permanent plantings. As used herein, “**permanent plantings**” shall mean those orchard trees with a life cycle of more than five years located in the existing orchard areas in TIC’s planning areas known as “PA1” and “PA 6” as shown on Exhibit 1. If imported, reclaimed or Irvine Lake supplies are not sufficient or are not available to meet the reasonable irrigation needs of such permanent plantings, IRWD shall pump and deliver non-potable groundwater to meet such needs. Any public agency, public district, non-profit organization or entity, or private community association which may succeed to TIC’s ownership of such permanent plantings, or has done so in the past, shall be considered as a third party beneficiary of IRWD’s commitment

under this section. TIC acknowledges that IRWD has previously credited TIC lands (including Northern Sphere Area, Planning Areas 1 and 2, Planning Areas 18/39/33/34 GP Amendment, Planning Area 40/12 GP Amendment, Santiago Hills Phase II and East Orange, and PA 33 (Lots 105/107 and 108) more than 12,000 AFY for the Irvine Sub-Basin in such assessments and verifications, and IRWD agrees to continue to include at least 12,000 AFY in credits (10,000 AFY potable; 2,000 AFY non-potable) with respect to any re-assessments related to those prior assessments in perpetuity notwithstanding the termination of this Agreement on the Termination Date.

(d) Recreation Rights. Nothing in this Agreement shall be construed as an assignment to IRWD of (i) any rights owned by TIC with respect to recreational use of Irvine Lake, or (ii) and funds derived by TIC arising from recreational rights or concessions operated at Irvine Lake. All of such rights and funds are reserved to TIC.

(e) Condemnation of IRWD Interest in Irvine Lake. If any portion of IRWD's interests in Irvine Lake are condemned prior to the Final Reconciliation Payment (as that term is defined below), then the following provisions will apply. If any portion of IRWD's interests in Irvine Lake is condemned after the Final Reconciliation Payment, this provision will not apply.

(i) Partial Condemnation Affecting Yield. If a portion of IRWD's interests in Irvine Lake are acquired by eminent domain, then the portion of such condemnation proceeds received by IRWD that are attributable to future lost revenue from native water (whether as part of determining the fair market value of the land or as part of severance or other damages) due to any reduction in the yield capacity of the Irvine Lake reservoir or reduction in the ability of IRWD to utilize such native water attributable to such eminent domain proceeding (collectively, the "**Lost Yield Value**"), such Lost Yield Value proceeds shall be added as a positive amount to the Cumulative Total pro rata each Reconciliation Year over the remaining term of the Agreement, plus Interest (as defined in Section 6(a)(iii) below) on each such pro rata amount. The Assumed Water Yield for each year of the remaining term will be reduced proportionately based on the reduction in yield capacity of the Irvine Lake reservoir due to the condemnation (e.g., if ten percent [10%] of the yield capacity of the Irvine Lake reservoir is lost due to the condemnation, then the Assumed Water Yield shall also be reduced by ten percent [10%]).

(ii) Complete Condemnation of Lake. If a complete condemnation of IRWD's interests in Irvine Lake are acquired by eminent domain, then the condemnation proceeds received by IRWD that are attributable to future lost revenue from native water (whether as part of determining the fair market value of the land or as part of severance or other damages) due to the Lost Yield Value, such Lost Yield Value proceeds shall be added as a positive amount to the Cumulative Total for the next upcoming Reconciliation Year. The final payment will be made in the upcoming Reconciliation Year as follows:

Cumulative Total prior to the conclusion of such condemnation

PLUS (Yield Value/AF in year condemnation concludes) × (Annual average Yield Differential for each of the remaining years of years 1-40) × (Remaining years of years 1-40)

PLUS the Lost Yield Value proceeds

TIMES 50% [half to connection fees]

EQUALS final payment.

Upon disbursement of this final payment, Section 6 of this Agreement will no longer be applicable and the merger provisions of Section 7 of this Agreement will be automatically accelerated to the disbursement date.

(f) Wells. TIC shall not drill any wells within IRWD's service area.

4. Agricultural Water Types, Quality, Monitoring, and Rate.

(a) Types of Water Served. TIC acknowledges that the type of water served through the ILP will be determined by IRWD, and may be recycled water, native water, groundwater, imported water, or any other water or combination thereof.

(b) Water Quality. TIC owns (directly, or indirectly by an affiliate of TIC) over 480 acres of avocado orchards (the "**Orchard Properties**"), which are depicted on **Exhibit 2-A**, that are currently served by, and will continue to be served by, the ILP. TIC has successfully used IRWD's recycled water on certain of its avocado orchards since 2013, with no apparent adverse effects. The Parties agree to the delivery and use of recycled water on the Orchard Properties. However, TIC remains concerned about the potential for adverse effects on the Orchard Properties due to future changes in the quality of recycled water from that used historically by TIC on its avocado orchards. TIC may, at its own cost, monitor the orchards and/or soil on the Orchard Properties for changes from the current conditions (the "**Baseline Conditions**") as documented in a "**Baseline Study**" dated July 2015. If TIC's monitoring demonstrates adverse changes from the Baseline Conditions that could be attributable to the use of IRWD's recycled water, then TIC shall provide that information to IRWD. IRWD shall monitor the non-potable water delivered to the Orchard Properties as described in Section 4(c). If IRWD's water quality monitoring shows levels greater than the "TIC Target" for one or more constituents listed on **Exhibit 2-B**, then TIC may initiate a meeting with IRWD to determine whether and how to further investigate and resolve in a reasonable manner any adverse changes from the Baseline Conditions attributable to the quality of recycled water with the intent to maintain water quality equal or better than the TIC Target (which "reasonable manner" may include, without limitation, making physical changes to IRWD's non-potable system including blending of sources to the non-potable system to achieve the "TIC Target". Such sources could include groundwater, Irvine Lake or Metropolitan Water District of Southern California).

(c) Water Quality Monitoring. IRWD will collect and analyze water samples from the ILP at up to three (3) locations mutually agreeable to TIC and IRWD that approximate

TIC's service locations for the Orchard Properties. Those samples will be collected and analyzed monthly for two (2) years and quarterly thereafter unless either (i) variability is such that IRWD determines more frequent monitoring is required or (ii) a quarterly report shows levels greater than the "TIC Target" for one or more constituents, then IRWD shall collect and analyze samples on a monthly basis until three (3) consecutive monthly samples show levels below the "TIC Targets". IRWD will share the results of the analyses with TIC within thirty (30) business days after such sampling.

(d) Rates and Charges. Notwithstanding the type of water served, the water rate for water delivered to TIC by IRWD for agricultural purposes shall be no greater than IRWD's "recycled water" rate, and the only rates and charges for such water shall be IRWD's then-prevailing "Low Volume" commodity rate for recycled water used for landscape irrigation charged to non-loan customers. IRWD will charge the applicable landscape recycled monthly water meter charges, but shall not bill TIC for any other additional charges (e.g., no pumping charges).

5. Native Water Value; Connection Fee Credit. The Parties hereby establish the following procedures regarding crediting the value of native water from Irvine Lake in the calculation of connection fees for District 153/253.

(a) Use of Native Water. IRWD shall use reasonable efforts to (i) maximize use of native water when available, and (ii) minimize the loss of native water from spills and evaporation. IRWD represents and warrants to TIC that IRWD has no current intention to reduce its use of native water from Irvine Lake. If any project at Irvine Lake (e.g., renovation of spillway or outlet tower) has a material adverse impact on IRWD's ability to utilize native water, the reconciliation obligations set forth in Section 6 below will be suspended for the applicable year(s) impacted by such project, and any native water utilized by IRWD during the Suspended Years (as defined below) [up to the date that IRWD is unable to utilize such native water and after IRWD is able to re-commence its utilization of such native water] shall be credited to the Actual Water Yield (as defined below) in the next fiscal year immediately after such suspension. In the event of such suspension, each applicable Reconciliation Year thereafter, the Final Reconciliation Payment, and the Termination Date, shall each be extended for a like period of time. For example, if a project has a material adverse impact on IRWD's ability to utilize native water from February 1, 2021 through October 15, 2021, then the reconciliation obligations for two (2) fiscal years (i.e., July 1, 2020-June 30, 2021 and July 1, 2021-June 30, 2022; the "*Suspended Years*") will be suspended, and the Suspended Years will be excluded from calculating the Yield Differential for those two (2) years (such that the Yield Differential for the 2025 Reconciliation Year shall include the years ending in 2019, 2020, 2023, 2024 and 2025, and the determination of the Final Reconciliation Payment will include the years ending in 2019, 2020, and 2023 through 2040), the Reconciliation Years (including the determination and due date of the Final Reconciliation Payment) will be extended to 2025, 2030, 2035 and 2040, and the Termination Date will be extended until June 30, 2060.

(b) Annual Yield of Native Water. For the period commencing July 1, 2018 through June 30, 2058, the assumed annual yield of native water in Irvine Lake (the "*Assumed Water Yield*") to be used in the Yield Accounting Formula (defined below) will be 3,800 acre feet of water per year (subject to adjustment in 2038 as provided in Section 6(b)(i) below).

(c) Value of Native Water. The initial value per acre foot of water to be used in the Yield Accounting Formula is Two Hundred Ninety-One Dollars (\$291.00), hereinafter the “*Yield Value/AF*”. The Yield Value/AF will increase by 7.2% in FY 2020¹, and by 4.8% in FY 2021, and thereafter by 3% annually on each anniversary of the Effective Date of this Agreement for the remainder of the forty-year period between the Effective Date and June 30, 2058, as shown in the table attached as **Exhibit 3**. The “*Annual Assumed Yield Value*” for each year will be the annual Assumed Water Yield times the Yield Value/AF for that Fiscal Year.

(d) Yield Accounting Formula. IRWD shall apply the Annual Assumed Yield Value into the *Enterprise Model for Setting Connection Fees by Improvement District* set forth in **Exhibit 3-B**. IRWD shall include the Annual Assumed Yield Value for each Fiscal Year as a component of the “other revenue” (“*OR*”).

6. Reconciliation Payments. The parties shall reconcile the value difference between the Assumed Water Yield and the actual amount of native water received into Irvine Lake (the “*Actual Water Yield*”) five times over the term of this Agreement, as set forth in this section (**Exhibit 4**).

(a) Initial Four Reconciliation Payments. No later than August 31 of each five-year anniversary of the Effective Date between the date of this Agreement and August 31, 2038 (that is, by August 31 of the years 2023, 2028, 2033 and 2038 -- each such anniversary, a “*Reconciliation Year*”), IRWD shall prepare a “*Reconciliation Notice*” in a form substantially similar to **Exhibit 5**, which shall include the following information calculated by IRWD:

(i) Yield Differential. IRWD shall identify the difference between the Actual Water Yield and Assumed Water Yield for each year of the preceding five-year period. The Actual Water Yield will be based on the monthly reports prepared by Irvine Lake Dam Keepers over the applicable five-year period. The difference between the Actual Water Yield for each year of the applicable 5-year period and each year’s Assumed Water Yield (3,800 acre feet) over the same period will be called the “*Yield Differential*” for that year.

(ii) Annual Yield Value Variance. The Yield Differential for each Fiscal Year will be multiplied by the Yield Value/AF for that Fiscal Year as identified in **Exhibit 4**, and the resulting value will be known as the “*Value Variance*”.

(iii) Interest on Prior Year’s Cumulative Total. “*Interest*” on the Value Variance will accrue beginning on July 1 at 3% per annum based on the prior Fiscal Year’s Cumulative Total, defined below.

(iv) Cumulative Total. The “*Cumulative Total*” for each Fiscal Year will be calculated by adding the prior Fiscal Year’s Cumulative Total, the current Fiscal Year’s Value Variance, and Interest accrued on the prior Fiscal Year’s Cumulative Total.

¹ A Fiscal Year (“FY”) refers to the IRWD fiscal year ending June 30 of the referenced year. E.g. FY 2020 refers to the fiscal year beginning July 1, 2019 and ending June 30, 2020.

(v) Reconciliation Payment. The “**Reconciliation Payment**” will be the Cumulative Total in the Reconciliation Year times 50%. If the Reconciliation Payment amount is positive, then IRWD shall pay to TIC the Reconciliation Payment amount. If the Reconciliation Payment amount is negative, then TIC shall pay to IRWD the Reconciliation Payment amount. Each of the first four Reconciliation Payments must be made within thirty (30) days after IRWD provides TIC with the Reconciliation Notice and substantiating backup information.

(b) **Final Reconciliation Payment**.

(i) By August 31, 2038, and as part of the Reconciliation Notice for that Reconciliation Year, IRWD shall identify the average Actual Water Yield (based on monthly reports from Irvine Lake Dam Keepers) during the twenty-year period between the Effective Date and June 30, 2038, and apply the average as the Actual Water Yield for the twenty-year period commencing on July 1, 2038 and ending on June 30, 2058. The Final Reconciliation Payment shall be paid in 2038 within sixty (60) days after IRWD provides TIC with the Reconciliation Notice and substantiating backup information (the “**Final Reconciliation Notice**”).

(ii) Calculation of Final Reconciliation Payment. The “**Final Reconciliation Payment**” shall be the sum of the 20-year average Actual Water Yield from Fiscal Years 1-20 minus the Assumed Water Yield *times* the Yield Value/AF applicable in Year 21 *times* 50%. No interest is included because the amount is paid in advance. An example calculation of the Final Reconciliation Payment is set forth in **Exhibit 4**.

(c) Annual Meeting. To facilitate understanding between the Parties regarding native water usage and connection fee credit calculations pursuant to these provisions, TIC may, beginning in May 2019 and on an annual basis each year thereafter through 2038, contact IRWD to schedule an annual meeting between the Parties to discuss usage of Irvine Lake native water, revenues derived from sales thereof, adjustments to the Yield Value/AF, connection fee credit allocations and related matters for the prior and upcoming fiscal years. IRWD shall make reasonable efforts to attend any such annual meeting within thirty (30) days of receipt of TIC’s meeting request.

7. Application of Revenues; Consolidation of Improvement Districts. IRWD shall apply the revenues from native water for the purposes of capital and related debt for the sole benefit of District 153/253 as follows: 50% will be credited to connection fees within District 153/253, and 50% will be credited to property taxes within District 153/253. This credit will be applied within District 153/253 for 20 years from the Effective Date of this Agreement, or until TIC buildout of District 153/253, whichever is later; after that time IRWD may merge District 153/253 into District 125/225. Following that merger, native water revenues will be applied in a similar manner for the purposes of capital and related debit for the sole benefit of District 125/225.

8. Periodic Notice Obligations.

(a) IRWD shall have a copy of the monthly reports of the Irvine Lake Dam Keepers delivered to TIC concurrently with the delivery of such reports to IRWD.

(b) To determine the extent of TIC's buildout within District 153/253 in connection with the consolidation described above in Section 7, and as a condition precedent to IRWD's duties under Section 8(c), TIC shall provide IRWD with TIC's development projections within District 153/253 by June 30 of each year.

(c) To reduce the likelihood of disagreements over figures in the Reconciliation Notices provided by IRWD, IRWD shall, by August 31 of each year during the twenty-year period between July 1, 2019 and June 30, 2038, provide TIC with an annual calculation of the Actual Water Yield (based on information provided by Irvine Lake Dam Keepers), the Yield Differential for that year, and the Yield Value Variance for the completed year. The numbers provided in these annual notices shall thereafter be used by the Parties in confirming information contained in each five-year Reconciliation Notice and the Final Reconciliation Notice. In addition, IRWD shall, promptly after each request by TIC, provide TIC with reasonable access to review applicable supporting documents that provide information regarding water availability and actual usage.

(d) Cooperation in Confirming Information in Any Reconciliation Notice. If IRWD fails to provide adequate backup information with any Reconciliation Notice or if TIC in good faith disagrees with the computations contained in any Reconciliation Notice, then the Parties will meet and confer to determine the final numbers in that Reconciliation Notice, and the deadline for either Party to make the reconciliation payment shall be extended until thirty (30) days after the Parties agree on the content of the Reconciliation Notice, including the Final Reconciliation Notice, not to exceed 60 days following service of that Reconciliation Notice.

9. Annexations/Detachments. IRWD shall work with TIC, at TIC's cost for third party costs pre-approved by TIC (e.g., engineering costs to prepare legal descriptions and depictions and filing fees, but excluding IRWD staff time), to annex to or detach from District 153/253 the parcels identified on Exhibit 6, and no other parcels will be annexed to or detached from District 153/253.

10. Exhibits. The following Exhibits are attached hereto and incorporated herein by this reference:

Exhibit 1: Depiction of Improvement District Boundaries

Exhibit 2: Orchard Exhibits

2-A – Orchard Properties

2-B – Recycled Water Historic Constituent Ranges

Exhibit 3: Formulas/Models

3-A – Native Water Accounting Formula for Connection Fee Credit

3-B – Enterprise Model for Setting Connection Fees by I.D.

Exhibit 4: – Formula for Calculation of Native Water Yield Reconciliation Payments (Example Only)

Exhibit 5: Form of IRWD Periodic Notices

5-A – Annual Notice

5-B – 5-Year Reconciliation Notice

Exhibit 6: Parcels to be Annexed into or Detached from District 153/253

11. Successors and Assigns. The provisions of this Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns. The obligations of each Party are personal to each party and shall not run with the land, except as described in Section 3(c). TIC may assign its rights and obligations hereunder, in whole or in part, to any entity affiliated with TIC (*i.e.*, all persons and entities controlling, controlled by or under common control with TIC) without IRWD's consent if either (a) IRWD is provided with financial guarantees that are commercially reasonably acceptable to IRWD, or (b) TIC is not released from its potential payment obligations under Section 6 of this Agreement.

12. No Third-Party Beneficiaries. Except as described in Section 3(c), no person or entity other than the Parties to this Agreement shall be deemed to be a third-party beneficiary, and nothing in this Agreement, either express or implied, is intended to confer upon any person or entity, other than the Parties to this Agreement and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement or the 1974 Agreement.

13. Waiver. Any waiver of any rights under this Agreement will be effective only if in writing, signed by the waiving Party. No waiver by either Party hereto of any breach, default or condition shall be considered to be a waiver of any other or subsequent breach, default or condition.

14. Governing Law and Jurisdiction. This Agreement will be construed in accordance with and be governed by the laws of the State of California.

15. Authority to Sign. Each person signing this Agreement on behalf of a Party represents and warrants to the other Party that he/she has all requisite power and authority to execute and deliver this Agreement for such Party and that this Agreement, when so executed and delivered, will be a binding obligation of, and enforceable against, such Party in accordance with its terms.

16. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute but one and the same instrument.

17. Dispute Resolution. Any controversy or claim between TIC and IRWD with respect to any claims, disputes, demands, differences, controversies, or misunderstandings arising under, out of, or in relation to this Agreement, or any asserted breach thereof (including but not limited to a determination of any and all of the issues in such dispute, whether of fact or of law), will be subject to this Dispute Resolution provision.

(a) Meet and Confer. TIC and IRWD shall meet and confer in good faith to resolve any claims, disputes, demands, differences, controversies, or misunderstandings that may

arise under this Agreement. If that meeting does not result in resolution within thirty (30) days, unless mutually extended in writing, the Parties will proceed to arbitration (unless the Parties otherwise mutually agree at such time to pursue mediation prior to arbitration).

(b) Mediation. The following terms shall only apply if the Parties mutually agree to pursue mediation in connection with a dispute. The Parties shall mutually agree on a mediator. If they cannot do so within ten (10) days, the Parties shall agree on a mediation service and ask that mediation service to provide them with a list of seven mediators who have experience mediating disputes involving public entities and, if possible, experience mediating disputes involving the design and operation of utility projects relating to the storage and distribution of water for agricultural, municipal and industrial purposes. Each Party will have seven (7) days to strike two of the names, and shall rank the remaining names in order of preference. From among the persons who have been approved on both lists, in accordance with the designated order of mutual preference, the mediation service will select the mediator. If the first preferred mediator declines the assignment, the mediation service will select the second preferred mediator. If that mediator also declines the assignment, the mediation service will select the final mediator. The costs of the mediation will be shared equally among the Parties.

(c) Arbitration. If mediation is unsuccessful or if the Parties do not agree to mediation in connection with such dispute, either Party may demand binding arbitration by sending written notice to the other at the address specified in this Agreement. Such notice shall designate as “respondents” any other party or parties as the initiating Party intends to have bound by any award. Any party not so designated but which desires to join in the arbitration may, within ten (10) days of the date of such notice, file a response indicating its intention to join in and to be bound by the results of the arbitration, and further designating any other parties it wishes to name as a respondent.

(i) Any arbitration shall proceed pursuant to the Federal Arbitration Act (9 U.S.C. sections 1-16 (the “FAA”), to the exclusion of California procedural law and any choice of law provision in this Agreement. Notwithstanding the above designation that the FAA procedural provisions govern to the exclusion of California procedural law and any choice of law provision in this Agreement, the arbitrator shall apply California substantive law in rendering his or her decision on the merits of any controversy or dispute. The arbitrator shall give effect to the statute of limitations in determining any claim. The arbitration shall be conducted by a single neutral arbitrator who is licensed to practice law in California. Any controversy concerning whether an issue is arbitrable shall be determined by the arbitrator. The institution and maintenance of an action for judicial relief or pursuit of a provisional or ancillary remedy shall not constitute a waiver of the right of any Party, including the plaintiff, to submit the controversy or claim to arbitration if any other Party contests such action for relief.

(ii) Any arbitration shall proceed in Orange County, California.

(iii) Any arbitration shall proceed pursuant to the Commercial Rules of the American Arbitration Association (“AAA”), or the appropriate rules of the arbitration service provider governing commercial disputes if the Parties mutually agree upon an arbitration service provider other than the AAA, to the extent such rules do not conflict with the FAA. In the event

of any conflict between the arbitration service provider's rules and the FAA, the FAA shall prevail.

(iv) Any Party shall be entitled to written findings of fact and conclusions of law as to all issues determined by the award. The arbitrator shall have no authority to add to, modify, or refuse to enforce any agreements between the Parties. Subject to the above limitations, the award shall be binding upon all parties to the arbitration and judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction.

(v) The Parties shall initially share equally the administrative fee as well as the arbitrator's fee. The arbitrator may, in his or her discretion, as part of the arbitration award impose upon any one Party or allocate among two or more of the parties, the liability for the arbitration fees and costs. Such allocable fees may include the initial administration fees, fees for conferences or hearings, postponement fees, and overtime fees, or as otherwise allowed under the FAA and by the rules of the selected arbitration service provider. In the event of the failure of the arbitrator to provide for the allocation of such fees and costs, the arbitration fees shall be divided equally between the Parties and the costs shall be borne by the Party incurring them.

18. Notices. Any notice or other communication to be given by one Party to the other hereunder shall be in writing and given by personal service, express mail, Federal Express or any other similar form of airborne/overnight delivery service, or by United States certified mail, return receipt requested, addressed to the Party at its respective address as follows:

If to IRWD:	Irvine Ranch Water District 16500 Sand Canyon Avenue P.O. Box 5700 Irvine, CA 92619-7000 Attn: Paul A. Cook, General Manager e-mail: cook@irwd.com
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If to TIC:	The Irvine Company LLC 550 Newport Center Drive Newport Beach, CA 92660 Attention: Sr. Vice President, Entitlement & Government Affairs e-mail: dmiller@irvinecompany.com
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With a copy to:	The Irvine Company LLC 550 Newport Center Drive Newport Beach, CA 92660 Attention: General Counsel e-mail: gnotices@irvinecompany.com
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Notice may also be given by e-mail to any Party pursuant to California Civil Code Section 1633.15, as amended from time to time, by sending to the e-mail address provided above, provided that receipt of such transmission shall be confirmed by follow-up notice within

seventy-two (72) hours by another method authorized in the first sentence of this subsection. Any Party may from time to time, by written notice to the other as provided above, designate a different address which shall be substituted for that specified above. If any notice or other document is sent by mail as aforesaid, the same shall be deemed served or delivered seventy-two (72) hours after mailing thereof as above specified. Notice by any other method shall be deemed served or delivered upon actual receipt at the address or e-mail address listed above.

[signatures on following page]

The Parties are signing this Agreement to be effective as of the Effective Date.

THE IRVINE COMPANY LLC, a Delaware
limited liability company

By: _____
Daniel C. Hedigan
Division President,
Land Sales & Homebuilding

By: _____
Daniel T. Miller
Senior Vice President,
Entitlement & Public Affairs

IRVINE RANCH WATER DISTRICT

By: _____
President

By: _____
Secretary

APPROVED AS TO FORM:
Lewis Brisbois Bisgaard & Smith, LLP

By: _____
District Counsel

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)

On _____, 20__ before me, _____, a Notary Public, personally appeared **Daniel C. Hedigan**, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____
Notary Public

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)

On _____, 20__ before me, _____, a Notary Public, personally appeared **Daniel T. Miller**, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____
Notary Public

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)

On _____, before me, _____, a Notary Public, personally appeared **Steven LaMar**, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____
Notary Public

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)

On _____, before me, _____, a Notary Public, personally appeared **Leslie Bonkowski**, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

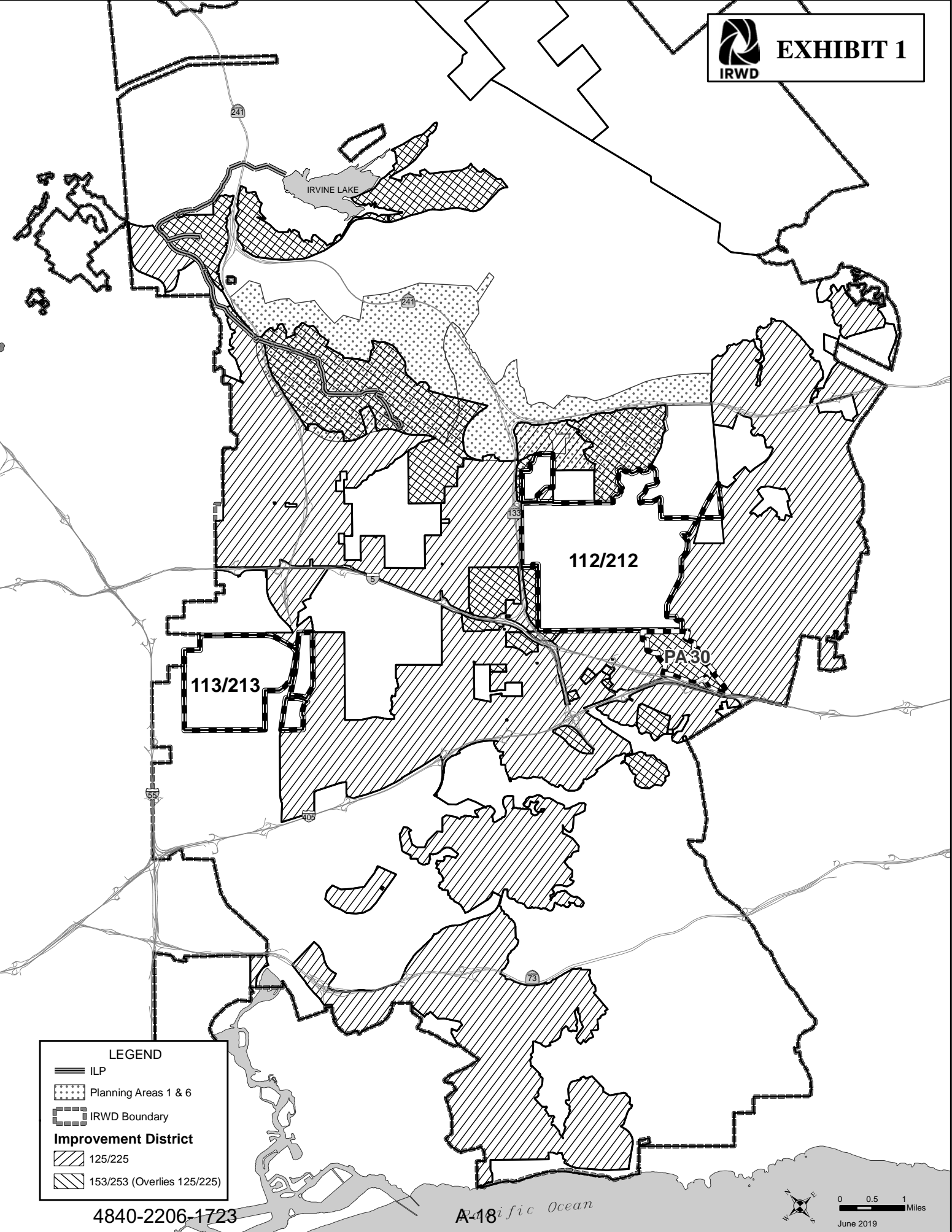
WITNESS my hand and official seal.

Signature _____
Notary Public






Exhibit 1

DEPICTION OF IMPROVEMENT DISTRICT BOUNDARIES

[See attached pages]

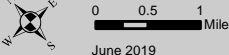


LEGEND

-  ILP
-  Planning Areas 1 & 6
-  IRWD Boundary
- Improvement District**
-  125/225
-  153/253 (Overlies 125/225)

4840-2206-1723

A-18 *ific Ocean*

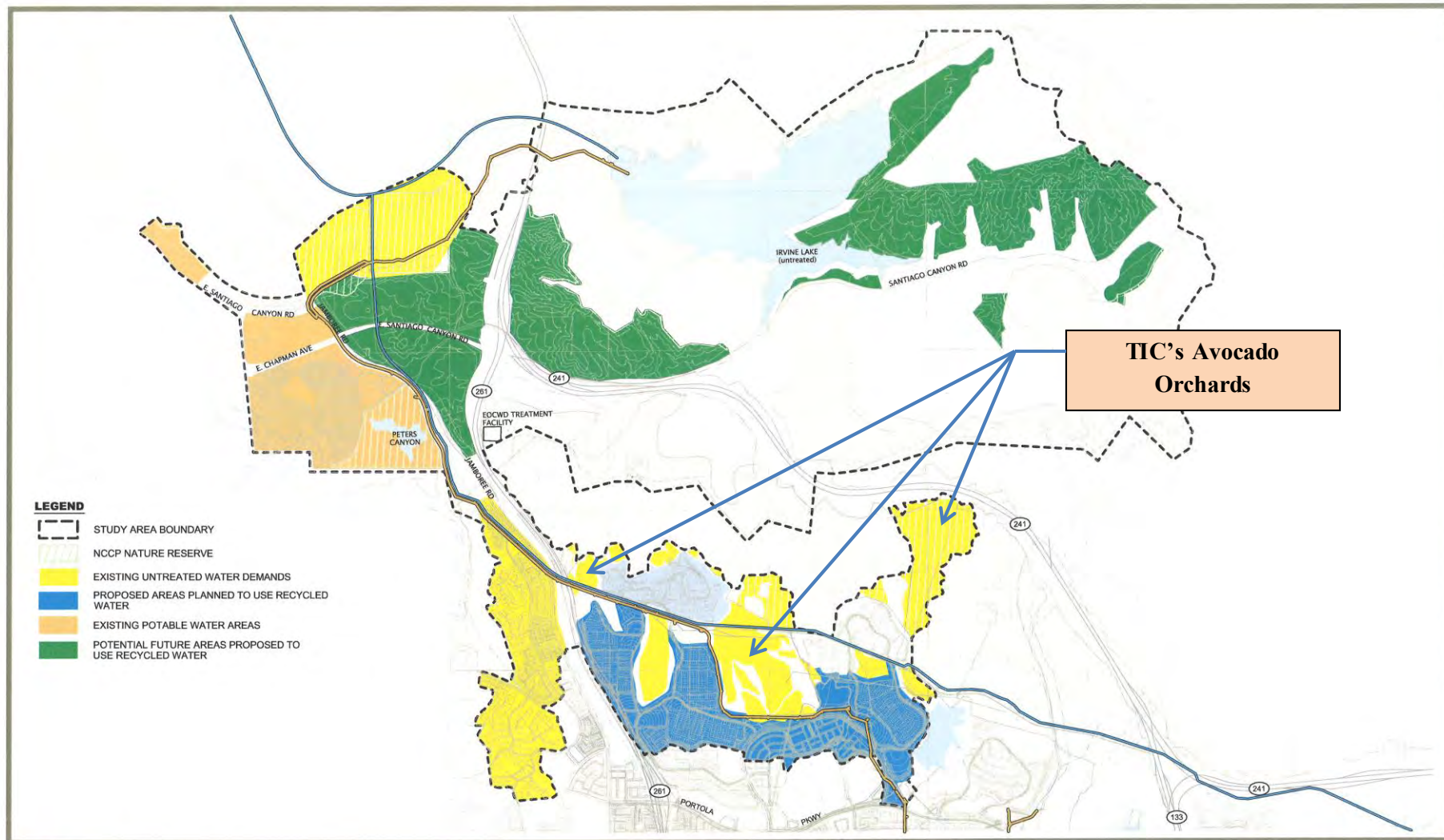


0 0.5 1 Miles
June 2019

Exhibit 2
ORCHARD EXHIBITS

2A – Orchard Properties
2B – Recycled Water Historic Constituent Ranges

Exhibit 2A



ILP - NORTH CONVERSION STUDY
SOURCE OF SUPPLY BY DEMAND AREA

FIGURE 3-2

Exhibit 2-B Water Quality Testing and Criteria

Water Quality

Table 1 lists the water quality constituents and factors that IRWD will test for in the non-potable water delivered to TIC for use on the Orchard Properties. The TIC Target listed below shall be the three-month rolling average.

Table 1				
<i>Constituent/Calculation</i>	<i>Units</i>	<i>TIC Target</i>	<i>IRWD's Units</i>	<i>Conversion to TIC Units</i>
Salinity – Electroconductivity (Ec)	dS/m	1.2	umhos/cm	x 0.001
Sodium (Na) – Surface Irrigation	SAR adj.	9.0	No units	x 1
Chloride (Cl) – Surface Irrigation	meq/L	4.25	mg/l	x 0.0282
Boron (B)	mg/L	0.7	ug/l	x 0.001
Fluoride (F)	mg/L	1.0	mg/l	-
Iron (Fe)	mg/L	0.3	ug/l	x 0.001
Manganese (Mn)	mg/L	0.2	ug/l	x 0.001
pH – pHc *		1.4	-	-
Water Infiltration Factor	SAR adj./Ec	8.0	-	=[SAR adj.] / ([EC] x 0.001)
Bicarbonate (HCO ₃) + Carbonate (CO ₃)	meq/L	4.0	mg/l	= [BICARB] x 0.0164 + [CARB] x 0.0333

* IRWD calculates Langlier Saturation Index (pH – pHs) which may yield a related value, this is calculated at the ambient temperature and at a standardized 25 degrees C.

Exhibit 3

FORMULAS

3A – Native Water Accounting Formula for Connection Fee Credit

3B – Enterprise Model for Setting Connection Fees by I.D

IRVINE RANCH WATER DISTRICT
Native Water Accounting Formula for Connection Fee Credit
Exhibit 3A

FISCAL YEAR	VALUE ESCALATION	ASSUMED NATIVE WATER YIELD (AFY)	VALUE PER ACRE FOOT	ASSUMED YIELD VALUE
FY 2019		3,800	\$291.00	\$1,105,800
FY 2020	7.2%	3,800	\$312.00	\$1,185,600
FY 2021	4.8%	3,800	\$327.00	\$1,242,600
FY 2022	3.0%	3,800	\$336.81	\$1,279,878
FY 2023	3.0%	3,800	\$346.91	\$1,318,258
FY 2024	3.0%	3,800	\$357.32	\$1,357,816
FY 2025	3.0%	3,800	\$368.04	\$1,398,552
FY 2026	3.0%	3,800	\$379.08	\$1,440,504
FY 2027	3.0%	3,800	\$390.45	\$1,483,710
FY 2028	3.0%	3,800	\$402.16	\$1,528,208
FY 2029	3.0%	3,800	\$414.22	\$1,574,036
FY 2030	3.0%	3,800	\$426.65	\$1,621,270
FY 2031	3.0%	3,800	\$439.45	\$1,669,910
FY 2032	3.0%	3,800	\$452.63	\$1,719,994
FY 2033	3.0%	3,800	\$466.21	\$1,771,598
FY 2034	3.0%	3,800	\$480.20	\$1,824,760
FY 2035	3.0%	3,800	\$494.61	\$1,879,518
FY 2036	3.0%	3,800	\$509.45	\$1,935,910
FY 2037	3.0%	3,800	\$524.73	\$1,993,974
FY 2038	3.0%	3,800	\$540.47	\$2,053,786
FY 2039	3.0%	3,800	\$556.68	\$2,115,384
FY 2040	3.0%	3,800	\$573.38	\$2,178,844
FY 2041	3.0%	3,800	\$590.58	\$2,244,204
FY 2042	3.0%	3,800	\$608.30	\$2,311,540
FY 2043	3.0%	3,800	\$626.55	\$2,380,890
FY 2044	3.0%	3,800	\$645.35	\$2,452,330
FY 2045	3.0%	3,800	\$664.71	\$2,525,898
FY 2046	3.0%	3,800	\$684.65	\$2,601,670
FY 2047	3.0%	3,800	\$705.19	\$2,679,722
FY 2048	3.0%	3,800	\$726.35	\$2,760,130
FY 2049	3.0%	3,800	\$748.14	\$2,842,932
FY 2050	3.0%	3,800	\$770.58	\$2,928,204
FY 2051	3.0%	3,800	\$793.70	\$3,016,060
FY 2052	3.0%	3,800	\$817.51	\$3,106,538
FY 2053	3.0%	3,800	\$842.04	\$3,199,752
FY 2054	3.0%	3,800	\$867.30	\$3,295,740
FY 2055	3.0%	3,800	\$893.32	\$3,394,616
FY 2056	3.0%	3,800	\$920.12	\$3,496,456
FY 2057	3.0%	3,800	\$947.72	\$3,601,336
FY 2058	3.0%	3,800	\$976.15	\$3,709,370

IRVINE RANCH WATER DISTRICT
Enterprise Model for Setting Connection Fees
by Improvement District (ID)

Exhibit 3B

$$\text{Connection Fees for each ID Updated Annually} = \frac{\left(\frac{BB + \sum OR + \sum BP + - \sum Int - \sum DS - \sum CS}{2} \right)}{FPD}$$

BB = Beginning balance of the capital, construction and debt service funds.

OR = Other revenue includes grants, reimbursements from other agencies, **native water revenue**, golf course revenue and any other revenue stream not previously identified.

BP = Bond proceeds from issuance.

Int = Interest earned on fund balances which can be positive or negative.

DS = Debt service payments for issued and outstanding bonds.

CS = Capital expenditures for local and regional facilities.

FPD = All future projected development.

All of the estimated revenue and expense streams are accelerated using Finance & Personnel Committee approved assumptions.

EXHIBIT 4

Formula for Calculation of Native Water Yield Reconciliation Payments
(Example Only)

Formula for Calculation of Native Water Yield Reconciliation

Example Only

Exhibit 4

in Acre Feet

	Fiscal Year	Assumed Water Yield	Actual Water Yield	Yield Differential	Yield Value per Acre Foot	Annual Yield Value Variance	Interest	Cumulative Total ⁽¹⁾
Year 1	2018 - 2019	3,800	4,400	600	\$291.00	\$174,600.00		\$174,600.00
Year 2	2019 - 2020	3,800	3,800	-	\$312.00	\$0.00	\$ 5,238.00	\$179,838.00
Year 3	2020 - 2021	3,800	3,800	-	\$327.00	\$0.00	\$ 5,395.14	\$185,233.14
Year 4	2021 - 2022	3,800	3,200	(600)	\$336.81	(\$202,086.00)	\$ 5,556.99	(\$11,295.87)
Year 5	2022 - 2023	3,800	3,800	-	\$346.91	\$0.00	\$ (338.88)	(\$11,634.74)
Total		19,000	19,000	-		(\$27,486.00)	\$ 15,851.26	
50% of the Cumulative Total								((\$5,817.37))
Reconciliation Payment ⁽³⁾ 1 (year 2023)								(\$5,817.37)
Year 6	2023 - 2024	3,800	4,400	600	\$357.32	\$214,392.00		\$214,392.00
Year 7	2024 - 2025	3,800	4,600	800	\$368.04	\$294,432.00	\$ 6,431.76	\$515,255.76
Year 8	2025 - 2026	3,800	3,100	(700)	\$379.08	(\$265,356.00)	\$ 15,457.67	\$265,357.43
Year 9	2026 - 2027	3,800	3,200	(600)	\$390.45	(\$234,270.00)	\$ 7,960.72	\$39,048.16
Year 10	2027 - 2028	3,800	3,600	(200)	\$402.16	(\$80,432.00)	\$ 1,171.44	(\$40,212.40)
Total		19,000	18,900	(100)		(\$71,234.00)	\$ 31,021.60	
50% of the Cumulative Total								((\$20,106.20))
Reconciliation Payment 2 (year 2028)								(\$20,106.20)
Year 11	2028 - 2029	3,800	2,100	(1,700)	\$414.22	(\$704,174.00)		(\$704,174.00)
Year 12	2029 - 2030	3,800	3,800	-	\$426.65	\$0.00	\$ (21,125.22)	(\$725,299.22)
Year 13	2030 - 2031	3,800	3,700	(100)	\$439.45	(\$43,945.00)	\$ (21,758.98)	(\$791,003.20)
Year 14	2031 - 2032	3,800	4,800	1,000	\$452.63	\$452,630.00	\$ (23,730.10)	(\$362,103.29)
Year 15	2032 - 2033	3,800	3,800	-	\$466.21	\$0.00	\$ (10,863.10)	(\$372,966.39)
Total		19,000	18,200	(800)		(\$295,489.00)	\$ (77,477.39)	
50% of the Cumulative Total								((\$186,483.20))
Reconciliation Payment 3 (year 2033)								(\$186,483.20)
Year 16	2033 - 2034	3,800	3,800	-	\$480.20	\$0.00		\$0.00
Year 17	2034 - 2035	3,800	3,800	-	\$494.61	\$0.00	\$ -	\$0.00
Year 18	2035 - 2036	3,800	3,100	(700)	\$509.45	(\$356,615.00)	\$ -	(\$356,615.00)
Year 19	2036 - 2037	3,800	3,200	(600)	\$524.73	(\$314,838.00)	\$ (10,698.45)	(\$682,151.45)
Year 20	2037 - 2038	3,800	5,900	2,100	\$540.47	\$1,134,987.00	\$ (20,464.54)	\$432,371.01
Total		19,000	19,800	800		\$463,534.00	\$ (31,162.99)	
50% of the Cumulative Total								\$216,185.50
Reconciliation Payment 4 (year 2038)								\$216,185.50

- (1) The interest rate is 3% and it is calculated using the cumulative total from the prior fiscal year (July through June) which includes the Annual Yield Value Variance and Interest.
- (2) The Cumulative Total includes the prior year Cumulative Total plus the current year Annual Yield Value Variance plus Interest.
- (3) The Reconciliation Payment is the cumulative total of the Yield Differential times the Yield Value per Acre Foot plus interest on the cumulative balance, times 50%. Positive reconciliation payment amounts will be made by IRWD to TIC. Negative payment amounts will be payable from TIC to IRWD.

Formula for Calculation of Native Water Yield Reconciliation

Example Only

Exhibit 4

in Acre Feet

Fiscal Year	Assumed Water Yield	Actual Water Yield	Yield Differential	Yield Value per Acre Foot	Annual Yield Value Variance	Interest	Cumulative Total ⁽¹⁾
Calculation for Final Reconciliation							
20 Year Average ⁽³⁾	3,800	3,795					
Yrs 21- 40 (20 2038 - 2039 * Yld Diff)	76,000	75,900	(100)	\$556.68	(\$55,668.00)		(\$55,668.00)
Total	76,000	75,900	(100)		(\$55,668.00)	\$ -	(\$27,834.00)
50% of the Cumulative Total							(\$27,834.00)
Final Reconciliation Payment 5 ⁽²⁾ (year 2038)							(\$27,834.00)

- (1) The Cumulative Total includes the prior year Cumulative Total plus the current year Annual Yield Value Variance.
- (2) The Final Reconciliation Payment is the cumulative total of the Yield Differential times the Yield Value per Acre Foot, times 50%. Positive reconciliation payment amounts will be made by IRWD to TIC. Negative payment amounts will be payable from TIC to IRWD.
- (3) The 20 Year Average is the average Actual Water Yield from the four prior reconciliation totals.

Exhibit 5

Form of IRWD Periodic Notices

5A – Annual Notice

5B – 5-Year Reconciliation Notice



Irvine Ranch Water District
15600 Sand Canyon Ave.
Irvine, CA 92618
(949) 453-5381

Invoice Number:
Billing Date:
Due Date:

53833
30-Sept-2023
10-Oct-2023

The Irvine Company
550 Newport Center Drive
Newport Beach, CA 92606

Description	Quantity	Unit Amount	Total
Reconciliation Payment 1 for Fiscal Years 2018-19 through 2022-23 (see attached detail)	1	1.10	\$ 1.10
		Total Due	\$ 1.10

TERMS: 30 NET

Reconciliation Notice

Example Only

Exhibit 5B

		in Acre Feet						
	Fiscal Year	Assumed Water Yield	Actual Water Yield	Yield Differential	Yield Value per Acre Foot	Annual Yield Value Variance	Interest (1)	Cumulative Total (2)
Year 1	2018 - 2019	3,800	4,400	600	\$291.00	\$174,600.00		\$174,600.00
Year 2	2019 - 2020	3,800	3,800	-	\$312.00	\$0.00	\$ 5,238.00	\$179,838.00
Year 3	2020 - 2021	3,800	3,800	-	\$327.00	\$0.00	\$ 5,395.14	\$185,233.14
Year 4	2021 - 2022	3,800	3,200	(600)	\$336.81	(\$202,086.00)	\$ 5,556.99	(\$11,295.87)
Year 5	2022 - 2023	3,800	3,800	-	\$346.91	\$0.00	\$ (338.88)	(\$11,634.74)
Total		19,000	19,000	-		(\$27,486.00)	\$ 15,851.26	
50% of the Cumulative Total								(\$5,817.37)
Reconciliation Payment ⁽³⁾ 1 (year 2023)								(\$5,817.37)

- (1) The interest rate is 3% and it is calculated using the cumulative total from the prior fiscal year (July through June) which includes the Annual Yield Value Variance and Interest.
- (2) The Cumulative Total includes the prior year Cumulative Total, the current year Annual Yield Value Variance and Interest applied to the prior FY Cumulative Total.
- (3) The Reconciliation Payment is the cumulative total of the Yield Differential times the Yield Value per Acre Foot plus interest on the cumulative total at Year 5 times 50%. Positive reconciliation payment amounts will be made by IRWD to TIC. Negative payment amounts will be payable from TIC to IRWD.

Exhibit 6

Parcels for Annexation to or Detachment from District 153/253



Exhibit 6A - Parcel List for Proposed ID 153/253 Additions

PARCEL ID	PROPERTY NAME	PA	TRACT	LOT	INSERTDATE	APN	ACRES	APN_LEGAL
1	Oak Crossing Ph 4	12	97-184	B	3/12/2003	46634202	2.22	BK 330 PG 35 PAR B
2	Future Office - TBD	12	2002-213	2	11/4/2003	46601302	1.44	P BK 334 PG 17 PAR 2
3	Oak Crossing Ph 2	12		251	1/1/1989	10441022	0.69	SUB BLK 122 LOT 251
4	Oak Crossing Ph 2	12		251	1/1/1989	10441075	0.23	SUB BLK 122 LOT 251
5	Oak Crossing Ph 2	12		251	1/1/1989	10441076	0.46	SUB BLK 122 LOT 251
6	Oak Crossing Ph 2	12		251	1/1/1989	10441077	0.46	SUB BLK 122 LOT 251
7	Oak Crossing Ph 1	12		251	1/1/1989	10441078	1.88	SUB BLK 122 LOT 251
8	Oak Crossing Ph 1	12		251	1/1/1989	10441033	1.38	SUB BLK 122 LOT 251
9	Marine Way Self Storage Ph 1	40		250	1/1/1989	10458317	2.53	SUB BLK 122 LOT 250
10	Marine Way Self Storage Ph 1	40		250	1/1/1989	10458426	0.37	SUB BLK 122 LOT 250
11	Marine Way Self Storage Ph 1	40		250	1/1/1989	10458324	3.00	SUB BLK 122 LOT 250
12	Spectrum Lot 103	33	87-LL-0065	A	1/1/1989	58508201	6.19	BLK 139 LOT 293
13	Spectrum Lot 106	33	85-280	11	1/1/1989	58508102	4.20	BK 203 PG 9 PAR 11
14	Spectrum Point (Lots 112/113)	33	94-167	3	1/3/2000	58505104	0.16	BK 312 PG 8 PAR 3
15	Spectrum Point (Lots 112/113)	33	94-167	3	1/3/2000	58505103	2.34	BK 312 PG 8 PAR 3
16	Spectrum Point (Lots 112/113)	33	94-167	4	1/3/2000	58505108	4.76	BK 312 PG 8 PAR 4
17	Spectrum Point (Lots 112/113)	33	94-167	3	1/3/2000	58505105	1.51	BK 312 PG 8 PAR 3
18	Spectrum Point (Lots 112/113)	33	94-167	4	1/3/2000	58505106	1.31	BK 312 PG 8 PAR 4
19	Spectrum Point (Lots 112/113)	33	94-167	4	1/3/2000	58505107	0.45	BK 312 PG 8 PAR 4
20	I-5 Parcel	34	348970-LL	2	9/16/2004	58818258	3.97	P BK 320 PG 1 PAR 13
21	Future Office - TBD	34	97-194	3	11/10/1998	58820212	2.44	N/A
22	PA 17 Remnant	17	32143		1/1/1989	48105314	0.40	SUB BLK 138
23	PA 17 Remnant	17			1/1/2012	48105319	0.23	SUB BLK 158
24	PA 17 Remnant	17	16225	39	4/22/2002	48105316	1.98	TR 16225 LOT 39
25	URP 9	25	43246-LL	1	6/6/2000	45524109	26.49	BK 293 PG 6 PAR 6

TOTAL: 71.08

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IRVINE LAKE PIPELINE SETTLEMENT AGREEMENT
(ILP Conversion; Termination of Sub-Basin Agreement)

This Settlement Agreement is effective as of _____, 2019 (“**Effective Date**”) and is between IRVINE RANCH WATER DISTRICT, a California water district (“**IRWD**”), and THE IRVINE COMPANY LLC, a Delaware limited liability company (“**TIC**”), each sometimes individually referred to as a “**Party**” and together as the “**Parties**.”

- A. IRWD has constructed a project to convert the northern reach of its Irvine Lake Pipeline from untreated water delivery to recycled water delivery. The conversion project consists of approximately two miles of pipeline, a 2.4 million gallon reservoir, and related facilities (the “**Project**”), as generally depicted in **Exhibit A**.
- B. TIC owns (directly, or indirectly by an affiliate of TIC) approximately 480 acres of avocado orchards in the area to be served by the Project, generally depicted on **Exhibit B** (the “**Orchard Properties**”).
- C. The *First Amended and Restated Agreement – Irvine Sub-Basin*, dated July 26, 2002 (the “**Sub-Basin Agreement**”) as amended by the *Conveyance Agreement (Amendment No. 1 to Amended and Restated Agreement, Irvine Sub-Basin)* dated June 14, 2006 (“**Amendment No. 1**”, and together with the Sub-Basin Agreement the “**Amended Sub-Basin Agreement**”), provided for TIC’s conveyance of certain groundwater well infrastructure and water rights to IRWD in exchange for IRWD (a) providing certain water supply assessments, (b) ensuring a sufficient quality and quantity of water supply for agricultural irrigation purposes, and (c) a contract rate for the cost of water. The Parties have fulfilled their duties relating to conveyance of well infrastructure and water rights, and providing water supply assessments.
- D. The Parties are, concurrently with this Settlement Agreement, entering into the *Irvine Lake Native Water Yield Agreement* (“**Yield Agreement**”), which Yield Agreement modifies existing terms related to connection fee credits benefitting property within IRWD’s Improvement Districts 153 and 253. In consideration for TIC’s agreement to this Settlement Agreement and other consideration related to the Yield Agreement, the Yield Agreement will also provide for a sufficient quality and quantity of water supply for agricultural irrigation purposes and a uniform contract rate for the cost of agricultural water – regardless of source – supplied by IRWD to TIC properties throughout IRWD’s service area, including the Orchard Properties.
- E. The Project will reduce the pressure of IRWD water delivered to the Orchard Properties meters as compared to the pressure of historic deliveries. As a result of the diminished pressure at these meters, TIC will be damaged in an amount equal to the cost to TIC to mitigate those damages, including the cost to improve, replace and operate its booster pumps (the “**Pressure-Related Damages**”).
- F. All terms of the Amended Sub-Basin Agreement have either been fulfilled or will be superseded by the Yield Agreement.

- G. The Parties intend by this Settlement Agreement to provide for the termination of the Amended Sub-Basin Agreement, and the settlement of any claims arising from or related to the Pressure-Related Damages.

The Parties therefore agree as follows:

1. Termination of Amended Sub-Basin Agreement. Effective upon the effective date of the Yield Agreement, the Parties hereby terminate the Amended Sub-Basin Agreement.
2. Payment for Pressure-Related Damages. Within 30 days after the Effective Date, IRWD shall pay to TIC in settlement of the Pressure-Related Damages the amount of \$50,000 (Fifty Thousand Dollars) by check made payable to “The Irvine Company LLC” and mailed to The Irvine Company LLC, 550 Newport Center Drive, Newport Beach, CA 92660, Attn: Peter Changala.
3. Release. TIC for itself and each of its respective predecessors, successors, affiliates, and assigns, hereby fully releases and forever discharges IRWD and its board, directors, officers, employees, agents, representatives and attorneys from any and all claims, demands, actions, causes of action, liens, judgments, losses, liabilities, costs, expenses, and attorneys’ fees, of whatever nature, past, present or future, whether in law or in equity, and whether known or unknown, suspected or unsuspected, and whether asserted or not asserted (collectively, “**Claims**”), solely to the extent arising out of or related to the Pressure-Related Damages. This release does not apply to any Claims to the extent arising out of or related to any other types of damages, including, without limitation, damages related to a change in water quality or quantity.
4. Interpretation; Legal Fees. Each of the Parties participated in drafting this Agreement and so in any action or proceeding involving the interpretation of this Agreement, the language and the terms of the Agreement will not be construed against any Party on the basis that it was the drafter. Each of the Parties further acknowledges that prior to entering into this Agreement it had the opportunity to obtain the advice of one or more attorneys of its choosing regarding the terms of this Agreement. Each of the Parties will bear its own costs and legal fees in preparing this Agreement.
5. Counterparts; Electronic Signatures. This Agreement may be executed in counterparts, including the execution of facsimile, or e-mail portable document format (“pdf”) copies, and the exchange of signatures by facsimile, or e-mail pdf, with the same effect as if all original signatures were placed on one document, and which, when taken together, will constitute one original agreement.

[signatures on following page]

The Parties are executing this Agreement to be effective as of the Effective Date.

THE IRVINE COMPANY LLC

By _____

By _____

APPROVED AS TO FORM:

By _____

IRVINE RANCH WATER DISTRICT

By _____

Paul Cook, General Manager

APPROVED AS TO FORM:

Lewis Brisbois Bisgaard & Smith, LLP

By _____

District Counsel

July 8, 2019

Prepared by: C. Smithson

Submitted by: C. Clary

Approved by: Paul A. Cook



ACTION CALENDAR

SETTING CONNECTION FEES AND PROPERTY TAXES FOR FISCAL YEAR 2019-20

SUMMARY:

IRWD typically adjusts connection fees annually, with the most recent update occurring in July 2018. The changes to connection fees proposed for Fiscal Year (FY) 2019-20 are based on updates to the capital budget and other changed assumptions including increases to the Engineering News Record (ENR) construction cost index, as discussed below. Staff recommends the Board adopt resolutions changing the existing connection fees and property tax rates based on updated data for the IRWD improvement districts (ID).

BACKGROUND:

IRWD's Long-Term Capital Funding Plan (LTFP), completed in November 2013, established connection fees and formed new IDs for funding capital requirements and setting tax rates. A fundamental concept in the District's LTFP is that the costs of new capital facilities are shared equally between the connection fees paid by the developer and property taxes paid by property owners (a 50/50 split). The District uses a comprehensive financial model to incorporate capital costs, debt funding, future development, growth rates, inflation and other variables to determine connection fees. Connection fee increases were modeled along with a consolidated tax rate for both residential and commercial development. Staff updated the District's financial model for FY 2019-20 connection fees and tax rate-setting to include the following:

- Updated capital improvement program;
- Updated ENR estimated capital cost increase of 3.0%;
- Fund balance adjustments through May 2019 with assumptions through fiscal year end;
- Updated assessed valuations; and
- Updated development units.

Exhibit "A" provides a summary of the proposed connection fees and property tax rates by ID. Exhibit "B" provides an analysis of changes within each ID.

IDs 112/212:

There are three separate developments contributing to IDs 112/212: the City of Irvine (City) / Great Park, the FivePoint Communities Great Park Neighborhoods and the County of Orange 100-acre parcel. Connection fees for these developments will be set separately.

City of Irvine / Great Park

The recycled water connection fee of \$28.85 million for the Great Park per agreement with the City was approved at the June 12, 2017 Board meeting. The City made the first recycled water connection fee payment of \$9.9 million in September 2017. The remainder will be paid as the

parcels are put into service. The Great Park will pay 100 percent of the planned recycled capital expenditures versus the previous assumption of a 50/50 cost sharing with the property owner. Staff recommends increasing connection fees by 3.6%,

FivePoint Communities – Great Park Neighborhoods

The Great Park Neighborhoods is the FivePoint Communities development within IDs 112/212. Staff recommends a 3.6% increase in the connection fees. The consolidated water and sewer connection fee increases by \$174, from \$4,830 to \$5,004, per unit. Staff recommends maintaining the current consolidated tax rate of \$0.7500 per \$100 of land assessed value in order to maintain the 50/50 split.

County of Orange 100-acre Parcel

Staff recommends applying the same 3.6% increase to the connection fees for the reasons discussed above for the 100-acre development site owned by the County of Orange, which has no tax base. The consolidated water and sewer connection fee will increase by \$320, from \$8,888 to \$9,208, per unit. The property tax rate will remain at zero as long as this property is owned by the County.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
112/212 (Great Park Neighborhood)	\$4,830	\$5,004	\$0.0750	\$0.0750
112a/212a (County 100-acre Parcel)	\$8,888	\$9,208	\$0.0000	\$0.0000

IDs 113/213 – Tustin Base:

Staff recommends increasing connection fees by 3.0%, consistent with ENR. This will increase the water and sewer connection fee \$252, from \$8,378 to \$8,629, per unit. Staff recommends maintaining the current consolidated tax rate of \$0.09900 per \$100 of land assessed value in order to maintain the 50/50 split.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
113/213	\$8,378	\$8,629	\$0.0990	\$0.0990

IDs 185/285 – Opportunity Study Area, Excluding Portola:

Staff recommends increasing connection fees by 3.0%, consistent with ENR. This will increase the water and sewer connection fee \$146 from \$4,868 to \$5,014 per unit. Staff recommends maintaining the current consolidated tax rate of \$0.0535 per \$100 of land-assessed value.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
185/285 (Opportunity Study)	\$4,868	\$5,014	\$0.0535	\$0.0535

IDs 188/288 – Portola – Portion of Opportunity Study Area:

Staff recommends a 3.0% increase in the current connection fees, consistent with ENR. The consolidated water and sewer connection fee will increase by \$128, increasing the water and sewer connection fee from \$4,268 to \$4,396 per residential unit. Staff recommends maintaining the current consolidated tax rate of \$0.0835 per \$100 of land assessed value in order to maintain the 50/50 split.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
188/288 (Opportunity Study)	\$4,268	\$4,396	\$0.0835	\$0.0835

IDs 153/253 – Developing IDs:

Staff has been working with the Irvine Company to establish future usage and related revenue from the sale of native water from Irvine Lake since the completion of the LTFP. A portion of the revenue produced by native water sales is applied to connection fees for the developing IDs 153/253. The amended Irvine Lake agreement is nearly complete and it will ensure that the Irvine Company pays its fair share of capital infrastructure (without overpaying), recognizing that future sales of native water will reduce the amount of connection fees. The native water assumption includes 3,800 acre-feet (AF) per year and it assumes a rate of \$312 per AF in FY 2019-20 and \$327 per AF in FY 2020-21 with the cost of water escalating annually at 3% thereafter. The agreement will also provide for a reconciliation every five years between the assumed and the actual native water revenue. The final reconciliation would occur at the end of 20 years.

Staff recommends decreasing the consolidated water and sewer connection fee from \$3,312 to \$3,213 (a net reduction of \$99 or 3%) and maintaining the current consolidated tax rate of \$0.0410 per \$100 of land assessed value in order to maintain the 50/50 split.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
153/253 (Undeveloped ID)	\$3,312	\$3,213	\$0.0410	\$0.0410

ID 256 – Orange Park Acres (OPA) Sewer:

Staff recommends a 3.0% increase in the current connection fees, consistent with ENR. The sewer connection fee will increase by \$182, increasing the connection fee from \$6,077 to \$6,259 per residential unit.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
156/256 (Undeveloped ID)	\$6,077	\$6,259	\$0.0000	\$0.0000

All Other IDs:

Other areas experienced no significant changes in funding requirements. The recommendation for these IDs is a 3.0% increase (ENR) to connection fees.

Improvement Districts	Connection Fees		Property Tax	
	Current	Proposed	Current	Proposed
125/225(Developed)	\$5,801	\$5,975	\$0.028	\$0.028
125/240(Developed)	\$6,619	\$6,818	\$0.028	\$0.028
111/222 (Developed, no GO Authority) ¹	\$9,626	\$9,914	NA	NA

Update of the Regional Capital Allocation Splits:

The regional splits were last updated as part of the LTFP process in December of 2013. Staff will be updating the splits in FY 2019-20 and the model based on adjusted capital demands. Any significant shifts in capital that result in a potential shift in connection fees and property tax rates will be brought to the Finance and Personnel Committee.

FISCAL IMPACTS:

Total connection fees discussed above are included in the FY 2019-20 Non-Operating budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on July 2, 2019.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTIONS BY TITLE EFFECTIVE AUGUST 1, 2019:

RESOLUTION NO. 2019 -

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA ADOPTING CHANGES TO CONNECTION FEES AS SET FORTH IN THE SCHEDULE OF RATES AND CHARGES IN EXHIBIT "B" TO THE RULES AND REGULATIONS OF IRVINE RANCH WATER DISTRICT FOR WATER, SEWER, RECYCLED WATER, AND NATURAL TREATMENT SYSTEM SERVICE AND ADOPT THE FOLLOWING RESOLUTIONS BY TITLE:

¹ Identifies the consolidated connection fee for a density between 5.9 to 10.8 dwelling units (DU) per acre.

RESOLUTION NO. 2019 -

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA
ESTABLISHING *AD VALOREM* TAX REVENUES FOR
FISCAL YEAR 2019-20

RESOLUTION NO. 2019 –

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

LIST OF EXHIBITS:

Exhibit “A” – Proposed Connection Fees and Property Tax Rates

Exhibit “B” – Analysis of Changes within IDs

Exhibit “C” – Resolution Adopting Changes to Rates and Charges

Exhibit “D” – Resolution Adopting Ad Valorem Property Tax Rates

Exhibit “E” – Resolution Amending Allocation of Ad Valorem Property Taxes to Debt Service

Exhibit “F” – Rates and Charges

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Exhibit "A"

**Proposed Connection Fees and Property Tax Rates
Fiscal Year 19-20**

CONNECTION FEES

Improvement District	Current			Proposed			Change ⁽¹⁾	
	Water	Sewer	Total	Water	Sewer	Total	\$	%
	111/222	\$3,448	\$6,178	\$9,626	\$3,551	\$6,363	\$9,914	\$288
112/212	\$1,338	\$3,492	\$4,830	\$1,386	\$3,618	\$5,004	\$174	3.6%
112a/212a No Tax Authority (100% Connection Fee)	\$2,462	\$6,426	\$8,888	\$2,551	\$6,657	\$9,208	\$320	3.6%
113/213	\$3,047	\$5,331	\$8,378	\$3,138	\$5,491	\$8,629	\$251	3.0%
125/240	\$2,789	\$3,830	\$6,619	\$2,873	\$3,945	\$6,818	\$199	3.0%
125/225/240	\$2,789	\$3,012	\$5,801	\$2,873	\$3,102	\$5,975	\$174	3.0%
153/253	\$1,532	\$1,780	\$3,312	\$1,486	\$1,727	\$3,213	(\$99)	-3.0%
153/253 PA 30	\$3,828	\$3,995	\$7,823	\$3,943	\$4,115	\$8,058	\$235	3.0%
256 OPA		\$6,077	\$6,077		\$6,259	\$6,259	\$182	3.0%
185/285	\$1,748	\$3,120	\$4,868	\$1,800	\$3,214	\$5,014	\$146	3.0%
188/288	\$1,572	\$2,696	\$4,268	\$1,619	\$2,777	\$4,396	\$128	3.0%

PROPERTY TAX RATES ⁽²⁾

Improvement District	Current			Proposed		
	Water	Sewer	Total	Water	Sewer	Total
112/212	\$0.0300	\$0.0450	\$0.0750	\$0.0300	\$0.0450	\$0.0750
113/213	\$0.0400	\$0.0590	\$0.0990	\$0.0400	\$0.0590	\$0.0990
125/225	\$0.0130	\$0.0150	\$0.0280	\$0.0130	\$0.0150	\$0.0280
153/253	\$0.0200	\$0.0210	\$0.0410	\$0.0200	\$0.0210	\$0.0410
185/285	\$0.0230	\$0.0305	\$0.0535	\$0.0230	\$0.0305	\$0.0535
188/288	\$0.0735	\$0.0100	\$0.0835	\$0.0735	\$0.0100	\$0.0835

(1) ENR for April 2018 through April 2019 is approximately 3%.

(2) Based on \$100 of land assessed value.

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Exhibit B
IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs
(in millions)

Improvement District:

112/212

To Date:

	Water	Sewer	Total
Expenditures ⁽¹⁾	\$ (17.7)	\$ (55.7)	\$ (73.3)
Connection Fees	\$ 4.7	\$ 20.9	25.5
GO Property Taxes	2.9	7.5	10.4
Previous Bond Sales	8.1	26.0	34.1
Other ⁽²⁾	4.1	4.5	8.6
Fund Balance (4/30/2019)	\$ 2.1	\$ 3.2	\$ 5.3

Future Projection:

Revenue:

Interest Income on Balance	\$ 27.1	\$ 1.5	\$ 28.6
Other Revenues ⁽²⁾	(2.2)	2.8	0.6
1% and Enhancement			
Bond Sales	15.1	50.2	65.4
Connection Fees	15.3	39.1	54.4
GO Property Taxes	25.7	45.0	70.7
Total Revenue	\$ 81.0	\$ 138.7	\$ 219.6

Expenditures:

Capital	\$ (15.2)	\$ (51.4)	\$ (66.6)
Debt	(35.5)	(117.8)	(153.3)
Total Expenditures	\$ (50.7)	\$ (169.2)	\$ (219.9)

Fund Balance (FY 2057-58)

\$ 32.4	\$ (27.3)	\$ 5.1
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Change

Connection Fees:

	Current	Propose	\$	%
Previous	\$4.7	\$20.9	\$25.5	
Future	15.3	39.1	54.4	
Total Connection Fees	\$19.9	\$60.0	\$79.9	50%
	\$4,830	\$5,004	\$174	3.6%

GO Property Taxes:

Previous	\$2.9	\$7.5	\$10.4	
Underlay (ID 125/225)	0.0	0.0	0.0	
Future	25.7	45.0	70.7	
Total GO Property Taxes	\$28.5	\$52.6	\$81.1	50%
	\$0.0750	\$0.0750	\$0.0000	0.0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs
(in millions)

Improvement District:

113/213

To Date:

	Water	Sewer	Total
Expenditures ⁽¹⁾	\$ (18.9)	\$ (31.9)	\$ (50.8)
Connection Fees	3.7	7.1	10.9
GO Property Taxes	1.3	1.9	3.1
Previous Bond Sales	16.3	28.6	44.9
Other ⁽²⁾	1.2	0.1	1.3
Fund Balance (4/30/2019)	\$ 3.7	\$ 5.7	\$ 9.4

Future Projection:

Revenue:

Interest Income on Balance	\$ 11.9	\$ 4.5	\$ 16.4
Other Revenues ⁽²⁾	1.2	1.0	2.2
1% and Enhancement	-	-	-
Bond Sales	11.0	18.6	29.6
Connection Fees	12.1	18.5	30.6
GO Property Taxes	17.3	21.4	38.7
Total Revenue	\$ 53.5	\$ 63.9	\$ 117.4

Expenditures:

Capital	\$ (10.3)	\$ (14.8)	\$ (25.1)
Debt	(37.9)	(58.0)	(95.9)
Total Expenditures	\$ (48.2)	\$ (72.9)	\$ (121.0)

Fund Balance (FY 2057-58)

\$ 9.0	\$ (3.2)	\$ 5.8
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Change

Connection Fees:

	Current	Propose	\$	%
Previous	\$3.7	\$7.1	\$10.9	
Future	12.1	18.5	30.6	
Total Connection Fees	\$15.8	\$25.6	\$41.4	50%
	\$8,378	\$8,629	\$251	3.0%

GO Property Taxes:

Previous	\$1.3	\$1.9	\$3.1	
Underlay (ID 125/225)	0.0	0.0	0.0	
Future	17.3	21.4	38.7	
Total GO Property Taxes	\$18.6	\$23.3	\$41.9	50%
	\$0.0990	\$0.0990	\$0.0000	0.0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs
(in millions)

Improvement District

153/253 (Undeveloped)

To Date:

	Water	Sewer	Total
Expenditures ⁽¹⁾	\$ (9.1)	\$ (33.1)	\$ (42.2)
Connection Fees	12.42	14.43	26.86
GO Property Taxes	1.64	1.72	3.36
Previous Bond Sales	7.60	11.90	19.50
Other ⁽²⁾	5.50	7.10	12.60
Fund Balance (4/30/2019)	\$ 18.0	\$ 2.1	\$ 20.1
Underlay	\$ 5.0	\$ 2.7	\$ 7.7

Future Projection:

Revenue:

Interest Income on Balance	\$ 0.5	\$ (10.2)	\$ (9.6)
Other Revenues ⁽²⁾	39.3	73.1	112.5
1% and Enhancement	-	-	-
Bond Sales	13.3	10.8	24.1
Connection Fees	12.5	14.2	26.7
GO Property Taxes	2.3	3.2	5.5
Total Revenue	\$ 68.0	\$ 91.1	\$ 159.1

Expenditures:

Capital	\$ (50.8)	\$ (48.6)	\$ (99.5)
Debt	(34.9)	(39.2)	(74.0)
Total Expenditures	\$ (85.7)	\$ (87.8)	\$ (173.5)

Fund Balance (FY 2057-58)

\$ 0.3	\$ 5.4	\$ 5.7
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Change

Connection Fees:

	Current	Propose	\$	%			
Previous	\$12.4	\$14.4	\$26.9				
Future	\$12.5	\$14.2	\$26.7				
Total Connection Fees	\$25	\$29	\$53.5	50%	\$3,312	\$3,213	(\$99) -3%

GO Property Taxes:

Previous	\$6.7	\$4.4	\$11.1				
Underlay (ID 125/225)	\$18.5	\$18.5	\$37.0				
Future	\$2.3	\$3.2	\$5.5				
Total GO Property Taxes	\$28	\$26	\$53.6	50%	\$0.0410	\$0.0410	\$0.0000 0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other Revenues include native water and golf course revenue for 153/253, buy-in costs, and estimated grant revenue.

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IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs
(in millions)

Improvement District:

185/285

To Date:

	Water	Sewer	Total
Expenditures ⁽¹⁾	\$ (1.0)	\$ (2.5)	\$ (3.5)
Connection Fees	\$ 2.0	\$ 3.0	4.9
GO Property Taxes	\$ 0.3	\$ 0.4	0.7
Previous Bond Sales	\$ 1.5	\$ 1.8	3.3
Other ⁽²⁾	\$ 0.3	\$ 2.8	3.1
Fund Balance (4/30/2019)	\$ 3.1	\$ 5.5	\$ 8.6

Future Projection:

Revenue:

Interest Income on Balance	\$ 1.6	\$ 8.7	\$ 10.3
Other Revenues	0.2	0.3	0.5
1% and Enhancement	-	-	
Bond Sales	3.9	3.0	7.0
Connection Fees	0.9	1.7	2.6
GO Property Taxes	0.8	0.8	1.5
Total Revenue	\$ 7.5	\$ 14.4	\$ 21.9

Expenditures:

Capital	\$ (4.4)	\$ (4.1)	\$ (8.5)
Debt	(8.8)	(8.2)	(17.0)
Total Expenditures	\$ (13.3)	\$ (12.2)	\$ (25.5)
Fund Balance (FY 2057-58)	\$ (2.7)	\$ 7.7	\$ 5.0

Connection Fees:

				Change			
	Current	Propose	\$	%			
Previous	\$2.0	\$3.0	\$4.9				
Future	\$0.9	\$1.7	\$2.6				
Total Connection Fees	\$3	\$5	\$7.5	50%	\$4,868	\$5,014	\$146 3.0%

GO Property Taxes:

Previous	\$0.3	\$0.4	\$0.7				
Underlay (ID 125/225)	\$5.3	\$0.0	\$5.3				
Future	\$0.8	\$0.8	\$1.5				
Total GO Property Taxes	\$6	\$1	\$7.6	50%	\$0.0535	\$0.0535	\$0.0000 0.0%

(1) Other includes any other revenue sources that were used to offset capital.

IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs
(in millions)

Improvement District:

188/288

To Date:

	Water	Sewer	Total
Expenditures ⁽¹⁾	\$ (9.4)	\$ (8.7)	\$ (18.0)
Connection Fees	0.5	0.8	1.3
GO Property Taxes	2.2	0.2	2.4
Previous Bond Sales	4.6	0.4	5.0
Other ⁽²⁾	2.6	6.7	9.3
Fund Balance (4/30/2019)	\$ 0.5	\$ (0.5)	\$ 0.0

Future Projection:

Revenue:

Interest Income on Balance	\$ 2.1	\$ 2.7	\$ 4.8
Other Revenues ⁽²⁾	0.7	0.3	1.0
1% and Enhancement	-	-	
Bond Sales	0.7	0.1	0.8
Connection Fees	1.3	2.3	3.6
GO Property Taxes	2.0	0.5	2.5
Total Revenue	\$ 6.9	\$ 5.9	\$ 12.8

Expenditures:

Capital	\$ (1.3)	\$ (0.6)	\$ (1.9)
Debt	(3.8)	(0.8)	(4.6)
Total Expenditures	\$ (5.1)	\$ (1.4)	\$ (6.4)
Fund Balance (FY 2057-58)	\$ 2.4	\$ 4.0	\$ 6.4

Connection Fees:

						Change	
				Current	Propose	\$	%
Previous	\$0.5	\$0.8	\$1.3				
Future	\$1.3	\$2.3	\$3.6				
Total Connection Fees	\$1.9	\$3.1	\$5.0	50%	\$4,268	\$4,396	\$128 3.0%

GO Property Taxes:

Previous	\$2.2	\$0.2	\$2.4				
Underlay (ID 125/225)	\$0.0	\$0.0	\$0.0				
Future	\$2.0	\$0.5	\$2.5				
Total GO Property Taxes	\$4.2	\$0.7	\$5.0	50%	\$0.0835	\$0.0835	\$0.0000 0.0%

(1) Expenditures includes both capital infrastructure and general plant expenditures.

(2) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs

(in millions)

Improvement District:

111/222

To Date:

	<u>Water</u>	<u>Sewer</u>	<u>Total</u>
Fund Balance (4/30/2019)	\$ 1.8	\$ (25.1)	\$ (23.3)

Future Projection:

Revenue:

Interest Income on Balance	\$ (35.1)	\$ 0.6	\$ (34.5)
Other Revenues⁽¹⁾	1.4	5.0	\$ 6.3
1% and Enhancement	120.3	133.1	\$ 253.4
Bond Sales	45.7	31.7	77.4
Connection Fees	2.8	5.1	7.9
GO Property Taxes	-	-	-
Total Revenue	\$ 135.1	\$ 175.4	\$ 310.5

Expenditures:

Capital	\$ (92.6)	\$ (55.4)	\$ (147.9)
Debt	(74.4)	(51.2)	(125.6)
Total Expenditures	\$ (167.0)	\$ (106.6)	\$ (273.6)
Fund Balance (FY 2057-58)	\$ (30.2)	\$ 43.8	\$ 13.7

(1) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

IRVINE RANCH WATER DISTRICT
Identifying Changes within IDs

(in millions)

Improvement District:

125/225

To Date:

Fund Balance (4/30/2019)

	Water	Sewer	Total
	\$ 147.0	\$ (5.7)	\$ 141.4

Future Projection:

Revenue:

Interest Income on Balance	\$ 98.2	\$ (5.7)	\$ 92.5
Other Revenues⁽¹⁾	21.7	19.1	\$ 40.8
1% and Enhancement	38.9	115.1	\$ 154.1
Bond Sales	77.1	138.3	215.4
Connection Fees	1.0	1.1	2.2
GO Property Taxes	182.5	437.4	619.9

Total Revenue

	\$ 419.5	\$ 705.3	\$ 1,124.7
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Expenditures:

Capital	\$ (121.5)	\$ (123.3)	\$ (244.8)
Debt	(393.1)	(609.2)	(1,002.2)

Total Expenditures

	\$ (514.6)	\$ (732.4)	\$ (1,247.0)
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Fund Balance (FY 2057-58)

	\$ 51.9	\$ (32.9)	\$ 19.1
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GO Property Taxes:

Total GO Property Taxes	\$0.0140	\$0.0140	\$0.0280
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(1) Other includes Grants, AMP, LRP, LPP, and any other revenue sources that were used to offset capital.

RESOLUTION NO. 2019-

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
ADOPTING CHANGES TO CONNECTION FEES AS SET FORTH IN
THE SCHEDULE OF RATES AND CHARGES IN EXHIBIT "B" TO THE
RULES AND REGULATIONS OF IRVINE RANCH WATER DISTRICT
FOR WATER, SEWER, RECYCLED WATER, AND NATURAL
TREATMENT SYSTEM SERVICE
(EFFECTIVE AUGUST 1, 2019)

The Irvine Ranch Water District ("IRWD") is a California Water District organized and existing under the California Water District Law, and all of the lands within the boundaries of said District are located in the County of Orange, State of California.

California Water Code Sections 35423, 35470, and 35501 empower the District to establish, print and distribute equitable rules and regulations and prescribe and collect rates or other charges for water and sewer service, which includes connection fees for connection and service capacity.

The Board of Directors of IRWD, by adoption of Resolution No. 2019- approved and adopted amended "Rules and Regulations of Irvine Ranch Water District for Water, Sewer, Recycled Water, and Natural Treatment System Service effective May 29, 2018 ("Rules and Regulations").

Exhibit "B" of the Rules and Regulations sets forth rates and charges, which may be changed from time to time by adoption of changes to any of the rates and charges or establishing any new rates and charges.

Public Resources Code Section 21080(b) (8) provides that the establishment, modification, structuring, restructuring or approval of rates, tolls, fares, or other charges by public agencies are exempt from the requirements of the California Environmental Quality Act if certain findings are made specifying the basis for the claim of exemption.

Article XIII B of the Constitution of the State of California, limiting local agencies' appropriations of proceeds of taxes, excludes user charges or fees or regulatory fees from the definition of proceeds of taxes, as long as such fees and charges do not produce revenue exceeding the costs reasonably borne in providing the regulation, product or service, and further excludes appropriations for debt service and appropriations for qualified capital outlay projects from appropriations subject to limitation.

The Board of Directors of IRWD deems it advisable and finds that it would be in the best interest of the District to amend or establish connection fees, consistent with applicable constitutional and statutory requirements.

The proposed revisions to the connection fees, as set forth in Exhibit "A" to this resolution, do not modify or establish any property-related fees or charges subject to the notice and hearing procedures of Article XIID of the Constitution of the State of California.

The Board of Directors of IRWD therefore resolves as follows:

Section 1. It is hereby found and determined that the proposed changes to the Schedule of Rates and Charges are within the purposes set forth in Section 21080(b) of the Public Resources Code including but not by way of limitation, the purposes of (1) obtaining funds for capital projects necessary to maintain service within existing areas, and (2) meeting financial reserve needs, and therefore, that such changes are exempt from CEQA.

Section 2. It is hereby found and determined that relative to Article XIII B of the Constitution of the State of California, the charges or fees or regulatory fees established or increased hereby do not produce revenues exceeding the costs reasonably borne in providing the regulation, product or service and/or are used for debt service or qualified capital outlay projects and accordingly do not constitute proceeds of taxes, the appropriation of which is limited under Article XIII B, and that the documentation used in making such determinations has been on file in the office of IRWD for not less than 15 days prior to the date hereof, pursuant to Section 7910 of the Government Code of the State of California. It is hereby further found and determined that relative to the requirements of Sections 66013 and 66016 of the Government Code of the State of California, the availability of such documentation also satisfies the requirement to make publicly available the data indicating the estimated cost and revenue sources to provide the service for which the fee is imposed at least 10 days prior to the meeting at which this resolution is adopted, and that the connection fees established or increased hereby do not exceed the estimated reasonable cost of providing the service for which they are imposed.

Section 3. The new and/or revised connection fees as set forth in Exhibit “A” attached to this resolution and by this reference incorporated herein are hereby adopted, and the corresponding rate(s), fee(s) or charge(s), if any, as set forth in Rules and Regulations Exhibit “B” currently in effect, are hereby superseded. Staff is directed to incorporate the hereby adopted new and/or revised connection fee(s) into Exhibit “B” to the Rules and Regulations.

Section 4. That the provisions of this Resolution shall be effective August 1, 2019.

Section 5. That the Secretary is hereby ordered and directed to post a certified copy of this Resolution in a public place within the Irvine Ranch Water District.

ADOPTED, SIGNED and APPROVED on July 8, 2019.

President, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

Secretary, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

APPROVED AS TO FORM:
Lewis Brisbois Bisgaard & Smith LLP

By: _____
District Counsel

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RESOLUTION NO. 2019-

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
ESTABLISHING AD VALOREM TAX REVENUES FOR
FISCAL YEAR 2019-20

The Board of Directors of the Irvine Ranch Water District (IRWD) has duly considered the financial needs of IRWD and its Improvement District Nos. 112, 113, 125, 153, 185, 188, 212, 213, 225, 240, 253, 285, and 288, for the fiscal year 2019-20 and the funds available and established to become available for meeting said financial needs.

Pursuant to Water Code Section 37206, the Board of Directors annually shall furnish to the Board of Supervisors of Orange County and to the County Auditor, an estimate in writing of the amount of money needed to be raised by the District during the fiscal year for the payment of its proportion of the amount required for the purposes of the District.

Article XIII B of the Constitution of the State of California provides that the appropriations of local agencies will be limited each year to those of the previous year with specified adjustments permitted.

Section 9(a) of Article XIII B specifically excludes appropriations required to pay the cost of interest and redemption charges, including the funding of any reserve or sinking fund required in connection therewith, on indebtedness existing or legally authorized as of January 1, 1979, or on bonded indebtedness thereafter approved according to law by a vote of electors.

The ad valorem tax revenues established by IRWD are used entirely for debt service and are therefore exempt from the appropriations formula established by Article XIII B.

The ad valorem tax revenues received by IRWD pursuant to this Resolution will provide a portion of the funds needed to pay principal and interest with respect to the General Obligation Bonds referenced below, and this Board wishes to specify the sources of the remainder of the amounts needed therefor in the current year.

The Board of Directors of IRWD therefore resolves as follows:

Section 1. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 153 of IRWD for fiscal year 2019-20 is .02000 percent (.0002000) of full value.

Section 2. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 253 of IRWD for fiscal year 2019-20 is .02100 percent (.0002100) of full value.

Section 3. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 225 of IRWD for fiscal year 2019-20 is .01500 percent (.0001500) of full value.

Section 4. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 240 of IRWD for fiscal year 2019-20 is .01500 percent (.0001500) of full value.

Section 5. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 125 of IRWD for fiscal year 2019-20 is .01300 percent (.0001300) of full value.

Section 6. That the tax to be levied for servicing Improvement District No. 252's just proportion of liability determined pursuant to Resolution No. 2005-41, for the General Obligation Bonds of Improvement District No. 225 of IRWD for fiscal year 2019-20 is .00001 percent (.0000001) of full value.

Section 7. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 188 of IRWD for fiscal year 2019-20 is .07350 percent (.0007350) of full value.

Section 8. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 288 of IRWD for fiscal year 2019-20 is .01000 percent (.0001000) of full value.

Section 9. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 113 of IRWD for fiscal year 2019-20 is .04000 percent (.0004000) of full value.

Section 10. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 213 of IRWD for fiscal year 2019-20 is .05900 percent (.000590) of full value.

Section 11. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 112 of IRWD for fiscal year 2019-20 is .03000 percent (.00030000) of full value.

Section 12. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 212 of IRWD for fiscal year 2019-20 is .04500 percent (.0004500) of full value.

Section 13. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 185 of IRWD for fiscal year 2019-20 is .02300 percent (.0002300) of full value.

Section 14. That the tax to be levied for servicing the General Obligation Bonds of Improvement District No. 285 of IRWD for fiscal year 2019-20 is .03050 percent (.0003050) of full value.

Section 15. The taxes levied pursuant to Sections 1 and 2 of this Resolution are for bonds approved before January 1, 1989. The taxes levied pursuant to Sections 7 through 14 are for bonds approved after January 1, 1989. The taxes levied pursuant to Sections 3 through 6 are for bonds approved before January 1, 1989 and bonds approved after January 1, 1989.

Section 16. That the Secretary and Treasurer of the District are hereby directed to furnish a certified copy of this resolution to the Auditor of the County of Orange.

Section 17. That the ad valorem tax revenues established by IRWD hereby for the fiscal year 2019-20 are in compliance with the provisions of Article XIII B of the constitution of the State of California.

Section 18. That principal and interest with respect to the General Obligation Bonds of IRWD shall be paid from (1) the ad valorem assessments received by IRWD pursuant to this Resolution; (2) any amounts held in bona fide debt service funds; (3) other monies, if any, required to be applied to the payment of debt service by the applicable indenture or resolution of issuance; (4) tax revenues applied pursuant to Resolution No. 2002-10 and to certain parity obligations as described in the Indenture of Trust, dated April 1, 2011, as amended and supplemented, relating to the Bonds of Irvine Ranch Water District, Refunding Series 2011A-1 (pledge of the 1% levy), as such application may be modified by resolution amending the allocation of tax revenues; and (5) to the extent additional amounts are necessary for such purpose, revenues which are received by IRWD within twelve months of being applied to the payment of debt service and which are legally available therefor, including income from the investment of such revenues where both the investment income and the revenues on which it is earned are received by IRWD within twelve months of being applied to the payment of debt service.

ADOPTED, SIGNED and APPROVED on July 8, 2019.

President, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

Secretary, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

APPROVED AS TO FORM:
Lewis Brisbois Bisgaard & Smith LLP

By: _____
District Counsel

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RESOLUTION NO. 2019 –

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

The Board of Directors of the Irvine Ranch Water District (“IRWD”) has adopted Resolution Nos. 1992-48 and 2002-10, relating to IRWD’s appropriation and pledge of revenues from the general 1% *ad valorem* property tax.

Those resolution authorized and directed the Treasurer to annually allocate the general 1% *ad valorem* property tax revenues received by IRWD among the debt service requirements of the issues of bonds specified in those resolutions (“Secured Bonds”) in accordance with a formula set forth therein, with the 2002 pledge formula to be applied in lieu of the 1992 pledge formula to the extent provided in Resolution No. 2002-10.

No Secured Bonds that received a pledge of general 1% *ad valorem* property tax revenues under Resolution Nos. 1992-48 or 2002-10 currently remain outstanding, except for the Series 1993 bonds.

IRWD’s revenues from the general 1% *ad valorem* property tax have, to the extent not applied to pay principal and interest on the Secured Bonds, been pledged by IRWD to certain parity obligations (the “Parity Obligations”) identified by the Indenture of Trust, dated April 1, 2011, as amended and supplemented (the “2011 Indenture”), relating to the Bonds of Irvine Ranch Water District, Refunding Series 2011A-1.

On November 11, 2013, pursuant to Water Code Section 36454 *et seq.*, the Board of Directors adopted Resolution No. 2013-43, ordering the consolidation of Improvement District Nos. 102, 105, 106, 121, 130, 135, 140, 161, 182, 184 and 186, as modified by certain annexations and detachments ordered by the Board, into a single improvement district designated “Improvement District No. 125” and the consolidation of Improvement District Nos. 2(202), 206, 221, 230, 235, 250, 261, 282, 284 and 286, as modified by certain annexations and detachments ordered by the Board, into a single improvement district designated “Improvement District No. 225”.

The consolidation is one of several actions taken by IRWD based upon its comprehensive evaluation and study of its long-term financial requirements, including: a detailed planning, engineering and financial assessment of the total costs of existing and future facilities in the water and wastewater systems; available bond authorization and other revenue sources to finance facilities to serve future development, system reliability necessary to meet upgraded regulatory requirements for both existing and future demands and replacement and refurbishment to the existing systems; debt service; simplification of the improvement district structure; and assurance of equitable and fair sharing of regional and local cost between existing and future users and among the areas that have comprised the various existing improvement districts and other geographic areas served by the system; and

Pursuant to Water Code Section 36454.1 , the included amounts and/or included percentages of each series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of Improvement District Nos. 105, 121, 130, 135, 140, 161, 182, 184 and 186 were assumed by and became the liability of Improvement District No. 125, and the included amounts and/or included percentages of the respective series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of Improvement District Nos. 221, 230, 235, 250, 261, 282, 284 and 286 were assumed by and became the liability of Improvement District No. 225.

The Board deems it to be appropriate, in the interest of IRWD and consistent with the pledges contained in Resolution No. 2002-10 and the 2011 Indenture (collectively, the “Pledges”), to modify the allocation of the revenues from the general 1% *ad valorem* property tax received during the 2019-20 fiscal year (the “Fiscal Year”), subject to the availability of other revenues for debt service on Secured Bonds and Parity Obligations in such year.

The proposed modifications consist of substitution of an allocation of 1% *ad valorem* tax revenues among debt service obligations that is different from the allocation that would be calculated under the formulas specified in the Pledges; in addition, by separate resolution adopting the capital budget, this Board has allocated a portion of the 1% *ad valorem* tax revenues for the Fiscal Year to one or both of IRWD’s Replacement Fund or Enhancement Fund.

Article XIII B of the Constitution of the State of California provides that the appropriations of local agencies will be limited each year to those of the previous year, adjusted for changes in population, cost of living and transfers in sources of funding.

Section 9 of Article XIII B excludes from the appropriations subject to limitation appropriations for debt service and appropriations for all qualified capital outlay projects; a qualified capital outlay project is defined by statute as an appropriation for a fixed asset (including land and construction) with a useful life of 10 or more years and a value which equals or exceeds one hundred thousand dollars (\$100,000).

The Board of Directors of the Irvine Ranch Water District therefore resolves as follows:

Section 1. Subject in all respects to the Pledges, the Treasurer is hereby authorized and directed to implement a modified allocation of the pledged amounts (as defined in the Pledges) of the general 1% *ad valorem* property tax revenues for the Fiscal Year 2019-20 in the manner set forth as follows:

- (a) the amount to be allocated to the Replacement Fund shall be as specified in the resolution adopting the capital budget for the Fiscal Year;
- (b) the amount to be allocated to the Enhancement Fund shall be as specified in the resolution adopting the capital budget for the Fiscal Year;
- (c) the amount to be allocated to the sharing of regional and local cost by existing and future users of the areas known as 111 and 222 shall be as set forth in

Exhibit “A,” which exhibit is attached to this resolution and by this reference made a part hereof;

(d) the allocation among the Improvement Districts’ debt service obligations shall be as set forth in Exhibit “A,” subject to adjustments as may be necessary to reflect actual tax revenues received by IRWD;

(e) the amount allocated to each Improvement District or combination of Improvement Districts specified in Exhibit “A” shall be further allocated by the Treasurer among the various outstanding bond issues based upon their debt service requirements and/or other criteria as he deems appropriate;

(f) the amounts to be allocated pursuant to paragraphs (d) and (e) from the pledged amount of the general 1% *ad valorem* property tax revenues received by IRWD shall be held unallocated until such allocations are made, and each such amount shall be deposited into the appropriate debt service fund or account for the respective bond issue as and when determined by the Treasurer.

The applications described in this section shall be made only if and to the extent there is not a deficiency at the time of application in the amounts available to pay debt service for any Secured Bonds or Parity Obligations.

Section 2. Nothing contained in this resolution is intended to impair or modify in any way the pledge of the general 1% *ad valorem* property tax revenues as stated in the Pledges. Nothing contained in this resolution is intended to create any entitlement with respect to the use of general 1% *ad valorem* property tax revenues for any particular purpose, it being intended that such revenues are unrestricted except by such Pledges and are subject to application as determined in the discretion of the Board of Directors from time to time.

Section 3. It is hereby found and determined that relative to appropriations subject to limitation under Article XIII B of the Constitution of the State of California, the applications of revenues described in this resolution are for debt service, and accordingly do not constitute proceeds of taxes the appropriation of which is limited under Article XIII B, and that the documentation used in making such determinations has been on file in the office of IRWD for not less than 15 days prior to the date hereof, pursuant to Section 7910 of the Government Code of the State of California

Section 4. The President, Secretary, Treasurer and each other officer of IRWD, acting singly, be and hereby is authorized and directed to execute and deliver any and all documents or instruments and to do and perform any and all acts and things necessary or proper for carrying out the transactions contemplated by this resolution.

ADOPTED, SIGNED AND APPROVED on July 8, 2019.

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

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

APPROVED AS TO FORM:
Lewis Brisbois Bisgaard & Smith LLP

By _____
District Counsel

EXHIBIT A

ID or Area (Water)	2002 Pledge Formula Allocation of 1% General Tax Revenue ^a	2019-20 Allocation of 1% General Tax Revenue	ID or Area (Sewer)	2002 Pledge Formula Allocation of 1% General Tax Revenue ^a	2019-20 Allocation of 1% General Tax Revenue
112	0	0	212	0	0
113	0	0	213	0	0
125 ^{b c}	17%	23%	225 ^{d e}	23%	26%
153	0	0	240	3%	10%
154	0	0	252	0	0
185	0	0	253	0	0
188	0	0	288	0	0
111	0	5%	222	0	7%

Fund	Allocation of 1% Revenue, Per 2019-20 Capital Budget Resolution
Replacement Fund	29%
Enhancement Fund	0

^a No Secured Bonds that received a pledge of 1% general tax levy revenues under Resolution No. 1992-48 remain outstanding. The pledge made by Resolution No. 2002-10 secured the outstanding Consolidated Series 1993 Bonds (consisting of the included percentages of Improvement District Nos. 105 (14.67%), 140 (15.20%), 240 (43.73%) and 250 (26.40%))

^b Improvement District No. 125 assumed the liability for the included amounts and/or included percentages of debt service for each series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of the improvement districts consolidated as Improvement District No. 125: Nos. 105, 121, 130, 135, 140, 161, 182, 184 and 186.

^c After the formation of Improvement District No. 125, with respect to the Series 1993 Bonds, the aggregated included percentages of Improvement District Nos. 105 and 140 (36.87%) were assumed by Improvement District No. 125.

^d Improvement District No. 225 assumed the liability for the included amounts and/or included percentages of debt service for each series of the Secured Bonds or Parity Obligations that constituted the general obligation of one or more of the improvement districts consolidated as Improvement District No. 225: Nos. 2(202), 206, 221, 230, 235, 250, 261, 282, 284 and 286.

^e After the formation of Improvement District No. 225, with respect to the Series 1993 Bonds, the included percentage of Improvement District No. 250 (26.40%) was assumed by Improvement District No. 225.

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Section 3: Developer Services

Water Connection Fees

1. Residential

	Improvement District	0-5.8 DUs/acre	5.9-10.8 DUs/acre	10.9-25.8 DUs/acre	25.9+ DUs/acre	
Connection Fees Per Dwelling Unit	111*	\$4,027 \$3,940	\$3,551 \$3,448	\$3,010 \$2,922	\$2,541 \$2,467	
	112	\$1,386 \$1,338	\$1,386 \$1,338	\$1,386 \$1,338	\$1,386 \$1,338	
	112a (tax exempt)	\$2,551 \$2,462	\$2,551 \$2,462	\$2,551 \$2,462	\$2,551 \$2,462	
	113	\$3,138 \$3,047	\$3,138 \$3,047	\$3,138 \$3,047	\$3,138 \$3,047	
	Development shall be gross acres excluding private parks.	125	\$2,873 \$2,789	\$2,873 \$2,789	\$2,873 \$2,789	\$2,873 \$2,789
		153	\$1,486 \$1,532	\$1,486 \$1,532	\$1,486 \$1,532	\$1,486 \$1,532
		153 PA 30	\$3,943 \$3,828	\$3,943 \$3,828	\$3,943 \$3,828	\$3,943 \$3,828
185		\$1,800 \$1,748	\$1,800 \$1,748	\$1,800 \$1,748	\$1,800 \$1,748	
	188	\$1,619 \$1,572	\$1,619 \$1,572	\$1,619 \$1,572	\$1,619 \$1,572	
	*All others					

2. Commercial, industrial and public authority

	Improvement District	Commercial	Industrial	Public Authority
Connection Fees Per Gross Acre	111*	\$22,345 \$21,694	\$34,033 \$33,042	\$22,345 \$21,694
	112	\$9,009 \$8,696	\$9,009 \$8,696	\$9,009 \$8,696
	112a (tax exempt)	\$16,577 \$16,004	\$16,577 \$16,004	\$16,577 \$16,004
	113	\$22,926 \$22,258	\$0 \$0	\$22,926 \$22,258
	125	\$14,249 \$13,834	\$20,227 \$19,638	\$14,249 \$13,834
	153	\$7,806 \$8,047	\$11,079 \$11,422	\$7,806 \$8,047
	PA 30	\$19,563 \$18,993	\$27,770 \$26,961	\$19,563 \$18,993
	185	\$8,411 \$8,166	\$8,411 \$8,166	\$8,411 \$8,166
	188	\$6,392 \$6,206	\$6,392 \$6,206	\$6,392 \$6,206
	*All others			

3. Parks, churches and recreational facilities

	Improvement District	Indoor Water Use	Outdoor ⁽¹⁾ Water Use
Connection Fees Per Fixture Unit	111*	\$69.98 \$67.94	\$246.27 \$239.09
	125	\$47.36 \$45.98	\$165.99 \$161.16
(1) Calculated per Uniform Code	153	\$25.98 \$26.78	\$91.04 \$93.86
	PA 30	\$65.07 \$63.17	\$228.05 \$224.44
	185	\$48.39 \$46.98	\$169.94 \$164.99
	188	\$31.94 \$31.04	\$112.35 \$109.08
	*All others		

4. Schools (public and private)

	Improvement District	Indoor Primary &/or Intermediate	Secondary	Outdoor Primary Intermediate & Secondary
Connection Fees Per 100 Students Based on Max Daily Attendance	111*	\$5,515 \$5,354	\$7,395 \$7,180	\$237 \$230
	125	\$3,724 \$3,616	\$5,001 \$4,855	\$167 \$162
	153	\$2,043 \$2,106	\$2,742 \$2,827	\$91 \$94
	PA 30	\$5,117 \$4,968	\$6,870 \$6,670	\$229 \$222
	185	\$3,648 \$3,542	\$5,118 \$4,969	\$165 \$160
	188	\$2,921 \$2,836	\$3,909 \$3,795	\$126 \$122
	*All others			

*All others

Other Water Connection Charges

1. High volume user – Non-Residential

This section shall apply to all commercial, industrial, and public authority applicants in addition to standard connection fees in all improvement districts.

Connection Fee Formula Additional High Volume Water User Connection Fee =

$$\frac{[\text{Est. Gallons per Day use} - (\text{no. acres} \times \text{use factor}^*)] \times 1,221,858258.514/\text{cfs}}{646,320 \text{ gal/day/cfs}}$$

*Non-Residential Water Use Factor	<u>Land Use Category</u>	<u>Water Use Factors (Gal/Acre x /Day)</u>
	Commercial	2,000.00
	Industrial	4,000.00
	UCI	Special Contract

Definitions

Commercial: Commercial development includes but is not limited to the following uses: Hotels, retail and offices.

Industrial: Industrial development includes but is not limited to the following uses: Manufacturing, research and development, and distribution.

Methodology for calculating redevelopment connection fees

Redevelopment connection fees will be calculated using the following methodology, effective January 1, 2014:

- 1) Calculate water and sewer connection fee based on redevelopment plans utilizing current rates and charges;
- 2) Provide a credit based on the existing project (to be redeveloped) by calculating a connection fee using current rates and charges; and
- 3) The redevelopment connection fee calculation is the difference between the new development connection fee and the connection fee credit. No refunds will be given if the credit is greater than connection fee.

2. Service installations by District

Customers may request the District to install, relocate or abandon domestic water, recycled water and fire protection service lines. To request an action listed above, the customer must submit a Quote Request for Service or Meter Modifications which can be obtained by contacting Development Services. District staff will prepare a cost estimate for the requestor. When payment is received, a work order will be issued to District staff to begin coordination and installation.

The District reserves the right to decline a customer's request for service installations by District for any reason. In the event the District declines to perform service installations, the requestor will need to submit design plans for review and approval through Development Services. For further information, see Development Services Procedural Guidelines and General Design Requirements document which can be found at www.irwd.com.

3. Meter installations by District

Customers may request the District to install or replace (downsize or upsize) domestic water or recycled water meters. To request an action listed above, the customer must submit a Quote Request for Service or Meter Modifications which can be obtained by contacting the District's Development Services. The District may require OCFA approval documents prior to the installation of certain meter sizes. District staff will prepare a cost estimate for the requestor. When payment is received, a work order will be issued to District staff to begin coordination and installation.

a. Meter Costs

<u>Meter size</u>	<u>Cost</u>	<u>Meter size</u>	<u>Cost</u>
5/8"	\$ 110.00	2" Disc	\$ 750.00
3/4"	170.00	2" Turbo	2,680.00
1"	240.00	3" Turbo – H2	1,900.00
1 1/2"	580.00	3" Turbo – T2	3,340.00
		4" Turbo	6,490.00

- b. The customer shall pay for the cost of additional parts and labor needed for the installation or replacement. For example, the cost to convert from 5/8" or 3/4" to a 1" meter is \$2,000. This price is in addition to the cost for a 1" meter.
- c. The customer will be responsible for any plumbing modifications downstream of the water meter.
- d. Costs for meters larger than 4-inches will be determined by the District's Purchasing Department at the time of request.
- e. Meter cost includes strainer.

4. Upsizing and downsizing meter request requirements

- a. It is the customer's responsibility to ensure that any upsizing or downsizing of the meter will not have any adverse effects to the customer's system as it relates to water pressure, fire protection or ability to successfully serve the demand of the home or business. The District may require OCFA approval of any modifications and/or a signed Request & Authorization to Change Meter Size form.
- b. Any private-side (downstream of the water meter) modifications or repairs are the sole responsibility of the customer.
- c. If for any reason the customer chooses to change back to the original size meter, all installation costs would once again apply.

A quote request for service or meter modifications can be obtained at the District's Development Services counter.

5. Domestic water, recycled water and Natural Treatment System (NTS) plan check and inspection fees

Plan check and inspection fees for water systems shall be calculated as 10% of the bondable cost for the off-site, public, potable or recycled water system or a fixed fee as described below. Plan check and inspection fees for Natural Treatment System (NTS) shall be calculated as 5% of the bondable cost or a minimum of \$30,000.00. Residential or Natural Treatment Systems plans require a non-refundable deposit of 5% of the estimated cost. Non-residential plans require a nonrefundable \$100 deposit. The deposit shall be submitted when submitting for first plan check. Any remaining fees shall be paid prior to final approval of the plans.

Installation of a 1" or 2" service	\$1,000.00
Removal of a 1" or 2" service	1,000.00
Installation of Fire DDCA or fire hydrants	1,000.00
Installation of recycled water hydrants or temporary construction connections	1,000.00

The overtime inspection rate is \$175.00/hr.

6. Interim water service charge – new development

Builders and developers will be charged ~~\$35,1043.15~~ per connection for water service directly related to the vertical construction process of homes. The charge applies only in a new tract and/or development for the period of time after in-tract pipelines, service mains and sewer pipelines have been connected to the District's water system. Once connections to the District pipelines are made and housing phases are released for occupancy, water used through the occupants metered house connection will be billed to the developer or resident as appropriate. Connection methods and appropriate use of water is at the sole discretion of the District. Examples of permitted uses may include construction of living structures, lot soft-scape, exterior of the home stucco/ plaster, drywall, interior stonework, interior finishing work and clean-up. Examples of unpermitted uses may include, but are not limited to, connections to sales/construction trailers, flat work, hardscaping, retaining and other walls, lot or pad soaking, streetscape, water trucks/ buffaloes or any connection practice that could pose a risk to public health resulting from a backflow condition. Unpermitted connections require a temporary construction meter. Failure to properly connect to the District's Distribution System will subject the builder/developer to non-compliance charges.

Unmetered water service is not permitted for custom lots. Developers for custom lots will be required to apply for a domestic water construction meter prior to starting construction.

Sewer Connection Fees

1. Residential

Improvement District	0-5.8 DUs/acre		5.9-10.8 DUs/acre		10.9-25.8 DUs/acre		25.9+ DUs/acre	
Connection Fees Per Dwelling Unit	1 (222)*	\$7,150 \$6,942	\$6,363 \$6,178	\$5,238 \$5,085	\$4,132 \$4,012			
	212	\$3,618 \$3,492	\$3,618 \$3,492	\$3,618 \$3,492	\$3,618 \$3,492			
	212a (tax exempt)	\$6,657 \$6,426	\$6,657 \$6,426	\$6,657 \$6,426	\$6,657 \$6,426			
	213	\$5,491 \$5,334	\$5,491 \$5,334	\$5,491 \$5,334	\$5,491 \$5,334			
Total acreage for any given development shall be gross acres excluding private parks.	240	\$3,945 \$3,830	\$3,945 \$3,830	\$3,945 \$3,830	\$3,945 \$3,830			
	225	\$3,102 \$3,042	\$3,102 \$3,042	\$3,102 \$3,042	\$3,102 \$3,042			
	253	\$1,727 \$1,780	\$1,727 \$1,780	\$1,727 \$1,780	\$1,727 \$1,780			
Parks.	253 PA 30	\$4,115 \$3,995	\$4,115 \$3,995	\$4,115 \$3,995	\$4,115 \$3,995			
	256	\$6,259 \$6,077	\$6,259 \$6,077	\$6,259 \$6,077	\$6,259 \$6,077			
	285	\$3,214 \$3,120	\$3,214 \$3,120	\$3,214 \$3,120	\$3,214 \$3,120			
	288	\$2,777 \$2,696	\$2,777 \$2,696	\$2,777 \$2,696	\$2,777 \$2,696			
	OPA1 (Ridgeline)	\$6,259 \$6,077	\$6,259 \$6,077	\$6,259 \$6,077	\$6,259 \$6,077			

*All others

2. Commercial, industrial and public authority

Improvement District	Commercial		Industrial		Public Authority	
Connection Fees Per Gross Acre	1 (222)*	\$40,073 \$38,906	\$69,916 \$67,880	\$40,073 \$38,906		
	212	\$21,600 \$20,849	\$21,600 \$20,849	\$21,600 \$20,849		
	212a (tax exempt)	\$39,746 \$38,365	\$39,746 \$38,365	\$39,746 \$38,365		
	213	\$32,717 \$31,764	\$0 \$0	\$32,717 \$31,764		
	240	\$18,015 \$17,490	\$0 \$0	\$18,015 \$17,490		
	225	\$15,168 \$14,726	\$17,943 \$17,420	\$15,168 \$14,726		
	253	\$7,923 \$8,168	\$13,147 \$13,554	\$7,923 \$8,168		
	253 PA 30	\$18,346 \$17,812	\$30,443 \$29,556	\$18,346 \$17,812		
	285	\$6,422 \$6,235	\$6,422 \$6,235	\$6,422 \$6,235		
	288	\$10,959 \$10,640	\$10,959 \$10,640	\$10,959 \$10,640		

*All others

3. Parks, churches and recreational facilities

Improvement District	Fee	
Connection Fees Per Fixture Unit	1 (222)*	\$443.37 \$430.45
	240	\$268.02 \$260.24
	225	\$237.73 \$230.84
	253	\$124.18 \$128.02
	253 PA 30	\$287.54 \$279.16
	288	\$72.72 \$70.60

*All others

4. Schools (public and private)

Improvement District	Primary & Intermediate		Secondary	
Connection Fees Per 100 Students Based on Max Daily Attendance	1 (222)*	\$21,009 \$20,397	\$28,016 \$27,200	
	240	\$12,667 \$12,298	\$16,892 \$16,400	
	225	\$11,169 \$10,844	\$14,893 \$14,459	
	253	\$5,834 \$6,045	\$7,779 \$8,020	
	253 PA 30	\$13,510 \$13,146	\$18,013 \$17,488	
	288	\$3,501 \$3,399	\$4,665 \$4,529	

*All others

Other Sewer Connection Charges

1. Sewer lateral installations by District

The District does not install sewer laterals.

2. Irvine Business Complex (IBC) – non-residential

-----Commercial/Industrial-----

	<u>Low Demand</u>	<u>Average Demand</u>	<u>High Demand</u>
Connection Fees Per 1,000 Square Feet	<u>\$276 \$268</u>	<u>\$1,704 \$1,654</u>	<u>\$4,039 \$3,921</u>

- a. Low Demand connections are the following categories of users: Nurseries, Warehouses, Parking Structures, RV Storage, Churches, Truck Terminals, RV Parks, Lumber/Construction Yards, and other discharge whose flow is similar in volume to these listed categories.
- b. Average Demand connections other than listed in Low or High Demand categories.
- c. High Demand connections are the following categories of users: Restaurants, Supermarkets, Car Washes, Coin Laundries, Amusement Parks, Shopping Centers with Restaurants, Food Processing Facilities, Textile Manufacturers, and other discharges whose flow is similar in volume to these listed categories.

3. High volume user – Non-Residential

This section shall apply to commercial, industrial and public authority applicants in addition to standard connection fees in all improvement districts.

Connection Fee Formula Additional High Volume Sewer User Connection Fee =

* Sewer GPD = 90% of water GPD [Est. GPD use * – (no. acres x use factor**)] x \$17.7618.29/Gal. of Sewer Flow

**Non-Residential Sewage Flow Generators (Use Factors)	<u>Land Use Category</u>	<u>Average Flows</u>
	Commercial	1,300.00
	Industrial	2,600.00
	UCI	Special Contract

Definitions Commercial: Commercial development includes but is not limited to the following uses: Hotels, retail and offices.
Industrial: Industrial development includes but is not limited to the following uses: Manufacturing, research and development, and distribution.

Methodology for calculating redevelopment connection fees

Redevelopment connection fees will be calculated using the following methodology, effective January 1, 2014:

- 1) Calculate water and sewer connection fee based on redevelopment plans utilizing current rates and charges;
- 2) Provide a credit based on the existing project (to be redeveloped) by calculating a connection fee using current rates and charges; and
- 3) The redevelopment connection fee calculation is the difference between the new development connection fee and the connection fee credit. No refunds will be given if the credit is greater than connection fee.

4. Sanitary sewer plan check and inspection fees

The plan check and inspection fee for public sewer systems will be calculated as 10% of the bondable cost for the off-site public sewer system. Residential plans require a non-refundable deposit of 5% of the estimated cost. Non-residential plans require a non-refundable \$100 deposit. The deposit shall be submitted when submitting for first plan check. Any remaining fees shall be paid prior to final approval of the plans. The overtime inspection rate is \$175.00/hr.

District closed circuit television inspection charges

a. Initial TV inspection fee

A fee of \$0.85 per linear foot as measured from the center line of manholes will be charged for all 6-inch and larger sewer lines to be inspected by a closed circuit television camera. The District will furnish the special camera equipment and manpower to fulfill this inspection requirement. This fee is to be paid along with the other connection, meter, and inspection fees prior to the District signing developer's tract utility plans.

b. Reinspection

Fees will be assessed for reinspection by District TV Crew after corrective work is completed. Those portions of the pipeline system that have been corrected must be retelevised.

- 1) District fees for retelevising corrective work will be a flat set-up fee of two hundred fifty dollars (\$250.00) plus \$0.85 per linear foot of sewer line reinspected measured centerline to centerline of manholes.
- 2) Payment for retelevising estimated inspection fees must be received by the Development and Inspection Services prior to scheduling the reinspection. Retelevising will not be done until the fees are paid.

c. Cancellation of District's TV inspection

If it is determined by either the Contractor or Developer that the job site will not be ready or accessible for the television inspection on the scheduled date, as notified, the Contractor shall notify the District Inspection Division of the necessary cancellation at least 24 hours in advance of the scheduled inspection to avoid being charged a cancellation fee.

- 1) If the District's television crew arrives at the job site and the work is not ready or accessible, the Contractor and owner will be billed for the cancellation fee of two hundred fifty dollars (\$250.00), payable to the District prior to the date of the rescheduled television inspection.
- 2) A rescheduled inspection is to be made through the District's project inspection division.

d. Optional developer TV inspection

If the Contractor or Owner desires to have a portion of, or the entire job, TV inspected for convenience, they will be charged a fee of one hundred fifty dollars (\$150.00) plus \$0.85 per linear foot of sewer line inspected measured centerline to centerline of manholes.